Savings decline from year to year because WNG's competitive response to Kansas Pipeline has been to hold the line on its prices for natural gas. As a result, most of the savings after the initial impact of Kansas Pipeline Group are reflected in lower WNG prices and not captured in this calculation.

Savings Produced by Kansas Pipeline Transportation

Similar to natural gas substitution, transportation on the Kansas Pipeline system has been substituted for transportation on the WNG system. In concept, this savings precisely parallels the savings produced by the substitution of lower cost Kansas Pipeline system supply for WNG system supply except that the service is being substituted rather than the "delivered" product²⁶. Like the substitution of system supply, there are large transportation savings related to WNG's competitive response. The competitive impact will be captured in a separate calculation.

The difference between the transportation rates of WNG and Kansas Pipeline Group for the period November 1986 to December 1991 is as follows:

When a single price is paid at the city gate for natural gas, that price represents the bundling together of the cost of gas and the transportation of the gas from the point of production to the city gate.

Transportation Rate Differential WNG and Kansas Pipeline Group Kansas City, Kansas Destination November 1986 - December 1991

	WNG Transportation	Kansas Pipeline Group Transportation	
Period	Rates ²⁷	Charges ²⁸	Differential
Nov.'86-Dec.'88	\$.31	\$.22	\$.09
Jan.'89-Dec.'89	.24	.17	.07
Jan.'90-Dec.'90	.25	.07	.18
Jan.'91-Dec.'91	.31	.23	.08

To calculate the impact of the substitution of Kansas Pipeline Group transportation for WNG transportation, the actual transported volumes are multiplied by the savings on Kansas Pipeline Group transportation. That calculation is as follows:

Sources: 1986-1988 average ITS-2 rates as filed; 1989-1990, "Williams 1990 Financial and Operating Statistics"; 1991 "Williams Natural Gas FERC Form 2".

²⁸ Actual average transportation charge as collected.

Savings From Substitution of Kansas Pipeline Group Transportation For WNG Transportation November 1986 - December 1991

Period	Mcf Transported	Savings Per Mcf	Total
Nov.'86-Dec.'88	1,663,284	\$.09	\$149,696
Jan.'89-Dec.'89	689,063	.07	48,234
Jan.'90-Dec.'90	3,231,360	.18	581,645
Jan.'91-Dec.'91	9,664,031	.08	773,122

Source: Volumes from Kansas Pipeline Group

As with the gas sales calculation, there is a substantial savings which is not reflected in the calculation. This savings is a result of the fact that WNG would have raised prices in the absence of competition. It will be reflected in the savings produced by competitive restraint.

Competitive Restraint on WNG Prices

The single most important impact caused by competition in the Kansas City natural gas pipeline market was that WNG could no longer set prices independent of the market under the shield of federal regulation. Rather, WNG had to begin to move the price of its products and services toward competitive levels. Before Kansas Pipeline Group forged a changed market structure for the pipelining of natural gas into the Kansas City metropolitan area, WNG and its connected producers constituted a closed system. In that closed system, the total

amount of revenue generated by the system and the division of that revenue between the parties was subject to regulation by FERC. WNG sought and was granted frequent increases in price and total revenue by the appropriate federal regulatory authorities before the operation of Kansas Pipeline Group.

When Kansas Pipeline Group became a competitor for the products and services in the pipeline market for the Kansas City metropolitan area, WNG was forced to modify its prices toward competitive levels. It did this by slowing and stopping increases in prices which could have been obtained by regulatory action. The effect of this course of action over time is the same as a one time price reduction.

The effect of this course of action was to cause prices to be lower than they "could have been". Since price increases did not offset changes in expense, a second effect of this course of action was to reduce the profitability of the company.

WNG acquired the pipeline assets of Cities Service Gas Company which served the Kansas City metropolitan area in 1983. The assets were acquired in October 1983, and 1984 was the first full year of ownership. The levels of profitability produced in 1984 (full year of operation) and 1985 (pre-Kansas Pipeline) are reasonable indicators of normal income levels for the pipeline under

WNG ownership.

In 1986, Kansas Pipeline Group began deliveries. As Kansas Pipeline Group began deliveries, WNG's profitability measured as a percent of revenues or as a percent of assets declined substantially. The years since WNG has been operating in a competitive market have been much less profitable than the years during which it operated in the "unthreatened" closed system.

The history of WNG profit as a percent of revenues and as a percent of assets is as follows:

Williams Natural Gas Profitability 1984-1991

		Operating	Profit Percent of	
<u>Year</u>	Revenues	<u>Profit</u>	Revenues	<u>Assets</u>
1983	\$250.1	\$27.2	10.88%	3.49%*
1984	958.0	98.9	10.32	12.56
1985	869.8	90.9	10.45	12.57
1986	666.5	47.9	7.19	6.86
1987	547.2	19.7	3.60	2.89
1988	504.4	38.3	7.59	5.30
1989	454.2	46.4	10.22	6.20
1990	382.1	-10.6	-2.77	-1.39
1991	408.6	40.9	10.01	5.56

^{*} The results of a partial year's activity.

Source: "The Williams Companies, Inc. 1990 Financial and Operating Statistics"; 1991 "Williams Natural Gas FERC Form No. 2". 1991 data is not comparable to 1983-1990 published data.

Since WNG management has accepted their post-Kansas Pipeline Group pattern of profit performance in contrast to their far superior pre-Kansas Pipeline Group level of returns, it is reasonable to assume that this lower pattern of profitability is a function of the competitive environment which has been created by the entry of Kansas Pipeline Group into the market²⁹.

This fact is confirmed by WNG filings with the Securities and Exchange Commission where WNG has stated that although rates have been adjusted, it will not be able to realize a full return because discounting will be necessary to meet the competitive circumstances in its markets for natural gas³⁰.

Since the returns earned are lower than could have been, customers have saved the difference between the "possible" level of return and the realized return because of the competitive environment. This difference can be calculated by determining the amount of profitability which WNG was forced to forego as a result of the competitive impact and resulting restraint created by Kansas Pipeline Group.

Recent WNG rate cases before FERC have been settled without full pursuit by WNG of higher rates. This supports this conclusion.

Form 10K, Williams Natural Gas Company for the year ended December 31, 1989, page 13. 1989 is the last year during which WNG filed a separate 10K.

Competitive Restraint Impact

The calculation involves the determination of the level of profit foregone as WNG transitioned from a closed monopoly system to the competitive system, the conversion of that amount to an Mcf margin. The margin can then be related to volumes transported and delivered to the Kansas City metropolitan area.

The first step in the analysis is a calculation of the revenues foregone as a result of competitive pressures. The calculation is based on the potential return on assets of 10.56 percent which is the average realized return for the period 1984-1985 reduced by 200 basis points. Shortfalls from the potential are considered savings produced by the competitive response. The shortfall or return suppression is then adjusted for income tax. The calculation for the period 1987 to 1991 is as follows:

Williams Natural Gas
Competitive Return Suppression
1987 - 1991

<u>Year</u>	Return Book	on Assets Potential	Return Suppression	Tax Factor	Before Tax Return Suppression
1987	2.89%	10.56%	7.67%	1.538	11.80%
1988	5.30	10.56	5.26	1.538	8.09
1989	6.20	10.56	4.36	1.538	6.71
1990	5.68	10.56	4.88	1.538	7.5 1
1991	5.56	10.56	5.00	1.538	7.69

The book return for 1990, the year of the tight sands settlement, was (1.39) percent. The poor performance is at least in part a result of the settlement. The average return of 1988, 1989 and 1991 was used to remove the unusual impact.

The before tax return suppression times the year's asset base produces total return suppression for the year. The revenue suppression per Mcf can then be calculated as follows:

Williams Natural Gas
Competitive Revenue Suppression per Mcf
1987 - 1991

<u>Year</u>	Before Tax Return Suppression	Assets (Millions)	Revenue Suppression (000)	Sales and Transport (TBTU)	Total Revenue Suppression Per Mcf
1987	11.80%	\$682.4	80,523	272	\$.30
1988	8.0 9	723.3	58,515	307	.19
1989	6.71	748.9	50,251	358	.14
1990	7.51	763.4	57,331	319	.18
1991	7.69	735.6	56,568	379	.15

Source: 1990 "Williams Companies, Inc. Financial Operating Statistics"; 1991 "Williams Natural Gas FERC Form 2".

The final step in the calculation relates the savings to the Missouri and Kansas deliveries for rate schedules GSk, GSf, RSm, GSm, and GSo of KPL Gas Service Company. That calculation is as follows:

Williams Natural Gas³¹
Savings From Competitive Price Determinations
1987 - 1991

Year	Kansas Volumes (Mcf)	Savings Per Mcf	Kansas Savings	Missouri Volumes (Mcf)	Savings Per Mcf	Missouri Savings
1987	57,056,269	\$.30	\$17,116,881	65,186,558	\$.30	\$ 19,555,967
1988	60,417,416	.19	11,479,309	69,534,820	.19	13,211,616
1989	60,200,438	.14	8,428,061	66,729,146	.14	9,342,080
1990	64,707,886	.18	11,647,419	59,705,548	.18	10,746,999
1991	58,445,154	.15	8,766,773	64,467,618	.15	9,670,143

In the future, it is reasonable to expect that WNG's actual return on assets will increase. This does not mean that the savings from competitive market discipline is diminishing. More likely, it means that WNG will have realigned its intracorporate allocation of expenses to a level which reflects a more appropriate mix of operating expense and profitability for WNG.

This type of response is possible because under the closed market system in which WNG operated prior to the formation of Kansas Pipeline Group, management's primary objective was to maximize revenues. In that context, the expense which appeared on the WNG income statement was as important as its profitability since it partially determined revenue in the regulated context.

Volumes from chart on page 5 supra.

Discounts on Transportation Service

As stated by WNG in its 1989 Form 10K filing with the Securities and Exchange Commission, the company has been forced to competitively discount various rates in order to maintain volumes. Recently, WNG has offered a competitive discount which is directly targeted at a major Kansas Pipeline Group transportation path. This is not the first time such discounts have been offered and it is probable that more frequent discounts will be offered as the intensity of competition increases. The effect of historic discounts have been captured in the calculation of the revenue suppression from the competitive equilibrium.

Summary of Savings

Three classifications of savings have been identified and specific savings amounts have been calculated for each classification. The total savings which were determined for the three classifications for the period November 1986 through December 31, 1991 are as follows:

Summary of Savings Kansas City Metropolitan Area Competitive Effect of Kansas Pipeline Group

	Substitution of		Competitive	
	Kansas Pir	peline Group	Constraint	
Period	Natural Gas	Transportation	on WNG_	Total
Nov.'86-Dec.'88	\$2,496,969	\$ 149,696	\$ 61,363,773	\$ 64,010,438
Jan.'89-Dec.'89	1,704,291	48,234	17,770,141	19,522,666
Jan.'90-Dec.'90	1,262,569	581,645	22,394,418	24,238,632
Jan.'91-Dec.'91	449,573	<u>773,122</u>	18,436,916	19,659,611
Grand total	<u>\$5,913,402</u>	\$1,552,697	<u>\$119,965,248</u>	<u>\$127,431,347</u>

The going level of savings produced by the Kansas Pipeline Group on the Kansas City market for natural gas is at least equal to the level of savings for 1991. However, future Kansas Pipeline Group volume is expected to grow even more rapidly than the past. This makes the 1991 level of savings a very conservative estimate of continuing savings.

In addition, savings produced by selective discounting must be considered. If WNG adjusts transportation rates further to effectively compete, discount levels already established in some markets may spread throughout the system.

Multiplier Effect

At any point, regional economies establish an equilibrium where the total level of economic activity is a function of consumer, business, and

government spending. Within individual regions, flows of funds to and from other regions add to or subtract from regional economic activities.

WNG's charges to the Kansas City region largely constitute a flow of funds out of the regional economy. This is because payments to WNG are for natural gas and capital payments in other areas.

To the extent that the flow of funds to WNG which goes out of the region is reduced, the amount of reduction will have the same impact as new spending into the region from another area. Savings in WNG's charges constitute additions to the level of economic activity as new discretionary income to the region's consumers. These savings then become subject to the economic multiplier for the region.

The multiplier effect is a principle of economics which states that increases in expenditures by any segment of the economy increase aggregate demand for goods and services within the economy in total. Once such aggregate demand is increased, a dynamic process follows where a single expenditure multiplies over an infinite number of periods in ever decreasing amounts. The final effect on the total level of economic activity is a multiple of the initial change in the level of expenditure.

This process describes the circumstance caused by the savings

produced by Kansas Pipeline in the cost of natural gas. That savings becomes free cash flow to the regional economy and begins to reverberate through the economy, increasing total expenditure or the level of economic activity by some multiple of the original amount. That multiple has been estimated to range from 1.8 to 2.2³² and since there is inevitably a certain amount of leakage in the regional economy to the adjoining areas, a multiplier of 2.0 has been used in the calculation.

When this multiplier is applied to the direct savings of \$127.4 million, the result is an increase in the level of economic activity for the region of \$254.8 million.

Kansas Pipeline Group Community Value

In addition to the direct savings created by the Kansas Pipeline Group for the Kansas City metropolitan area, the pipeline group has a value to the metropolitan area as an element of the area's infrastructure. This value can be measured by determining the amount of public investment which the community would be required to make to produce the level of annual savings currently being generated by the Kansas Pipeline Group.

To establish this value, the annualized savings produced by the Kansas

In estimating the impact of the Bartle Hall addition on the Kansas City regional economy, a multiplier of 1.8 times was used by the Mid-America Regional Council. This multiplier related to wage and salary income which is less robust than pure additions to discretionary income.

Pipeline Group have been forecasted for a 10 year period. This forecast is based on the current annualized savings rate of \$19.6 million forecasted to increase at 15 percent per year for the next five year period and 5 percent per year for the succeeding five year period.

The total savings over the 10 year period are then reduced to 1992 dollars using a present value factor of 6 percent. The present value balance spanning a 10 year period is then reduced to the average annual savings produced over the 10 year period.

This average annual savings is then capitalized into an investment value for the community using the current municipal bond rate of 7.25 percent.

This calculation produces a community value or asset value of the Kansas Pipeline Group to the metropolitan Kansas City are in excess of \$350 million.

Secondary Benefits

In addition to the financial savings produced by Kansas Pipeline Group, a number of non-financial or secondary savings and benefits have been identified. These include:

- 1. Increased pipeline delivery capacity to the metropolitan area.
 - a. Growth potential without customer cost.

- b. Reduced interruption of supply at peak
 - i. higher levels of output
 - ii. higher levels of employment
 - iii. improved economic environment and related growth.
- 2. Gas-on-gas competition by producers for the metropolitan market.
- 3. Improved balance in the employment mix.

Increased Pipeline Delivery Capacity

The addition of the Kansas Pipeline Group's system serving the Kansas City metropolitan area increases the capacity of all pipeline systems which serve Kansas City natural gas requirements. The additional pipeline makes it possible to deliver a greater volume of natural gas on peak to the Kansas City area. That in turn means that Kansas City interruptible customers will have fewer interruptions³³.

Significantly, this new pipeline capacity serving Kansas City had no cost to natural gas customers. This is in striking contrast to the historic

One classification of customers in the Kansas City area is the industrial interruptible customer. Those customers, in return for lower rates, have accepted the right of the pipeline to interrupt service when the demands of other customers require the pipeline to do so. This service interruption, since most of these customers are industrial customers, means that either alternative fuels must be used at higher cost or that production must be curtailed.

In either event, output becomes more expensive or is lower and employment is constrained. When more gas is supplied on peak, there is less substitution of alternative fuel, higher levels of employment and more profitability for the industrial customer.

circumstance where most additions to the capacity serving the system caused increases in rates for the customers on the system. Not only did Kansas Pipeline Group cause natural gas prices to decline, the incremental addition to system capacity was done at the same time.

In addition, there is a significant amount of gas-on-gas competition produced by the presence of the Kansas Pipeline Group in the Kansas City market. This is because Kansas Pipeline Group, as a result of various construction activities, has tied the Kansas City consumption markets into previously underutilized supply markets for natural gas. Those markets, in competing to establish sales of Oklahoma natural gas in the Kansas City area, must reduce price to displace traditional WNG sources of natural gas. This gas-on-gas competition produces lower overall prices for natural gas in the Kansas City metropolitan area.

Finally, the enhanced economic circumstances which result from the increased capacity and the gas-on-gas competition will alter the employment mix of the city. Kansas City has traditionally had a heavy representation in the service industries and a relatively light representation in the manufacturing field. Greater levels of manufacturing activities in the Kansas City area would balance the Kansas City employment mix and make the city more resistant to recession and business cycles. This change in balance should have a long run effect of improved natural

gas supply and price in the Kansas City metropolitan area.

Conclusion

The impact of Kansas Pipeline Group on the Kansas City regional economy has been positive and substantial. Kansas Pipeline Group has caused reductions in the cost of natural gas and its transportation for residential, commercial and industrial users in the Kansas City area. It has increased the level of economic activity in the area, paid taxes, made substantial investments and located its operating and executive headquarters in the metroplex. Kansas Pipeline expects to continue to expand its operations and increase its throughput. This will result in even greater savings and benefits to the community.

In sum, Kansas Pipeline is an important new asset to the community which will make Kansas City both more viable and more attractive to businesses and individuals considering new locations. By any measure, Kansas Pipeline has been one of the most important new assets to the Kansas City community in the decade of the 1980s.

ANALYSIS OF ECONOMIC BENEFITS FROM KANSAS PIPELINE GROUP COMPETITIVE SALES AND TRANSPORTATION OF NATURAL GAS IN THE METROPOLITAN KANSAS CITY AREA

INDEX

	Page <u>Number</u>
EXECUTIVE SUMMARY	
ANALYSIS OF ECONOMIC BENEFITS	
The Nature of Natural Gas Competition	7
Viability of Competitive States	10
Optimal LDC Strategy	12
Threats to the Competitive Environment	13
Competitive Imbalance	13
Regulatory Risk Assessment	14
Contractually Limiting Competition	17
LDC Arranged Lockouts	19
The Impact of Reduced Competition	21
WNG Response to Limiting Competition	22

ANALYSIS OF ECONOMIC BENEFITS FROM KANSAS PIPELINE GROUP COMPETITIVE SALES AND TRANSPORTATION OF NATURAL GAS IN THE METROPOLITAN KANSAS CITY AREA

INDEX

	Page <u>Number</u>
The Cost of Limiting Competition	22
Embedded Annual Savings	24
Economic Contraction Related to Lost Savings	28
Growth in Annual Savings	29
Estimate of Growth in Savings	30
Multiplier Impact of Growth in Savings	32
Secondary Benefits	33
Conclusion	33

ANALYSIS OF ECONOMIC BENEFITS FROM KANSAS PIPELINE GROUP COMPETITIVE SALES AND TRANSPORTATION OF NATURAL GAS IN THE METROPOLITAN KANSAS CITY AREA

EXECUTIVE SUMMARY

Kansas Pipeline Group is an affiliated group of partnerships and corporations providing competitive transportation and delivery of natural gas to the Kansas City natural gas market. In 1992, Kansas Pipeline Group commissioned a report to determine its impact on the Kansas City market for natural gas and natural gas transportation and the regional economy. The report examined the first five years of Kansas Pipeline Group's competitive entry into the Kansas City market and concluded that the Group was producing significant economic benefits for the Kansas City metropolitan area. Furthermore, even though full competition had not been achieved and the Kansas Pipeline Group was still in the developmental stage, significant benefits had already been produced during its short history. In addition, the prospects for even more significant future benefits was very real. The level of these benefits and the recipient by customer class is as follows:

Kansas Pipeline Group Economic Impacts Kansas City Metro Area (Millions)

	<u>[</u>	<u>Direct</u>			
	Residential and Small	Large		Economic Multiplier	Grand
<u>Savings</u>	Commercial	<u>Users</u>	Subtotal	Savings	
Historic 1986-1991	\$120.0	\$7.5	\$127.5	\$255.0	\$382.5
Current embedded annual	17.4	2.2	19.6	39.2	58.8
Potential additional annua	al 26.7	3.3	30.0	60.0	90.0

The detail of the amounts is contained on Schedule 1 attached to the report and represents savings or reductions in price and increases in economic activity produced by Kansas Pipeline Group for the Kansas City area. The major beneficiary of the historical and ongoing direct savings are the residential and small commercial customers which realized 94 percent of the historic savings and 87 percent of the ongoing annual savings. The balance of the savings flowed to larger non-firm customers.

Since the December 1992 report, several threats have been identified which may erode or undermine the competitive environment and which may result in Kansas Pipeline Group being boxed into its market "niche" representing only 9 percent of the Kansas City regional market. The costs associated with permitting a monopolist control of the Kansas City market are as follows:

Annual Economic Cost of WNG Monopoly of Kansas City Natural Gas Transportation Market (Millions)

	I	Direct			
Savings	Residential and Small Commercial	Large <u>Users</u>	Subtotal		Grand Total
Embedded competitive savings Potential embedded	\$13.8	\$1.7	\$15.5	\$31.0	\$46.5
competitive savings	<u>26.7</u>	<u>3.3</u>	_30,0	_60.0	_90.0
Total annual savings	<u>\$40.5</u>	<u>\$5.0</u>	<u>\$45.5</u>	<u>\$91.0</u>	<u>\$136.5</u>

The costs are a result of Williams Natural Gas (WNG), the incumbent pipeline supplier, with 91 percent market share and no competitive threat to its market power, asserting monopolistic control over pricing and service in the Kansas City natural gas transportation market. The threats which may lead to these excess economic costs include:

- The possibility of limiting the growth of Kansas Pipeline Group and allowing the current competitive imbalance in the Kansas City natural gas market to continue.
- Regulatory reviews of gas acquisition policies which could cause the LDC to inappropriately avoid alternative supply and/or transportation choices to minimize short run regulatory risk.
- Predatory contract demands by WNG on its LDC customers which could have the potential to foreclose permanent and workable competition.

Efforts by the LDC and WNG to capture some of the benefits of competition by negotiation or contract without the physical development of a permanent and workable competitive alternative.

If such threats become actualized, the competitive impact of Kansas Pipeline Group may be reduced and WNG would once again be permitted to operate as a monopoly, extracting unreasonable prices from the Kansas City area LDCs and, in turn, ultimate customers of those LDCs.

ANALYSIS OF ECONOMIC BENEFITS FROM KANSAS PIPELINE GROUP COMPETITIVE SALES AND TRANSPORTATION OF NATURAL GAS IN THE METROPOLITAN KANSAS CITY AREA

A December 1992 report on the economic impact of Kansas Pipeline Group¹ on the Kansas City metropolitan area identified significant benefits to the metropolitan area from the competitive sales and transportation of natural gas by Kansas Pipeline Group. The report concluded, among other things, that since starting operations in 1986, Kansas Pipeline Group had produced direct savings to natural gas customers of \$127.5 million of which residential and small commercial customers realized 94 percent or \$120.0 million with the remaining \$7.5 million flowing to larger non-firm customers. The report also identified an increase of at

Kansas Pipeline Group is an affiliated group of partnerships and corporations focused on the competitive delivery of natural gas and pipeline transportation services for the Kansas City market. The backbone of the Group consists of the following natural gas pipeline entities: Kansas Pipeline Company, L.P., Kansas Natural Partnership, and KansOk Partnership (all intrastate pipeline companies), and Riverside Pipeline Company, L.P., an interstate pipeline company. Operations of the group are directed by KPOC (Kansas Pipeline Operating Company) from its headquarters and main control center in Overland Park, Kansas.

least \$255 million in overall regional economic activity as a result of the activities of Kansas Pipeline Group. Finally, the report concluded that, at its current size and scope of operations, Kansas Pipeline Group was generating direct annual benefits (embedded savings) to the Kansas City metropolitan area of \$19.6 million per year of which 89 percent or \$17.4 million flowed directly to residential and small commercial with the balance of \$2.2 million going to larger non-firm customers. The ongoing embedded savings also increased the level of economic activity in the region through the economic multiplier effect by \$39.2 million per year.

In looking to the future, the report found that Kansas Pipeline Group had an entrepreneurial culture and a competitive attitude which would lead to continued growth in its sales and transportation of natural gas. The report anticipated further substantial increases in the level of sales and transportation of natural gas by Kansas Pipeline Group. It was concluded that as the current level of sales and transportation grew, the annual direct savings being generated by the system for the Kansas City area would grow from the current \$19.6 million annual level to a conservatively higher level estimated at \$50 million total or an additional \$30 million, of which 89 percent or \$26.7 million would flow to residential and small commercial and \$3.3 million to larger customers. Furthermore, this

incremental savings would increase the economic impact of the savings by the multiplier to a total level of \$100 million or an additional \$60 million.

However, the report conditioned its forecasts of the future growth of Kansas Pipeline Group and even the continuation of currently realized direct and indirect savings on a continuing commitment to competition by local distribution companies (LDCs) supported by state and federal regulatory authorities. Also the dominant LDC in the Kansas City market, although not specifically identified in the report, was assumed to develop a more progressive attitude toward nurturing competition consistent with regulatory trends at the state (KCC and MPSC), and federal (FERC and DOJ) levels, and currently identified benefits of competition.

Furthermore, although it was not explicitly identified, the maintenance and extension of the new regulatory policies developed by FERC and described in its Order 636 was recognized as a significant contributor to the continued production of growing economic benefits. This new FERC regulatory policy was designed:

"to improve the competitive structure of the natural gas industry to facilitate the operation of a national wellhead market as envisioned by Congress in order to provide natural gas consumers with access to an adequate supply of clean and abundant natural gas prices. Moreover, the Commission is improving this competitive structure without undermining the reliability of service for pipeline customers by requiring pipelines to perform a "no-notice"

transportation service. In short, the Commission is both promoting competition and protecting all gas consumer interests, especially with respect to the reliability and the pricing of services."²

It is important to recognize that the emphasis in the "re-regulation" of the pipeline industry doesn't involve direct intervention by regulatory authorities as in the case of market center formation³, but rather the development and maintenance of a structure which is conducive to competition. To fully realize the benefits of pipeline-to-pipeline competition for Kansas City, the policies fostered by state PSCs⁴ that promote local or intrastate competition are critical since

FERC Order 636, page 58.

FERC Order 636 is usually described as focused on gas-on-gas competition rather than pipeline-on-pipeline competition or best cost end result. In fact, FERC believes that Order 636 creates a market structure where both gas-on-gas and pipe-on-pipe competition or total price competition will flourish. Martin Allday, Chairman of FERC, in a speech at the Conference on State Regulation in February 1992 said that "Market centers where pipelines come together, let producers attached to many pipelines sell gas to customers attached to many pipelines. Neither side has to deal only with partners connected to the same pipeline (and) . . . that improves competition." He went on to describe his expectation of the development of these market centers and the total gas cost competition they foster as powerfully driven by commercial dynamics without the need for regulatory mandate. Record of Proceedings, February 1992, U.S. Department of Energy, NARUC.

⁴ Missouri and Kansas regulators have recognized the importance of both interstate and intrastate competition in the Kansas City area natural gas markets and both have endorsed and encouraged pipeline-to-pipeline competition and reform.

Kansas City has for all practical and realistic purposes only a single interstate supplier which exercises monopolistic pricing power.

Since the report in December 1992, it has become apparent that the emerging competitive environment which allowed the benefits of Kansas Pipeline competition in the first place is not entirely secure. Threats to the nascent competitive environment include:

- The possibility of allowing the current competitive imbalance in the Kansas City natural gas market to continue.
- Regulatory reviews of gas acquisition policies which could cause the LDC to inappropriately avoid alternative supply and/or transportation choices to minimize short run regulatory risk.
- Predatory contract demands by WNG on its LDC customers which could have the potential to foreclose permanent and workable competition.
- Efforts by the LDC and WNG to capture some of the benefits of competition by negotiation or contract without the physical development of a permanent and workable competitive alternative.

If any such threats become actualized, the results will be to reduce or eliminate the competitive threat and/or create a defacto monopoly for WNG. In such an event, WNG, given its prior pricing practices, would exercise its regained market power to increase its profits and to realize other corporate objectives, but the pipeline monopoly market in the Kansas City area would be smaller by the market share competitively captured by Kansas Pipeline Group prior to the change

in market structure⁵.

Furthermore, if WNG preserves its existing market share and effectively increases its market power by eliminating the risk of further market share penetration by Kansas Pipeline Group, it is reasonable to expect that new gains expected from growth in competition in the Kansas City natural gas markets would not materialize. This loss would be in addition to the erosion of embedded gains produced by Kansas Pipeline Group at the expense of WNG's previous level of monopoly profits. The primary evidence of such a change would be rising prices for natural gas and natural gas transportation⁶ or falling prices long enough

This of course assumes that the market for natural gas in Kansas City continues to be served by two pipelines, WNG and Kansas Pipeline Group, and that the status quo is maintained. If by some chance, not even contemplated here, the entire market was returned to WNG as a total monopolist, all gains from competition already embedded and expected to materialize would be lost.

The capacity of WNG to behave in a relatively unfettered manner is a function of the current FERC policy as outlined in Order 636 and the logical implications of the order. FERC's intention is to couple competition and regulation by maintaining a regulatory and business structure which will allow competition to flourish. Unfortunately, WNG is the incumbent interstate pipeline serving the metropolitan Kansas City area and without Kansas Pipeline Group, WNG is not subject to a competitive constraint. Without Kansas Pipeline Group, the much lessened constraint from regulators combined with WNG's historic ability to operate successfully within the regulatory process to produce monopoly profit creates the potential for monopoly abuse by WNG. Furthermore, regulation allows regulated entities to charge rates which collect "approved" costs from customers. From the regulated company's point of view, success involves getting most costs classified as approved costs. In contrast, competition permits only efficiently and appropriately incurred costs. Thus, regulation would typically approve a higher

to preserve market share in the face of aggressive competition followed by rising prices.

The Nature of Natural Gas Competition

Competition between pipelines for natural gas markets consists of a series of actions and reactions which culminate in a static state of economic equilibrium. Viewed through time, such competition is a dynamic process of action and reaction representing an evolving series of successive states of equilibrium. The Kansas City market for pipeline transportation and supply of natural gas was for many years a monopoly market with a sole supplier, WNG. This was the initial static state and, although undesirable, it was a market equilibrium.

As described in the December report, after a series of regulatory and construction initiatives, Kansas Pipeline Group entered the market⁷. The successful entry created the second static state which, at its inception, was in

cost basis than could be collected from customers in a competitive market.

The competition for the market actually began when Kansas Pipeline Group announced its intention to operate as a transmission company serving the Kansas City market. WNG responded with a substantial administrative and judicial effort to block Kansas Pipeline Group from the market. This administrative effort can be characterized as a competitive response for an incumbent and it illustrates that competition and competitive behavior involves a wide range of actions not limited to price and service.

disequilibrium. WNG was the supplier to the entire market and a new entrant had a fixed amount of new capacity to serve the market. Through a series of initiatives including customer price and service advantages, Kansas Pipeline Group began to fill its system. At the same time, WNG, recognizing that all business earned by Kansas Pipeline was at its expense, responded with: i) regulatory and judicial blocking maneuvers; ii) lower prices; and iii) attempts to improve service options and customer relations. The process of vying for business in this stage would continue until a new static equilibrium was achieved when i) Kansas Pipeline's system achieved near capacity operations; and ii) further business opportunities adequate to prompt investment in additional facilities (capacity with which to compete for further market shares and which viewed from WNG's perspective, creates a dynamic and ever present threat of future market deterioration) were not present or forthcoming.

The new static equilibrium at the climax of the second state, like the static equilibrium which existed at the climax of the first state, has no tendency to change as a result of internal forces. All internal forces are in balance and the only progress⁸ or change which would take place in the market is a result of

Movement which increases competition is considered progress in this context. Consistent with the views of contemporary economics, competition and competitive markets are considered efficient in that true underlying economic costs are reflected in prices which in turn are used by buyers in making consumption

external pressure such as the decision by Kansas Pipeline Group to increase capacity and market share by a new competitive initiative.

Absent a realistic opportunity for Kansas Pipeline Group to increase market share, the market will remain in a non-competitive equilibrium with Kansas Pipeline Group operating at capacity and supplying a market "niche", and WNG monopolizing the remaining market share which amounts to 91 percent of the market. Assuming Kansas Pipeline Group can be boxed into only this market "niche", the resulting equilibrium state provides no continuing competitive threat to WNG. Unless local distributors and Kansas Pipeline Group act to expand business relationships and move the market into the next stage, the static equilibrium defaults into a monopoly market because of the market power of the major supplier.

Currently, the Kansas City market is at a pivotal point. Local distributors and Kansas Pipeline Group are working to develop new alternatives to advance pipeline competition to a new level while WNG is working to negate or block opportunities for Kansas Pipeline Group so the market will stay at its

decisions. This process produces an efficient allocation of resources consistent with maximum consumer welfare.

current equilibrium thereby defaulting to the original monopoly status. Ideally from WNG's perspective, the market progress toward further competition needs to be limited so WNG can once again enjoy the benefits of monopoly power. In contrast, from the consumer's perspective, the market should progress toward additional competition and the reduction of market power by the monopoly transporter.

Viability of Competitive States

The competitive status of any market state falls on a spectrum from the classically defined, perfectly competitive market to its polar opposite, the single supplier monopoly market. Some market states are very persistent and some are fragile. The pipeline market serving Kansas City prior to the first efforts of Kansas Pipeline Group was a monopoly market. In a monopoly market, there is a single transporter, and that single transporter has the power to set prices, terms of service, and other conditions related to the sale of its product and service. Although WNG was regulated under the terms of the Natural Gas Act, that regulation provided for a "collection" of costs by the monopolist rather than a market setting of price. Because of historical entrenchment, the existence of a substantial institutional framework and the extraordinarily high barriers to entry,

The effort to move forward by Kansas Pipeline and the WNG response to block, parallels the initial entry of Kansas Pipeline on the market.

this initial state was static and there was a very low probability that anything would alleviate this entrenched monopolistic power of the incumbent pipeline.

When Kansas Pipeline Group entered the monopoly market, the "threat" caused the monopolist, WNG, to reduce prices, seek to improve service, and to generally behave in a manner beneficial to consumers. If i) Kansas Pipeline Group reaches its operating capacity, and ii) its threat to increase market share can be effectively presented; then the competitive threat on WNG immediately diminishes. At the climax of this market stage, WNG still controls 91 percent of the market for natural gas. Kansas Pipeline Group, while supplying 9 percent of the market, is operating at capacity. Without additional incentive for Kansas Pipeline Group to expand and compete, Kansas Pipeline Group is not a threatening competitor since it cannot take further market share from WNG, and WNG is free once again to exert the full force of its monopolistic power.

To move the market into the next stage, it is necessary for WNG to be threatened again with loss of further market share. The only scenario in which this progress can occur is for Kansas Pipeline Group to increase its capacity to further competition. Furthermore, Kansas Pipeline Group's continued viability must be assured and it must have a large and secure beachhead from which it can competitively threaten WNG, compelling it to exercise market discipline. This

development effectively sets the stage for the final market state where two relatively equal competitors vie for the "middle market" or uncommitted segment.

It is only this stage that produces maximum benefits for the consumer.

Optimal LDC Strategy

The optimal LDC strategy should foster competition between the LDC's pipelines and maximize the number of supply areas sourced by such pipelines. The end result would be increased gas-on-gas competition within and between supply areas materially complimented by competition between pipelines to transport the supply to the LDC's markets.

While it would be desirable to have these circumstances, as the new competitive market for natural gas unfolds under the coupling of regulation and competition envisioned by federal and state regulatory bodies, Kansas City does not have adequate commitments of plant and facilities to achieve this state. The LDC, however, has the purchasing power which, if wisely used, could create the incentive to develop a full competitive natural gas pipeline infrastructure to serve the Kansas City market in an economically efficient manner. The LDC can do this by initially directing its purchases to an alternate pipeline in adequate amounts to nurture the development of the necessary, desirable and mature infrastructure. Once an infrastructure is in place and the pipelines are relatively equal

competitors, there will inherently be aggressive competition by both pipelines to fill "excess" capacity with uncommitted load. This will produce the maximum benefit for the LDC and its customers¹⁰.

Threats to the Competitive Environment

At least four new forces have been identified which jeopardize the competitive environment in which Kansas Pipeline Group currently operates.

Competitive Imbalance

The current natural gas and transportation pipeline system serving Kansas City is in a static equilibrium. Kansas Pipeline Group has entered the market and as a result of competitive behavior "filled" its pipeline system. Until further facilities are in place and operating, Kansas Pipeline Group cannot compete for additional business. In theory, Kansas Pipeline Group needs a reasonable business prospect to make substantial and additional investments to become active in the effort to attract new business. Without that business prospect, Kansas Pipeline Group will work to retain and serve its 9 percent of the Kansas City

The Department of Justice in evaluating markets for Sherman Act violations generally measures market power using the HHI Index. In a single supplier situation, the HHI Index is 10,000. In a multiple supplier situation, the HHI Index, which is the sum of the squares of the market shares of the relevant market participants, has a minimum level of 100 which is considered to be a perfectly competitive market. In a two supplier marketplace, each supplier must have or approach 50 percent market share in order to minimize the HHI Index and minimize the market power of each of the two participants.

market. WNG, with Kansas Pipeline boxed into a market "niche," would once again begin to act as a monopolist in its 91 percent market share and work to produce excess monopoly profits and reduce services. To remedy this competitive imbalance and advance the market into the next stage, Kansas Pipeline Group must have the opportunity to expand its market share in order to attract the capital necessary to make additions to plant and facilities. This will revitalize the competitive dynamic in the market and restore the full competitive threat to WNG's market dominance.

To progressively move the market development to the next stage, the LDC should encourage competition by facilitating Kansas Pipeline Group's growth and, in fact, should be prepared to nurture Kansas Pipeline until it is a viable and meaningful competitor permanently capable of exerting competitive pressure on WNG for significant parts of its market share. To do that, the LDC must recognize the risks of the current market imbalance, the potential of fuller competition, and the necessity for its proactive role in the development of real, workable, long-term competition.

Regulatory Risk Assessment

The second threat to the competitive environment is regulatory review of the LDC's gas acquisition practices. Under the initial single pipeline supplier

arrangement to Kansas City, the LDC dealt only with WNG. Under those circumstances, it was not possible for the LDC to make a gas acquisition or transportation mistake. In the absence of any alternatives, the LDC acquired whatever product or service was available at whatever price and terms offered, subject only to FERC regulatory relief which, by its very nature, has been materially after the fact.

However, when a second supplier, Kansas Pipeline, entered the marketplace, the potential developed for the LDC to make reasonable gas acquisition and/or transportation decisions which in the short run, although appropriate, had the potential to result in a different cost of gas than that of the traditional supplier. This presented the LDC with the risk that the regulatory structure at the LDC level could evaluate such gas acquisition and/or transportation decisions negatively.

The LDC should consider the far more draconian risk presented by these reviews, if the LDC fails to proactively create a meaningful and permanent alternative, permitting the market to default to the monopoly stage. In fact, FERC Order 636 and the succession of orders leading to this pronouncement have demonstrated the benefits of competition in natural gas markets. The efficiency and efficacy of regulation without competition has been questioned and the

superiority of coupling competition to regulation (as opposed solely to regulation) abundantly demonstrated. In this environment, the risk of not proactively assisting the development of a meaningful (non-niche) competitive transporter to avoid short-term PSC prudence review risk is an illusion, based on a regressive strategy, which would not withstand a comprehensive and thoughtful regulatory review¹¹.

LDCs will be required to demonstrate that they have obtained the best price for natural gas and pipeline service which, in the long-term, will be produced by the LDC which uses its buying power (purchasing natural gas and transportation services) to generate competition between suppliers and transporters, capturing for its customers the full promise of supply transportation and service competition.

To do this for the Kansas City market, the LDC must facilitate competition, treating the potential for competition as an opportunity. The LDC's market power should be used as part of a gas transportation and acquisition

This proposed adjustment which was dropped by the Staff after the annual savings from competition of \$19.6 million per year related to only 9 percent market penetration by Kansas Pipeline Group. If Kansas Pipeline Group is permitted to aggressively compete and the market approaches some optimal supplier mix, it is conceivable that total savings associated with competition would amount to \$50 million per year. Clearly, the regulatory risk associated with aggressive gas acquisition is "de minimis" as compared to the potential cost associated with in-action by the LDC in the development of a meaningful transportation alternative.

strategy to reduce cost and develop alternatives. This is in striking contrast to the short-sighted policy of "hunkering down" to avoid short-term regulatory audits which results because the LDC is placing itself in a position to have an economic choice. If the LDC does not act, future purchasing practice reviews shall not focus on the difference in gas price for a single period, but rather the long-term losses produced by the lack of the LDC action in generating competition. In fact, the mere size of those regulatory risks alone should be sufficient to cause the LDC to embrace competition and use its market power to develop competitive alternatives and options¹².

Contractually Limiting Competition

The competitive environment which has allowed Kansas Pipeline to produce significant savings for customers of natural gas and natural gas transportation could be eliminated if WNG was able to "lockup" the market for future sales and transportation of natural gas. To create the lockup, WNG would obligate its LDC customers to purchase all or substantially all uncommitted transportation. Such a lockup would create a defacto monopoly for WNG for its

The direct savings related to limited competition for the first few years of Kansas Pipeline Group's operations exceeded \$125 million. As the level of competition in the Kansas City market increases, the magnitude of those savings will increase in proportion. The size of the savings suggests that LDC actions which would limit those savings could produce regulatory disallowances which might exceed the total value of the LDC.

current marketplace by freezing the movement of customers or sales between transporters. Under that defacto monopoly, the competitor, Kansas Pipeline, would be "frozen" out of the market since the LDC would be unable to choose between suppliers and take advantage of competitive offerings by alternate pipeline suppliers.

In an exercise of its still imposing monopoly power, WNG delivered ultimatums to its LDC customers requiring execution of "lockout" contracts as a requirement to preserve "rights" on the WNG system for natural gas transportation and storage capacity. Initially, WNG "required" the execution of five year lockout contracts — certainly enough to kill the nascent competition in this market. Although FERC rejected these demands, it granted a one year lockout — a period not fatal, but certainly not conducive to full and free competition.

While a period of one year is not fatal to competition, it does demonstrate that the emerging competition in the Kansas City market is still fragile. There is little doubt that five year lockouts would not only eliminate the competitive threat for the short term, but would drastically decrease WNG's risk of a long run competitive threat, since (once the opportunity to develop competition in the Kansas City market would have passed) reinvigorating a competitive alternative would be far more difficult (if not impossible) than

implementing further competition at this point.

LDC Arranged Lockouts

In a mirror image of WNG's effort to lockup the market for natural gas transportation in the Kansas City area, the LDC in the Kansas City market could solicit contract offers from WNG designed to capture at least some of the benefits of competition for the LDC, primarily a lower price for transportation service, while avoiding the LDC's perceived short run regulatory risks from review of gas acquisition decisions.

Such an approach would be highly detrimental to the Kansas City market. First, while the benefits generated by the "contract" are promised for the life of the contract, it is apparent that WNG, once the competitive threat had passed, would have a substantial incentive to avoid its contractual obligations and once again exercise its monopoly power. Second, even if unsuccessful in the use of avoidance techniques, WNG becomes absolutely unfettered at the end of the contract when there is no contractual obligation and no competitor. There is no doubt that WNG as a monopolist with only regulatory constraints on its powers to extract monopoly rent would try to make up for lost time. Finally, through the period of the contract there would undoubtedly be i) numerous regulatory changes; ii) needs for new capacity; and iii) other changes in circumstance, each of which

would give WNG an opportunity to chip around the edges of the contract and capture material elements of monopoly rent.

The most serious flaw in the "boxing in" of the Kansas Pipeline Group's niche position by an LDC/WNG contract which presumes WNG's monopolistic market share is the fact that the Kansas City market is at a critical point . . . the advantages of which would in all probability be lost forever. All of the economic resources necessary to create a competitive environment are currently in place. It has taken Kansas Pipeline Group millions of dollars, more than six years, and broad entrepreneurial efforts to reach this point. If the resources which present the opportunity for a competitive alternative for natural gas and natural gas transportation in the Kansas City market are dissipated, it is unlikely that Kansas City would readily find the opportunity to develop an alternative competitive transmission source¹³. Further, since there would be no competitive pipeline capacity, there would be materially less commitments by producers and others to bring competitive natural gas to the Kansas City market.

While in the narrowest view Kansas Pipeline represents an alternative transmission source, Kansas Pipeline also accesses new natural gas production areas and creates for the Kansas City market the potential for gas-on-gas and pipeline-on-pipeline competition at a level which would produce substantial long run benefits for the city.

The Impact of Reduced Competition

WNG still has a 91 percent share of the Kansas City market. If WNG solidifies its control over its 91 percent market segment or even some modestly smaller segment by anti-competitive contracting or other means, WNG will be a near monopolist with extreme market power in the Kansas City market. This means that WNG would again have the opportunity to extract monopolistic profit from its customers and, given its past performance, limit services and options to its customers by subordinating customer needs and requirements to WNG's own objectives.

Furthermore, because of WNG's substantial market power and because of the competitive imbalance in market share (WNG 91 percent, Kansas Pipeline Group 9 percent), a permanent partitioning of the marketplace or reduction in the competitive threat could undercut the viability of Kansas Pipeline Group. Kansas Pipeline Group remains quite small by the standards of the pipeline business. While progress has been substantial, competition in this market remains fragile and the Kansas Pipeline Group is a new company, in a hostile environment, facing an entrenched monopolist who claims that all customers in the market belong to it. To constrain or merely not support Kansas Pipeline Group may jeopardize its viability or its effect as a pipeline supplier to the Kansas City market and will

certainly further solidify WNG's already strong position.

WNG Response to Limiting Competition

If, by virtue of restricting Kansas Pipeline Group to a "niche" market share, WNG is given the opportunity to once again become a monopolist in the Kansas City natural gas transportation market. It is certain that WNG will engage in the practices it previously used as a monopolist when its pricing practices generated monopoly revenue which proved unsustainable under competition. WNG management would move to load its existing stranded investment as well as its historical lost return onto remaining customers¹⁴. Management would also eliminate its current practice of discounting authorized rates to meet the competitive threat and, finally, the contribution from the pipeline to corporate overhead would almost certainly increase.

The Cost of Limiting Competition

The cost of diluting the competitive environment, limitation or partitioning of the market or any other change which would lessen the competitive threat for a meaningful segment of the Kansas City market for natural gas transportation, will occur in at least five areas:

This would require a regulatory initiative by WNG and there is no assurance of success. In fact, it is almost certain based on some FERC pronouncements that complete success is not possible.

- Continuation of the embedded annual savings of \$19.6 million (historically achieved as a result of Kansas Pipeline Group's niche in the marketplace, coupled with the threat of additional market penetration) will be jeopardized.
- The related economic multiplier impact of two times the embedded savings (an additional \$39.2 million per year) would likewise be jeopardized.
- Future growth in the level of competitive savings (an additional \$30 million per year) shall be lost entirely.
- The additional economic multiplier effect caused by increases in the amount of annual savings (an additional \$60 million per annum) will shrink in proportion to the loss of future growth in the embedded savings.
- Many of the supplemental non-price benefits produced by Kansas Pipeline will be lost or limited.

The loss of the current savings and the loss of the benefits from further competition assumes a change in market structure which leads to a withering of competition. It is also assumed that the loss will be spread to all customers on the system including the Kansas Pipeline Group customers¹⁵ and the shrinkage in benefits will multiply as a rippling contraction throughout the regional economy in a mirror image of the way the embedded savings were increased through the economy by the economic multiplier effect.

Spreading the cost of restoring monopoly power of WNG to all of the customers is a result of the mechanics of the purchased gas cost adjustment. The clause spreads changes in average gas cost to the entire customer base.

Embedded Annual Savings

The December 1992 report on the impact of Kansas Pipeline identified a going level or current and continuing embedded rate of annual savings of \$17.4 million flowing to residential and small commercial customers and \$2.2 million flowing to larger non-firm customers resulting from the competitive effect of the Kansas Pipeline Group. This savings amount can be defined as the increment of monopoly profit eliminated by the competitive threat (and success) of Kansas Pipeline Group given the size of the market, Kansas Pipeline Group and WNG¹⁶. The savings is a result of the threat of continued competition from Kansas Pipeline Group and the effort of Kansas Pipeline Group to continue to attract volumes from WNG with more attractive prices, additional service and/or a combination of both. If this wasn't the case, it is reasonable to expect that WNG would price its product to recapture as much of the embedded annual savings, \$17.4 million of savings flowing to the residential and small commercial and \$2.2 million flowing to the larger non-firm customers, (which from WNG's point of view is \$19.6 million in lost annual revenue) as possible from its remaining market share.

This level of savings was produced by Kansas Pipeline Group successfully attracting about 9 percent of WNG's non-mainline KPL Gas Service sales. Substantial potential for further savings exists in the remaining 91 percent market share.

To produce monopoly rent at this level, WNG would raise prices to the customer base which it controlled in an attempt to recover as much of the \$19.6 million of lost revenue as possible. The feasibility of recapturing the entire \$19.6 million of savings can be estimated by examining the initial derivation of the amount in the December report.

The December report identified the annual savings as comprised of two separate components:

Source of Savings	Amount
Savings from substitution of Kansas Pipeline natural gas and transportation	\$ 1,222,695
Annualized savings from competitive market effect	<u> 18,436,916</u>
Total annualized savings	\$19,659,611

The element of the savings related to the substitution of natural gas is a result of combined gas-on-gas and pipe-on-pipe competition. Even after WNG establishes market dominance over 91 percent of the market, there should be significant regulatory reluctance to permit it to recapture the savings associated with gas-on-gas competition. Assuming that 75 percent of the substitution savings result from gas-on-gas competition, it is reasonable to assume that \$917,000 or 75 percent of the total \$1.2 million savings would be secure.

The second element of the savings, the competitive market effect is i) in part a function of stranded investment which is no longer earning a full return; and ii) in part a function of WNG's accepting as a competitive response to the threat of Kansas Pipeline Group reduced returns. On the other hand, that element of return which WNG lost as a result of competitive pressure would be subject to recapture from the remaining customers assuming it did not involve stranded investment.

To estimate the amount of potential recapture, it is reasonable to assume that WNG would argue that only a small portion of the total amount was related to stranded investment. This would enable WNG to try to reload onto remaining customers a substantial percent of the total loss, but WNG would be forced to achieve reload under a different guise. This is because there is a high probability that regulators, specifically FERC, will not authorize a reloading of lost income. Reloading is antithetical to competition theory, since it makes competition harmful to the customer. This is in direct opposition with the trend of recent FERC decisions which clearly uphold competition as the path to lower cost gas and transportation.

Because of the problems, recapture of lost profit will require more than one rate proceeding and it is reasonable to expect that WNG would be able

to successfully argue that only 10 percent or so of the loss was related to stranded investment. Thus, it could successfully reload 75 percent to 90 percent of the lost return onto its remaining customer base without calling it "reload". This means that the total recapture by WNG would range from \$14.7 million to \$17.6 million. This represents a significant part of the original and ongoing savings generated by competition in the natural gas pipeline market serving Kansas City¹⁷. Unlike a situation in which there are two meaningful competitors capable of intensely competing for uncommitted market share, competition in this case (or the lack thereof) would provide no restraint whatsoever to the regulatory strategy of reload, because Kansas Pipeline Group would be "boxed" into its "niche" position of only a 9 percent market share without any possibility (or threat to WNG) of increasing its market share.

It is of vital importance to recognize the critical distinction between "re-load" opportunities available to WNG in a market where competition and regulation can be used to restrain "re-load"; versus a market in which competition is effectively removed (such as in the case if Kansas Pipeline Group is boxed into

Because volume decreases with price increases in a monopolist's price produce disproportionate losses in economic welfare, i.e., the total welfare cost associated with an increase in price, is greater than the revenue associated with such increase. This loss is at the first level or in the direct market. When multiplier effects are considered, there is a much greater loss of economic welfare.

its 9 percent niche market share). In a market where competition and regulation both exert pressures on WNG, it really is of little import whether or not FERC would allow reload completely, in part or not at all, because the continuing threat represented by further meaningful WNG market share deterioration would supply a real competitive restraint to reload . . . a restraint which simply is not present if Kansas Pipeline Group is boxed into a 9 percent niche market share. In short, meaningful competition is a better antidote to "re-load" than regulation alone. This is not to say that regulatory prohibition and/or restrictions to "re-load" are not desirable and helpful in the formation of a truly competitive market; but it is to say that competition, coupled with regulation (or even without regulation) is the LDC's best defense to "re-load".

Economic Contraction Related to Lost Sayings

As savings were originally generated for the Kansas City economy by the competition from Kansas Pipeline Group's entry into the market, those savings flowed through the economy and multiplied in effect as a result of the economic multiplier. The December 1992 report estimated that the original savings amount of \$19.6 million per year would also produce a multiplier savings of two times that amount or \$39.2 million per year. If the total savings are reduced from \$19.6 million by \$15.5 million (the average of the range), the economic impact of that

reduction would be a contraction in regional economic activity of twice that amount.

Growth in Annual Savings

Limiting the threat of competition will jeopardize if not eliminate the growth in embedded savings which can be expected from continued competitive activity by Kansas Pipeline Group. If competition widens, it is reasonable to expect growth in embedded savings from three separate factors:

- Increased levels of business by Kansas Pipeline Group.
- Continued competitive response by WNG (reduction in WNG's remaining economic rent) in order to prevent even further deterioration of its market share.
- Increased economic multiplier benefits of about two times the direct growth in savings.

The growth in savings assumes that so long as there is an opportunity to produce a reasonable return from competition, there will be incentive for Kansas Pipeline Group to commit capital to capacity additions to move the competitive process into succeeding stages. As Kansas Pipeline Group works to attract new business to its system at each new stage of competition and as WNG strives to maintain its then existing level of business, customers will be offered better prices, better service, more options, and combinations of pricing, service and option packages designed to meet their needs and attract their business. Each time a sale

long-term savings will be produced. The savings from such transfers, the movement of the delivery of service to a lower priced supplier and the constant effort of the competitors to move sales to their side of the ledger, adds to the embedded annual rate of savings produced by the competition between Kansas Pipeline Group and WNG. If the competition is limited, all of this is lost.

As consumer decisions increase the embedded annual level of savings, flows of new free (uncommitted) funds in the region produce economic multiplier savings which are in proportion to the direct savings associated with these consumer decisions. The multiplier effect, as noted in the December 1992 report, is two times the annual rate of savings and as the direct savings grow, the dollar amount of the multiplier effect savings will grow proportionately.

Estimate of Growth in Savings

As previously discussed, the best possible market power outcome in a two supplier market is for each supplier to meet approximately 50 percent of market demand while maintaining the capacity to serve a much larger increment of the load. At the same time, in order to provide for a viable market with continued participation and competition by each supplier, it is essential that the LDC maintain the viability of both suppliers by committing to each a meaningful

segment of the total market. One possible segmentation of the market by the LDC which would maximize the purchasing power of the LDC divides the entire market total into essentially three equal segments committing one segment to the incumbent supplier, WNG, and one to Kansas Pipeline Group. The remaining one-third market share, pivoted about the 50 percent market level, would be perpetually subject to competitive bid by the two pipelines. Such an arrangement should produce long run competition and the lowest possible cost to customers as a result of both the pipe-on-pipe competition which occurs in the market, and the gas-on-gas competition which is made possible and facilitated by the two pipelines and excess capacity¹⁸.

To estimate the total savings related to further competition, the level of savings produced by the existing pipeline-on-pipeline competition can be extrapolated using a less than proportionate rate. Kansas Pipeline Group has captured 9 percent of the market and in the process produced an embedded annual savings for the Kansas City area of \$19.6 million. If the optimal level of savings will be achieved by sharing the market equally between two suppliers, it is

The lowest possible cost to consumers is a function of two separate cost savings — gas-on-gas competition and pipe-on-pipe competition. The existence of the new pipeline to Kansas City developed by Kansas Pipeline Group opens new production areas. This creates gas-on-gas competition and reduces the cost of gas embedded in customers' total cost. This savings is not measured in this calculation.

reasonable to assume that if that market sharing and the intense competition it implies is realized, there will be no further savings from competition once the two suppliers share the market. If 100 percent of the savings are produced when the market is shared between competitors on a 50/50 percent basis and if the change of 10 percent in the market share produced a \$19.6 million annual savings, a straight line decline (extrapolation) in incremental savings from 100 percent to 50 percent would yield a total expected annual savings of \$50 million¹⁹.

Multiplier Impact of Growth in Savings

If the grand total savings produced by maximizing the competition in the Kansas City market amounts to \$50 million and the incremental portion of that savings is an additional \$30 million per year, that incremental portion will flow through the regional economy. As the incremental amount flows through the

This is a conservative estimate of the expected annual savings. While it is possible to assume that WNG will attempt to reload all of its lost revenue onto its existing or remaining customer base, it is more reasonable to assume that WNG would appropriately evaluate its circumstances and determine that it would become a competitor in the marketplace. To be a competitor, WNG would decide that costs must be cut, expenses trimmed, needless or excess capacity abandoned, and service produced to meet customer requirements at the lowest possible level. When companies make this type of commitment, extraordinary reductions in the cost of doing business can be realized. Naturally, WNG's response to the competitive threat may be so successful that it will in turn precipitate a response by Kansas Pipeline Group. If that is the case, it is reasonable to expect that competition will work to produce the most efficient pricing for natural gas transportation and sales for the Kansas City market.

economy, there will be a multiplier effect as the money is spent and respent. The December 1992 report estimated the multiplier effect at two times indicating that the level of economic activity will increase by an additional \$60 million as a result of increases in total economic activity from the multiplier effect.

Secondary Benefits

The December 1992 report identified a number of secondary benefits related to the existence of the Kansas Pipeline Group. Those secondary benefits involved economic growth and improved economic activity associated with better supplies, better prices for natural gas during the year and on peak. If the competitive activities of Kansas Pipeline Group are limited, it is reasonable to expect that the secondary benefits would be lessened. Since many of the secondary benefits are related to the promise of a continuation of competition and occur in later time periods, if competition is constrained, those activities which have not yet taken place may be canceled as a result of constraints on competition.

Conclusion

The December 1992 report on the economic benefits produced by Kansas Pipeline Group for the Kansas City natural gas customers anticipated a growing annual savings to the customers from continued competitive activity in the marketplace. Since the issuance of that report, events which may limit or

jeopardize continued competition in the Kansas City market for transportation and sale of natural gas have been identified. Four such forces which could partition the Kansas City market into two separate markets, one served by Kansas Pipeline Group and the other by WNG, were discussed. These forces are:

- The possibility of allowing the current competitive imbalance in the Kansas City natural gas market to continue.
- Regulatory reviews of gas acquisition policies which could cause the LDC to inappropriately avoid alternative transportation choices to minimize short run regulatory risk.
- Predatory contract demands by WNG on its LDC customers which could have the potential to foreclose permanent and workable competition.
- Efforts by the LDC and WNG to capture some of the benefits of competition by negotiation or contract without the physical development of a real and workable competitive alternative.

If such partitioning did take place, the level of savings produced by the competitive efforts of Kansas Pipeline Group for the market as a whole could be significantly reduced. If the change permits WNG to again function as a monopolist, the reduction in the benefits of Kansas Pipeline Group would be limited only by the disparity in pricing between Kansas Pipeline Group and WNG, and the elasticity of demand for natural gas of customers in the WNG market segment.

The reduction in competition would also lead to the loss of growth in

the competitive savings which are anticipated from WNG's continued response to Kansas Pipeline Group's competitive threat and Kansas Pipeline Group's continued efforts to expand its segment of the market at the expense of WNG's remaining market share.

Finally, the indirect economic benefit of the direct savings, the multiplier effect, would also be lost. The indirect savings grow in proportion to the direct savings and are estimated to be at least two times the direct savings. Loss of growth would cause the loss of potential multiplier effects and loss of the embedded savings would cause an actual reduction in multiplier effects already realized.

In summary, the loss of savings produced by a failure to proceed with a competitive solution to the Kansas City pipeline market are as follows:

Kansas Pipeline Group
Economic Impacts
Kansas City Metro Area
(Millions)

	E	<u> Direct</u>			
	Residential			Economic	
	and Small	Large		Multiplier	Grand
Savings	Commercial	<u>Users</u>	Subtotal	<u>Savings</u>	Total
Historic 1986-1991	\$120.0	\$7.5	\$127.5	\$255.0	\$382.5
Current embedded annua	17.4	2.2	19.6	39.2	58.8
Potential additional annua	al 26.7	3.3	30.0	60.0	90.0

The detail of total savings is attached as Schedule 1 to the report.

The historic savings includes savings from transportation for industrial customers in the amount of \$1.6 million and savings from industrial sales in the amount of \$5.9 million.

Given the substantial costs and the significant economic welfare loss associated with WNG's monopoly behavior and pricing, it is apparent that WNG should continue to be subjected to a competitive threat and the market structure which has permitted Kansas Pipeline Group to compete with WNG should be maintained and, to the extent possible, expanded to permit a widening of the competitive interface between Kansas Pipeline Group and WNG.

Kansas Pipeline Group Historic Customer Savings Competitive Price Determination (By Customer Class)

			Kansas		Missouri		
		Small			Small]
Year	Residential	Commercial	Other	Residential	Commercial	Other	Total
<u>VOLUME</u>							
1987	40,182,827	16,791,576	81,866	42,660,199	22,526,359	0	122,242,827
1988	42,946,966	17,413,091	57,359	47,161,288	22,373,532	0	129,952,236
1 9 89	42,790,719	17,304,916	104,803	47,058,455	19,670,691	0	126,929,584
1990	48,169,524	16,393,457	144,905	41,879,836	17,825,712	0	124,413,434
1991	42,783,565	15,595,946	65,643	43,626,939	20,840,679	0	122,912,772
DOLLARS							
1987	\$12,054,848	\$5,037,473	\$24,560	\$12,798,060	\$6,757,908	\$0	\$36,672,848
1988	8,159,924	3,308,487	10,898	8,960,645	4,250,971	0	24,690,925
1989	5,990,701	2,422,688	14,672	6,588,184	2,753,897	0	17,770,142
1990	8,670,514	2,950,822	26,083	7,538,370	3,208,628	0	22,394,418
1991	6,417,535	2,339,392	9,846	6,544,041	3,126,102	0	18,436,916
Total	\$41,293,521	\$16,058,862	\$86,060	\$42,429,299	\$20,097,506	\$0	\$119,965,249

SUMMARY:

1987-1991	1991
\$83,722,821	\$12,961,576
36,156,368	5,465,494
86,060	9,846
5,913,402	449,573
1,552,697	773,122
\$127,431,348	\$19,659,611
	\$83,722,821 36,156,368 86,060 5,913,402 1,552,697

1	PUBLIC SERVICE COMMISSION
2	STATE OF MISSOURI
3	In the Matter of Missouri Gas) Energy's Gas Cost Adjustment)
4	Tariff Revisions to be Reviewed) Case No. GR-96-450 in its 1996-1997 Annual
5	Reconciliation Adjustment) October 28, 1998 Account.) Jefferson City, Mo.
6	
7	
8	DEPOSITION OF THOMAS SHAW,
9	a witness, produced, sworn and examined on the 28th
10	
11	day of October, 1998, between the hours of 8:00 a.m.
12	and 6:00 p.m. of that day at the law offices of
	Brydon, Swearengen & England, 312 East Capitol, in the
13	City of Jefferson, County of Cole, State of Missouri,
14	before
15	KELLENE FEDDERSEN, CSR, RPR
16	ASSOCIATED COURT REPORTERS, INC. 714 West High Street
17	P.O. Box 1308
18	JEFFERSON CITY, MO 65109 (573) 636-7551
19	
20	and Notary Public within and for the State of
21	Missouri, commissioned in Cole County, in the
22	above-entitled cause, on the part of MGE, taken
23	pursuant to agreement.
	CODY
24	Associated Court Reporters, Inc.
25	Jefferson City, MO (573) 636-7551

1

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109
TOLL FREE - 1-888-636-7551

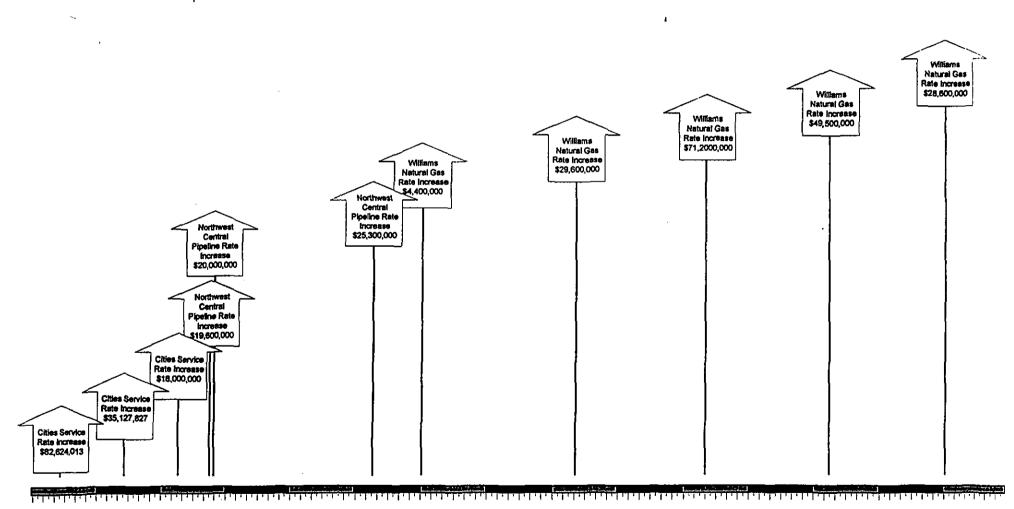
1	time, do a comparison of the Mid-Kansas 1 contract and
2	the Mid-Kansas 2 contract?
3	A. No, I've not made such a comparison.
4	Q. Are you intending to do so in your
5	testimony?
6	A. No, I don't believe.
7	Q. Have you read Mid-Kansas 1?
8	A. Yes, I have read it.
9	Q. You answered some questions, I believe, that
10	Mr. Duffy had asked regarding the lower commodity
11	costs and fixed transportation rates. Do you recall
12	those questions?
13	A. Yes.
14	Q. Do you recall indicating that the commodity
15	price and transportation terms were more favorable to
16	MGE under Mid-Kansas 2 than under Mid-Kansas 1?
17	A. I did make that statement.
18	Q. I don't recall if Mr. Duffy asked this
19	question. Are you familiar with the fact that under
20	Mid-Kansas 1 there was a buying limitation of takes to
21	4 BCF a year, but under Mid-Kansas 2 that volume
22	limitation was eliminated and MGE had the right to
23.	take 46,332 MMBtu every day?
24	A. I'm aware of that fact, yes.
25	Q. Will you agree that is a favorable provision

55

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109
TOLL FREE - 1-888-636-7551

(573)636-7551 JEFFERSON CITY, MO 65109 TOLL FREE - 1-888-636-7551

Williams Natural Gas General Rate Case Filings



1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995

BEFORE THE PUBLIC SERVICE COMMISSION 1 OF THE STATE OF MISSOURI 3 4 In the Matter of Missouri Gas Energy's Gas Cost Adjustment) Case No. GR-96-450 5 Tariff Revisions to be Reviewed in its 1996-1997 Annual Reconciliation Adjustment Account) 6 7 8 9 10 DEPOSITION OF MICHAEL T. LANGSTON, 11 a witness, sworn and examined on the 27th day of 12 October, 1998, between the hours of 8:00 a.m. and 13 6:00 p.m. of that day at the law office of Brydon, Swearengen & England, 312 East Capitol Avenue, in the 14 City of Jefferson, County of Cole, State of Missouri, 15 before 16 17 18 KRISTAL R. MURPHY, CSR, RPR, CCR 19 ASSOCIATED COURT REPORTERS, INC. 714 West High Street 20 Post Office Box 1308 JEFFERSON CITY, MISSOURI 65102 21 (573) 636-7551 22 23 Notary Public, within and for the State of Missouri, 24 in the above-entitled cause, on the part of the MGE, 25 taken pursuant to agreement. Associated Court Reporters, Inc. Jefferson City, MO (573) 636-7551 ASSOCIATED COURT REPORTERS, INC. (573) 636-7551 JEFFERSON CITY, MO 65101

responsibilities, do you manage the gas supply portfolios of all of those, I mean, in the head position? Is that a safe description of what your duties include?

- A. Yes.
- Q. Does MGE -- does Southern Union, generally, with respect to these 100 or so cities that you serve, have as one of its goals a desire to maintain a balanced or diversified transportation portfolio where possible?
- A. I'm not sure if I understand what you mean by a balanced transport portfolio.
- Q. Let me try to rephrase that and be more specific. You had earlier said that you agreed it was a goal when you acquired the Western Resources distribution property -- that one of your goals was to move away from reliance upon Williams that is, basically, the predominant supplier.

What I'm trying to get at is, is that a philosophy of -- the philosophy of not relying on one pipeline for transportation, is that a philosophy that you have applied to the other cities in which Southern Union has local distribution companies?

A. Yes. In general, our intention is to provide the maximum amount of interconnected capacity

Q. We have described Riverside I, generally speaking, as the transportation-only version of Mid-Kansas II where MGE makes the purchasing decisions and the pipe -- and I'll refer to the Riverside pipe as all of the pipe from Oklahoma to Missouri -- only transports it.

Is the role of being the purchaser of the commodity, the gas, something that MGE and Southern Union generally prefer to have, rather than have the merchant function held by a third party?

- A. Generally, that's true.
- Q. Okay. I believe you -- in answering questions posed by the MPSC Staff counsel, you were present and directly involved in negotiations surrounding the execution of the Mid-Kansas II agreement; is that correct?
 - A. Yes.

- Q. And, generally speaking, were you involved in the negotiations regarding the acquisition of the Western Local Distribution Company?
 - A. I was not involved in the negotiation of the

ASSOCIATED COURT REPORTERS, INC. (573) 636-7551 JEFFERSON CITY, MO 65101

ı	
1	PUBLIC SERVICE COMMISSION STATE OF MISSOURI
2	SIRIE OF MISSOURI
3	In the Matter of Missouri Gas) Energy's Gas Cost Adjustment)
4	Tariff Revisions to be Reviewed) Case No. GR-96-450 in its 1996-1997 Annual
5	Reconciliation Adjustment) October 26, 1998 Account.) Jefferson City, Mo.
6	, , , , , , , , , , , , , , , , , , , ,
7	
8	DEPOSITION OF MICHAEL WALLIS,
9	
10	day of October, 1998, between the hours of 8:00 a.m.
11	and 6:00 p.m. of that day at the law offices of
12	
13	Brydon, Swearengen & England, 312 East Capitol, in the
14	City of Jefferson, County of Cole, State of Missouri,
15	before
	KELLENE FEDDERSEN, CSR, RPR
16	ASSOCIATED COURT REPORTERS, INC. 714 West High Street
17	P.O. Box 1308
18	JEFFERSON CITY, MO 65109 (573) 636-7551
19	The same multiple and the state of
20	and Notary Public within and for the State of
21	Missouri, commissioned in Cole County, in the
22	above-entitled cause, on the part of MGE, taken
23	pursuant to agreement.
24	
25	Associated Court Reporters, Inc. Jefferson City, MO (57.) 636-7564

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109 TOLL FREE - 1-888-636-7551

Q. In your opinion, was it reasonable in May of 1996 for MGE to be concerned about the high level of capacity commitment on the Williams system alone from

44

24

25

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109

TOLL FREE - 1-888-636-7551

1	PUBLIC SERVICE COMMISSION STATE OF MISSOURI
2	
3	In the Matter of Missouri Gas) Energy's Gas Cost Adjustment)
4	Tariff Revisions to be Reviewed) Case No. GR-96-450 in its 1996-1997 Annual
5	Reconciliation Adjustment) October 26, 1998 Account.) Jefferson City, Mo.
6	
7	
8	DEPOSITION OF MICHAEL WALLIS,
9	a witness, produced, sworn and examined on the 26th
10	day of October, 1998, between the hours of 8:00 a.m.
11	and 6:00 p.m. of that day at the law offices of
12	Brydon, Swearengen & England, 312 East Capitol, in the
13	City of Jefferson, County of Cole, State of Missouri,
14	before
15	
16	KELLENE FEDDERSEN, CSR, RPR ASSOCIATED COURT REPORTERS, INC.
17	714 West High Street P.O. Box 1308
18	JEFFERSON CITY, MO 65109 (573) 636-7551
19	and Notary Public within and for the State of
20	Missouri, commissioned in Cole County, in the
21	above-entitled cause, on the part of MGE, taken
22	pursuant to agreement.
23	haradate en agreement.
24	
25	Associated Court Reporters, Inc. Jefferson City, MO (573) 636-7551

ASSOCIATED COURT REPORTERS, INC. (573) 636-7551 JEFFERSON CITY, MO 65109
TOLL FREE - 1-888-636-7551

43

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109

TOLL FREE - 1-888-636-7551

Q. In your opinion, was it reasonable in May of 1996 for MGE to be concerned about the high level of capacity commitment on the Williams system alone from

44

24

25

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109

TOLL FREE - 1-888-636-7551

BEFORE THE PUBLIC SERVICE COMMISSION 1 OF THE STATE OF MISSOURI 2 3 4 In the Matter of Missouri Gas Energy's Gas Cost Adjustment 5 Tariff Revisions to be Reviewed) Case No. GR-96-450 in its 1996-1997 Annual 6 Reconciliation Adjustment Account) 7 8 9 10 DEPOSITION OF MICHAEL T. LANGSTON, 11 a witness, sworn and examined on the 27th day of 12 October, 1998, between the hours of 8:00 a.m. and 13 6:00 p.m. of that day at the law office of Brydon, Swearengen & England, 312 East Capitol Avenue, in the 14 15 City of Jefferson, County of Cole, State of Missouri, 16 before 17 18 KRISTAL R. MURPHY, CSR, RPR, CCR 19 ASSOCIATED COURT REPORTERS, INC. 714 West High Street 20 Post Office Box 1308 JEFFERSON CITY, MISSOURI 65102 21 (573) 636-7551 22 23 Notary Public, within and for the State of Missouri, 24 in the above-entitled cause, on the part of the MGE, 25 taken pursuant to agreement. Associated Court Reporters, Inc. Jefferson City, MO (573) 636-7551 ASSOCIATED COURT REPORTERS, INC. (573) 636-7551 JEFFERSON CITY, MO 65101

correct.

б

Okay. What I'd like to do, Mr. Langston, is talk a little bit about the differences between Mid-Kansas II and Mid-Kansas I, and you don't necessarily need to refer to the contract unless you -- unless you want to. I'm going to try to be broad enough where we can talk about concepts.

Is it fair to describe the commodity charge under the Mid-Kansas II agreement as a price equal to 105 percent of what is referred to as a TRANSOK spot index?

- A. Yes, for any base load quantities that we nominated for the month.
- Q. And with respect to the Mid-Kansas I contract, do you recall that the commodity cost there was 114 percent of an average spot of certain Mid-Kansas -- or Mid-Continent pipelines?
- A. I don't recall the specifics, but that very well could have been the pricing provision.
- Q. Okay. Do you recall the price provision under -- let me ask it this way: In your opinion, was the pricing provision of the Mid-Kansas II contract as to commodity better than the commodity pricing under the Mid-Kansas I agreement?
 - A. Yes.

ASSOCIATED COURT REPORTERS, INC. (573) 636-7551 JEFFERSON CITY, MO 65101

1 2	PUBLIC SERVICE COMMISSION STATE OF MISSOURI
3	In the Matter of Missouri Gas)
4	Energy's Gas Cost Adjustment) Tariff Revisions to be Reviewed) Case No. GR-96-450
5	in its 1996-1997 Annual) Reconciliation Adjustment) October 28, 1998
6	Account.) Jefferson City, Mo.
7	
8	DEPOSITION OF THOMAS SHAW,
9	
10	a witness, produced, sworn and examined on the 28th
11	day of October, 1998, between the hours of 8:00 a.m.
12	and 6:00 p.m. of that day at the law offices of
13	Brydon, Swearengen & England, 312 East Capitol, in the
14	City of Jefferson, County of Cole, State of Missouri,
15	before
16	KELLENE FEDDERSEN, CSR, RPR ASSOCIATED COURT REPORTERS, INC.
17	714 West High Street P.O. Box 1308
18	JEFFERSON CITY, MO 65109 (573) 636-7551
19	and Notary Public within and for the State of
20	Missouri, commissioned in Cole County, in the
21	above-entitled cause, on the part of MGE, taken
22	
23	pursuant to agreement.
24	COPY
25	Associated Court Reporters, Inc. Jefferson City, MO (573) 836-7551

1.

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109
TOLL FREE - 1-888-636-7551

A. I can't think of one, no.

25

58

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109

TOLL FREE - 1-888-636-7551

1	BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI
2	OF THE STATE OF MISSOURI
3	
4	In the Matter of Missouri Gas) Energy's Gas Cost Adjustment)
5	Tariff Revisions to be Reviewed) Case No. GR-96-450 in its 1996-1997 Annual
6	Reconciliation Adjustment Account)
7	
8	
9	
10	DEPOSITION OF MICHAEL T. LANGSTON,
11	a witness, sworn and examined on the 27th day of
.12	October, 1998, between the hours of 8:00 a.m. and
13	6:00 p.m. of that day at the law office of Brydon,
14	Swearengen & England, 312 East Capitol Avenue, in the
15	City of Jefferson, County of Cole, State of Missouri,
16	before
17	
18	KRISTAL R. MURPHY, CSR, RPR, CCR
19	ASSOCIATED COURT REPORTERS, INC. 714 West High Street
20	Post Office Box 1308 JEFFERSON CITY, MISSOURI 65102
21	(573) 636-7551
22	
23	Notary Public, within and for the State of Missouri,
24	in the above-entitled cause, on the part of the MGE,
25	taken pursuant to agreement.
	1 Associated Court Reporters, Inc. Jefferson City, MO (573) 636-7551
	ASSOCIATED COURT REPORTERS, INC. (573) 636-7551 JEFFERSON CITY, MO 65101

A. Yes.

- Q. And you testified that those contracts vary in terms from -- I believe anything from one year all of the way out to the year 2013?
 - A. I believe that's right.
- Q. And under those contracts, generally, as

 MGE -- to your knowledge, has MGE and its predecessor

 Western paid any such additional charges for

 transportation such as transition costs, take-or-pay

 liabilities, pollution liabilities, GSR, ACI,

 et cetera?
 - A. Yes.
- Q. Without recalling any specific numbers, would you generally recall those costs that Williams has assessed to MGE to be significant?
- A. Yes, I -- the primary costs are what they refer to as gas supply realignment costs. Those run \$2 1/2 to \$3 million per quarter. We get approximately 40 percent of that allocation, so our costs are, you know, 1.1 to 1.2 million, normally. It does change every month -- I mean, every quarter.
- Q. Does MGE absorb those charges or do you pass them on to the ratepayers in your charges, to the

ASSOCIATED COURT REPORTERS, INC. (573) 636-7551 JEFFERSON CITY, MO 65101

t	
1	PUBLIC SERVICE COMMISSION STATE OF MISSOURI
2	
3	In the Matter of Missouri Gas) Energy's Gas Cost Adjustment)
4	Tariff Revisions to be Reviewed) Case No. GR-96-450 in its 1996-1997 Annual
5	Reconciliation Adjustment) October 28, 1998 Account.) Jefferson City, Mo.
6	Account. / Dellerson City, Mo.
7	
8	DEPOSITION OF THOMAS SHAW,
9	
10	a witness, produced, sworn and examined on the 28th
11	day of October, 1998, between the hours of 8:00 a.m.
1.2	and 6:00 p.m. of that day at the law offices of
	Brydon, Swearengen & England, 312 East Capitol, in the
13	City of Jefferson, County of Cole, State of Missouri,
14	before
15	KELLENE FEDDERSEN, CSR, RPR
16	ASSOCIATED COURT REPORTERS, INC.
17	714 West High Street P.O. Box 1308
18	JEFFERSON CITY, MO 65109 (573) 636-7551
19	
20	and Notary Public within and for the State of
21	Missouri, commissioned in Cole County, in the
	above-entitled cause, on the part of MGE, taken
22	pursuant to agreement.
23	
24	Associated Court Reporters, Inc.
25	Jefferson City, MO (573) 636-7551

ASSOCIATED COURT REPORTERS, INC. (573) 636-7551 JEFFERSON CITY, MO 65109
TOLL FREE - 1-888-636-7551

25

the ratepayer?

1.

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109

TOLL FREE - 1-888-636-7551

- 2
- Q. Are you aware of whether or not Mr. Wallis' calculations takes into consideration those additional charges above and beyond the reservation charge in doing his comparison?

4

A. I'm not aware whether they do or not.

If they do not, don't you think it's unfair to do a

7

Q. Assume for the time being that they do not.

8

comparison when you've got certain charges that MGE is

9

paying for services passed along to the consumer, but

10 11

yet it's not included in the calculation in comparing

12

two different pipelines?

13

14

15

16

17

18

19

20

21

2223

24

25

A. Certainly this was a topic of discussion when we settled the previous cases, and Staff's position was, and I think probably will be, that the direct bill taker pay charges are unavoidable costs as a result of FERC deregulation.

The transition charges, if they're a surcharge on the transportation invoice, it may -- probably would be appropriate to consider doing the surcharge as a possible additional charge that should be considered when -- if you transferred your load to another pipeline system.

Q. I guess my question, I understand your position and the Staff's position you just testified

51

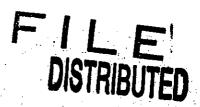
ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109

1	PUBLIC SERVICE COMMISSION STATE OF MISSOURI
2	SIATE OF MISSOURI
3	In the Matter of Missouri Gas) Energy's Gas Cost Adjustment)
4	Tariff Revisions to be Reviewed) Case No. GR-96-450 in its 1996-1997 Annual
5	Reconciliation Adjustment) October 26, 1998 Account.) Jefferson City, Mo.
6	
7	
8	DEPOSITION OF MICHAEL WALLIS,
9	a witness, produced, sworn and examined on the 26th
10	day of October, 1998, between the hours of 8:00 a.m.
11	and 6:00 p.m. of that day at the law offices of
12	
13	Brydon, Swearengen & England, 312 East Capitol, in the
14	City of Jefferson, County of Cole, State of Missouri,
15	before
16	KELLENE FEDDERSEN, CSR, RPR ASSOCIATED COURT REPORTERS, INC.
17	714 West High Street P.O. Box 1308
18	JEFFERSON CITY, MO 65109 (573) 636-7551
19	
20	and Notary Public within and for the State of
21	Missouri, commissioned in Cole County, in the
22	above-entitled cause, on the part of MGE, taken
23	pursuant to agreement.
24	
25	Associated Court Reporters, Inc. Jefferson City, MO (573) 636-7551
	1 30 marson City, MC (5/3) 636-7551

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109
TOLL FREE - 1-888-636-7551

ASSOCIATED COURT REPORTERS, INC. (573)636-7551 JEFFERSON CITY, MO 65109

Page 2 of 2



BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of the investigation of certain PGA-related issues involving Missouri Gas Energy, a division of Southern Union Company.

Case No. GO-94-318

REPORT AND ORDER

Issue Date:

January 31, 1996

Effective Date:

February 14, 1996

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of the investigation of certain

PGA-related issues involving Missouri Gas Energy.

A division of Southern Union Company.

Phase II

APPEARANCES

Gary W. Duffy, Brydon, Swearengen & England, P.C., 312 East Capitol Avenue, Post Office Box 456, Jefferson City, Missouri 65102, for Missouri Gas Energy, a division of Southern Union Company.

Richard W. Stavely, Attorney at Law, 257 North Broadway, Suite 200, Wichita, Kansas 67202-2318, for MOUNTAIN IRON & Supply Company.

Milliam G. Riggins, Staff Attorney, Kansas City Power & Light Company, 1201 Walnut Street, Kansas City, Missouri 64106, for Kansas City Power & Light Company.

James M. Fischer, Attorney at Law, 101 West McCarty Street, Suite 215, Jefferson City, Missouri 65101; for Fidelity Natural Gas, Inc.; Greeley Gas Company, a division of Atmos Energy Corporation; and Tartan Energy Company of Missouri, L.C., d/b/a Southern Missouri Gas Company, L.C.

James C. Swearengen and Dean L. Cooper, Brydon, Swearengen & England, P.C., 312 East Capitol Avenue, Post Office Box 456, Jefferson City, Missouri 65102, for Associated Natural Gas Company, a division of Arkansas Western Gas Company: Missouri Public Service, a division of UtiliCorp United Inc.; St. Joseph Light & Power Company: and United Cities Gas Company.

Michael C. Pendergast, Assistant General Counsel, Laclede Gas Company, 720 Olive Street, Room 1530, St. Louis, Missouri 63101, for Laclede Gas Company.

Richard W. French, French & Stewart, 1001 East Cherry Street, Suite 302, Columbia, Missouri 65201, for Trigen-Kansas City Energy Corporation.

Richard S. Brownlee, III, Hendren and Andrae, 235 East High Street; Post Office Box 1069, Jefferson City, Missouri 55102, for Williams Natural Gas Company.

Paul W. Phillips, Deputy Assistant General Counsel, United States Department of Energy, 1000 Independence Avenue, S.W., Washington, D.C. 20585, for the United States Department of Energy and the Federal Executive Agencies.

Stuart W. Conrad, Finnegan, Conrad & Peterson, 1209 Penntower Office Centex, 3100 Broadway, Kansas City, Missouri 64111, for Midwest Gas Users Association.

Milliam M. Barvick, Attorney at Law, 240 East High Street, Suite 202, Jefferson City, Missouri 65101, for the City of Kanses City, Missouri.

Ronald R. Evans, Associate General Counsel, Union Electric Company, 1901 Chouteau Avenue, Post Office Box 149, St. Louis, Missouri 63166, for Union Electric Company.

Dougles E. Micheel, Senior Public Counsel, Office of the Public Counsel, Post Office Box 7800, Jefferson City, Missouri 65102, for the Office of the Public Counsel and the public.

Penny G. Baker, Deputy General Counsel, Missouri Public Service Commission, Post Office Box 360, Jefferson City, Missouri 65102, for the staff of the Missouri Public Service Commission.

ADMINISTRATIVE LAW JUDGE:

Thomas H. Luckenbill, Deputy Chief.

REPORT AND ORDER

On April 8, 1994; Missouri Gas Energy, a division of Southern Union Company (MGE), filed a motion to establish a docket to address certain Purchased Gas Adjustment (PGA) related issues. This motion was made by MGE under the terms of the unanimous stipulation and agreement filed by the parties in Case No. GR-93-240. Case No. GR-93-240 was the most recent rate case of Western Resources, Inc. d/b/a Gas Service, a Western Resources Company (WRI). MGE is the successor of WRI with respect to all Missouri properties formerly owned and operated by WRI with the exception of the Palmyra service area, which was purchased by United Cities Gas Company. Southern Union Company (parent of MGE) acquired all the Missouri properties of WRI, except for the Palmyra service area, on or about January 31, 1994. The unanimous stipulation and agreement filed in GR-93-240 deferred all issues raised by the parties in that proceeding relative to the PGA to a subsequent proceeding. Some of these issues (e.g., transition costs) have been addressed by interested parties and the Missouri Public Service Commission (Commission) in Cases GT-95-32 and GR-93-33.

On April 15, 1994, the Commission issued an Order And Notice which established a prehearing conference and made parties to GR-93-240 parties to this docket.

Trigen-Kansas City District Energy Corporation; Williams Natural Gas Company; the City of Kansas City, Missouri; Union Electric Company; Tartan Energy Company, L.C., d/b/a Southern Missouri Gas Company, L.C.; Fidelity Natural Gas, Inc.; Greeley Gas Company, a division of Atmos Energy Corporation; Missouri Public Service, a division of Utilicorp United Inc.; Associated Natural Gas Company, a division of Arkansas Western Gas Company; United Cities Gas Company; St. Joseph Light and Power Company; Laclede Gas Company; and Cohen-Esrey Real Estate all applied for and were granted intervention in this proceeding.

on July 29, 1994, the parties jointly filed a list of issues and positions. On or about August 19, 1994, further statements of position and recommended procedural treatment of issues were filed by various parties. On or about September 2, 1994, responses to the recommendations of various parties were filed.

On October 19, 1994, the Commission issued an Order Defining Scope
Of Docket, Providing Notice And Establishing Prehearing Conference. This order
defined seven issues for consideration in this docket.

On January 27, 1995, the Commission issued an Order Establishing Procedural Schedule. This order separated the docket into two phases. On October 19, 1995, the Commission convened a prehearing conference with respect to Phase II of this case.

On September 7, 1995, the Commission issued a Report And Order in this docket with an effective date of September 19, 1995, which order dealt with the certain issues delineated as Phase I issues.

On October 27, 1995, a hearing memorandum was filed which provided the positions of the parties on the issue to be decided by the Commission in Phase II of this docket. The issue framed by the Commission for consideration in Phase II of this docket is:

Whether MGE's Purchased Gas Adjustment/Actual Cost Adjustment (PGA/ACA) tariff provisions should be

modified or eliminated to effectuate a gas cost recovery mechanism where MGE bears financial risk in connection with gas procurement practices in addition to or distinct from the current prudence review mechanism.

On November 6, 1995, the evidentiary hearing commenced. The evidentiary hearing adjourned on November 8, 1995. Briefs have been filed and the Phase II issue (and related subissues as identified by the parties) are now before the Commission for decision.

Findings of Fact

The Missouri Public Service Commission, having considered all of the competent and substantial evidence upon the whole record, makes the following findings of fact.

MGE currently operates under tariff provisions approved by the Commission which allow MGE to alter the rates for the cost of gas outside the context of a general rate case. The Purchased Gas Adjustment tariff provisions establish a process whereby MGE may periodically file estimated changes in the cost of gas it obtains from suppliers of natural gas. MGE then makes an Actual Cost Adjustment (ACA) filing after each twelve-month ACA period. The ACA filing is made to ensure that gas costs passed on to customers reflect the MGE's actual cost of gas. In addition, the ACA filing and related contested case provide the Commission an opportunity to review the prudence of decisions underlying gas costs passed on to ratepayers by MGE through the PGA provisions.

The parties divided the issue as identified by the Commission into several subsesses. The Commission will address the issues as framed by the parties to the case. The first two subissues are so closely related that the Commission will consolidate them for purposes of this Report And Order.

- 1. Should the PGA/ACA process be eliminated?
- 2. Should traditional rate case treatment be used in lieu of the PGA and incentive PGA mechanisms?

MGE's position is that the PGA/ACA process should not be eliminated. MGE states that the PGA/ACA has served to keep costs to ratepayers low by allowing gas companies to deal with price fluctuations outside of their control. MGE states that changes in federal regulation of the natural gas industry present an opportunity to modify the PGA/ACA process to provide a process which is designed to allow a local distribution company an incentive to minimize overall gas costs without jeopardizing reliability. MGE states that the PGA/ACA mechanism should not be eliminated if the replacement would be to thrust consideration of gas costs into a traditional rate case. MGE further states that an incentive aspect can be added to the existing PGA/ACA process to reduce potential litigation over prudence issues and reduce the administrative requirements of the Staff of the Commission (Staff).

MGE states that traditional rate case treatment should not be used in lieu of the PGA and incentive PGA mechanisms. MGE states that use of a traditional rate case to deal with gas costs would not be in the ratepayers' best interest. MGE states that elimination of the PGA/ACA process and replacement of that process with a traditional rate case will shift significant market risk to the utility company, thus requiring substantially higher rates of return and a correspondingly higher cost of service, including increased working capital requirements and increased gas costs. MGE states that rates of return have been set for the past 30 years for gas companies on the assumption that the market price of gas is flowed through to consumers with no profit to the gas company. MGE states that gas prices, which are now set by the market as a result of federal deregulation, have demonstrated significant volatility. MGE states that gas costs are a significant part of the overall cost of providing gas service. MGE states that this combination means that it will be difficult to arrive at gas

costs in a traditional rate case that are representative of the future without risking significant gains or losses by the utility. MGE states that the magnitude of some potential losses could seriously jeopardize the financial viability of the company. MGE states that to require the gas company to take on these significant new risks will require a corresponding increase in the allowed return on equity to compensate it for these risks. MGE further states that no other states treat gas costs as a component of the cost of service in a traditional rate case so use of the traditional rate case for handling gas costs would make Missouri unique, which would further complicate the rate of return process.

staff states that the current FGA/ACA process is administratively cumbersome and does not provide positive incentives for successful management. Staff states that other alternatives such as handling gas costs in a general rate case may not be feasible given the volatility of the spot market and the nature of the FERC process. Staff states that it is concerned with the likely potential for higher capital costs associated with changes to the current gas cost recovery mechanism that will cause increased volatility in earnings.

The Staff states that it does not believe a rate case approach should be used in lieu of the current PGA/ACA process. Staff states that even though a rate case approach could provide positive incentives for efficiency in the procurement of gas, it does not adequately address the issue of spot market volatility and the current nature of the FERC process.

PGA/ACA process should be eliminated. OPC provides five reasons for its position. First, OPC states that the historical basis on which the PGA/ACA has been based has changed with the enactment of Order 636 by the Federal Energy Regulatory Commission (FERC). Second, OPC states that the ACA and related prudence review fail to adequately monitor and enforce prudent gas procurement

processes. Third, traditional regulation or an alternative regulatory format (total cost of service) would provide better incentives to minimize costs subject to risk and reliability and improve profitability. Fourth, the current PGR focuses on only one cost component of MGE's cost of service, gas supply costs. OPC believes the focus on one cost in determining a rate is not prudent regulatory policy and constitutes illegal single-issue ratemaking. Fifth, the current ACA process focuses on only one cost component of MGE's cost of service, gas supply costs. OPC believes the focus on one cost in determining a rate is not prudent regulatory policy and in the case of the ACA constitutes not only single-issue ratemaking but also retroactive ratemaking.

OPC states that it believes the traditional rate case treatment is the appropriate method to deal with MGE's gas costs. OPC states that traditional rate case treatment would give MGE better incentives to minimize costs subject to risk and reliability and to improve profits. OPC states that, moreover, it believes it is better regulatory policy to review all costs of service items at one time in the context of a rate proceeding where the company's authorized rate base is audited and reviewed as opposed to isolating one cost of service item, gas costs.

The United States Department of Energy (DOE) states the PGA/ACA process should be eliminated. DOE supports the position of OPC and the testimony and reasoning of OPC witness Mr. Trippensee. DOE agrees with OPC that because of the recent changes in the gas industry, the current PGA/ACA process does not meet the requirements for permissible single issue ratemaking under State ex rel. Utility Consumers Council of Missouri, Inc. v. Public service Commission, 585 S.W.2d 41 (Mo. banc 1979).

Midwest Gas Users Association (MGUA) states that it believes that at the present time the statutory rate case treatment is the only lawful and

effective means of exploring all relevant factors which may be involved in a need for a rate increase.

Laclede Gas Company (Laclede) states that the PGA/ACA process should not be eliminated because it continues to perform functions that are vital to protecting the interests of both local distribution company (LDC) ratepayers and LDC shareholders. Laclede continues by stating more specifically that by permitting rates to be adjusted on a timely basis to reflect substantial changes in the LDC's purchased gas costs, the PGA/ACA process ensures that natural gas customers will not be arbitrarily deprived of the benefits of significant gas cost decreases and that the financial integrity of LDCs, and their ability to render reliable service, will not be continually threatened by gas cost increases that the LDCs are powerless to influence.

Laclede states that the traditional rate case approach is such a grossly inadequate and impractical alternative for recovering purchased gas costs that the Commission's use of such a mechanism would constitute an abdication of the Commission's statutory duty to set just and reasonable rates. Accordingly, Laclede states that the traditional rate case approach should not be used in lieu of the PGA or incentive PGA mechanisms.

The Small LDC Group (Tartan Energy Company, L.C., d/b/a Southern Missouri Gas Company, L.C., Fidelity Natural Gas, Inc., and Greeley Gas Company, a division of Atmos Energy Corporation) states that it does not believe that a traditional rate case approach is preferable to the existing PGA or an incentive PGA mechanism. The Small LDC Group believes that the PGA/ACA process should not be eliminated for the LDC industry, except on a case-by-case basis. The Small LDC Group takes no position on whether MGE's PGA/ACA should be eliminated.

Union Electric Company (UE) does not present a position on whether the PGA/ACA process as it applies to MGE should be eliminated. It is UE's position that the plan or form of gas cost recovery for gas utilities should be

determined in the context of each gas utility's particular circumstances. UE offers no comments on the specific plan proposed by MGE.

The Commission finds that the PGA/ACA process should not be eliminated. The Commission finds that the PGA/ACA mechanism is an effective way to handle the risk associated with short term fluctuations in the price of natural gas. In addition, the Commission is of the opinion that the PGA/ACA does not constitute unlawful single-issue ratemaking. The Commission's opinion with regard to the legality of the PGA/ACA mechanism will be addressed in the Conclusions Of Law section of this Report And Order.

The Commission finds that the spot market price of natural gas fluctuates significantly. The Commission further finds that approximately 60 percent of the expenses of a typical Missouri LDC are expenses that the LDC incurs to purchase gas for resale to its customers. The Commission finds that elimination of the PGA/ACA process would have a detrimental impact on the financial viability of the LDC which would ultimately harm ratepayers.

The Commission is of the opinion that LDCs would likely respond to elimination of the PGA/ACA by increasing the requested authorized return on equity or engage in a substantial level of trading in natural gas derivatives to hedge against price change risks. The Commission finds that these are undesirable outcomes since either of these would cause the average price of natural gas charged to ratepayers to increase. Thus, the Commission finds that the PGA/ACA process should not be eliminated because it is the only process presented to date that results in LDCs maintaining a level of business risk that ensures the financial viability of LDCs while preserving just and reasonable rates for customers. The Commission, however, would note its concern regarding the length of time that it takes to process ACA cases. For instance, GR-92-80 is an open ACA case covering the 1991-1992 ACA period. In addition, ACA cases

covering each subsequent ACA period for Western Resources, Inc., or MGE are still not resolved.

The Commission finds that traditional rate case treatment should not be used in lieu of the PGA or incentive PGA mechanisms because the PGA process is the only process presented to date that results in LDCs maintaining a level of business risk that ensures the financial viability of LPCs while preserving just and reasonable rates for customers.

3. Should the current PGA/ACA process be modified exclusive of an incentive PGA mechanism?

MGE's position is that the current PGA/ACA process should not be modified exclusive of an incentive PGA mechanism. MGE states that the modifications to the PGA suggested by the Staff which would reduce the frequency of PGA filings should not be implemented outside the context of a general rate proceeding. MGE states that the current thresholds for filing PGAs assume a certain level of cash working capital requirements, since MGE absorbs the effects of such changes up to the threshold level. Changes to the threshold PGA filing level should not be made outside the context of a general rate case where those cash working capital considerations can be addressed.

The Staff states that the trigger mechanism currently embodied in the PGA for MGE should be increased to reduce the number of PGA filings.

OPC takes no position on this issue because OPC is requesting that the PGA/ACA process be eliminated.

DOE asserts that the current PGA/ACA should be modified to exclude take-or-pay and transition cost components because they constitute impermissible single-issue ratemaking.

MGUA challenges the use of the PGA to charge costs to transportation customers who are not purchasing natural gas from the utility.

Laclede states that it is opposed to Staff's proposal to raise the threshold level of gas cost changes necessary to trigger a PGA filing. Laclede states that Staff's proposal could result in deferred costs or credits which are too large to expect LDCs or ratepayers to temporarily absorb.

The Commission is of the opinion that this is not the appropriate docket to implement an increase in the threshold amount required to trigger the PGA filing process. The purpose of Phase II in this docket is to consider fundamental changes to the PGA/ACA process in relationship to the current prudence review mechanism. The PGA threshold issue is one of mechanical detail and is not ripe for decision in this docket, which deals with the broad policy issue of whether a fundamental modification to the process is needed. The Commission would note that it is making no decision as to the merits of the PGA threshold issue. The Commission is of the opinion that if the parties have a dispute about the appropriate level of the PGA filing threshold, the issue should be presented to the Commission for decision in a separate proceeding.

4. Should MGE's minimum filing requirements under the current PGA/ACA process be modified?

Staff states that requiring LDCs to submit minimum filling requirements for review prior to the ACA period would be an improvement to the current PGA/ACA process. Staff states that this filing should include the provision of some information prior to the costs being incurred in order to avoid an attempt at "after-the-fact" justification regarding procurement decisions by either MGE or the Staff.

MGE's position is that the Staff has access now to all of the relevant data it needs to perform its audit functions and that additional minimum filing requirements are neither necessary nor desirable.

The Commission is of the opinion that MGE should be required to file information relating to MGE's gas supply reliability for the next ACA period.

In addition, if MGE implements the financial incentive mechanism as detailed in this Report And Order, MGE will be required to file monitoring reports after the conclusion of each ACA period. These requirements will be fully explained in the discussion of the implementation of a financial incentive mechanism (subissue ? hereinafter).

5. Are the incentive PGA mechanisms proposed by MGE and Staff legal?

MGE has stated that the Commission can only order MGE to implement the proposal that it has offered. MGE states that the Commission has previously reached this conclusion in ER-95-411. In that case, the Commission stated that it can "not under current statutes order [a utility] to adopt a plan to share earnings with customers..."

The Commission is of the opinion that the true issue on this point would be whether the Commission, in conjunction with Missouri courts,—can force a gas local distribution company to implement a financial incentive mechanism that the utility does not want to implement. The Commission is of the opinion that it has the lawful authority to order MGE to enter into a financial incentive mechanism other than the one proposed by MGE so long as the decision results in setting just and reasonable rates based on competent and substantial evidence. The financial incentive mechanism applicable in this case is different from the one discussed in ER-95-411 in that the mechanism in ER-95-411 was an earnings sharing plan while the mechanism proposed by MGE in this case involves sharing of gas costs or savings. Notwithstanding the foregoing, however, the Commission has no interest in forcing MGE to implement a financial incentive mechanism that MGE does not want to implement. The Commission does have an interest, and indeed an obligation, to establish the reasonable characteristics of a financial incentive mechanism, and has done so in this case.

6. Should MGE be required to unbundle services as a prior condition to implementation of any incentive PGA mechanism?

MGE states that the concepts of "unbundling" and "incentive PGAs" are mutually exclusive concepts if "unbundling" is used in the same sense that it has been applied to the interstate pipelines. MGE states that interstate pipelines have divested themselves of the merchant function and thus sell no gas. MGE states that the incentive PGA approach contemplates that MGE will continue to acquire and sell gas to its customers. MGE continues by stating that if "unbundling" is suggested as requiring changes to the transportation structure of MGE as a prior condition, the answer is still "no" because changes to the transportation structure of MGE were dealt with in issues 1 through 6 in this proceeding and also in GT-95-32.

The Staff states that the issue of unbundling was dealt with in Phase I of this proceeding and should not be reconsidered in Phase II.

Laclede states that there is no logical nexus between whether services are unbundled and whether an incentive PGA mechanism should be implemented. Laclede states that one should not be made contingent on the other.

MGUA states that MGE should be made to unbundle all its service offerings. MGUA states that customers should only be required to purchase those services that they desire and are willing to pay for. To the extent possible. Competition should be permitted in the provision of these services.

MOUNTAIN IRON & Supply Company (MOUNTAIN IRON) states that MGE's proposal is premature and anticompetitive. MOUNTAIN IRON states that real competitive experience should be accumulated by MGE before it assumes the financial tisk of open-market buying. MOUNTAIN IRON further states that MGE has clearly evidenced its opposition to fair and open competition in sales to small business. MOUNTAIN IRON further asserts that MGE's gas cost incentive proposal is driven by its dominant market share of gas buying for its certificated area. MOUNTAIN IRON states that MGE's offer to share profits with ratepayers is merely

its cost of access to monopoly rents under conditions of monopolistic competition or imperfect competition in gas purchasing. MOUNTAIN IRON states that these rents will accrue to MGE's ratepayers and stockholders at the expense of its captive customers.

The Commission finds that there is no logical connection between requiring MGE to unbundle services and the implementation of a gas cost incentive mechanism. The Commission is of the opinion that unbundling of LDC services and gas cost incentive mechanisms are independent concepts. Thus, the Commission finds that MGE should not be required to unbundle service as a prior condition to implementation of a gas cost incentive PGA mechanism.

7. If the Commission adopts an incentive PGA mechanism for MGE, should it be the proposal of MGE or Staff?

MGE states that its proposal is a reasonable approach to provide an incentive to MGE to take on additional risks to provide benefits to ratepayers.

MGE states that its proposal is based on superior aspects of programs developed in other states and tailored to some of the unique factors which apply to MGE.

MGE states that its proposal is the only one presented in this docket with sufficient detail to allow implementation by the Commission. MGE states that the Staff's proposal is not complete and contains unnecessarily complex and subjective aspects which will not reduce the regulatory compliance aspects of the present system.

MGE's proposal uses a published monthly spot market price for natural gas (the index), plus a premium, in order to develop a benchmark. MGE proposes that the published prices of spot market natural gas from Inside F.E.R.C.'s Gas Market Report. MGE would use a weighted average of the reported spot market prices for two pipelines that serve the MGE system, Williams Natural Gas Company (WNG) and Panhandle Eastern Pipe Line Company (PEPL). The weighting proposed by MGE is 70 percent WNG and 30 percent PEPL. MGE witness Langston testified that

"over the long term", MGE anticipates that approximately 30 percent of the annual volumes consumed within the Missouri distribution system will flow through PEPL.

spot market prices because the spot market prices represent interruptible, base load supplies contracted on a short term basis. MGE states that it serves loads that are variable in use and requires more reliability than available with spot market gas which gas is provided on an interruptible basis. MGE states that in order to meet the requirements of customers who expect and demand service to keep them warm on the coldest day in winter, MGE must contract for gas supply in a manner that ensures: (1) that MGE has access to gas supplies on a continuing basis; (2) that supplies will be available for terms longer than 30 days; and (3) that volume "swing" capabilities are available to meet the changing market demand of MGE's customers. MGE states that in order to achieve these contracting goals it must pay more to the producer (and also the transporter) than the price reflected in the spot index.

MGE's proposal includes caps on potential gains and losses to MGE that put a limit on the additional business risk caused by the gas cost incentive mechanism. MGE stated at the hearing that it was willing to incorporate the Staff's recommendation for dealing with capacity release revenues.

The Staff states that the spot market price proposed by MGE (70 percent WNG and 30 percent PEPL) is a fair representation of an appropriate benchmark if certain adjustments are made. Staff states that the premium to be added to the weighted average of the spot market indices should be determined by using the gas sendout model and MGE's most recent contract mix subject to prudence review by the Commission.

Staff states that a tolerance zone around the benchmark is needed because weather can impact the actual premium paid by MGE. Staff states that the tolerance zone should be determined using the gas sendout model, MGE's most

recent contract mix and simulating a wide range of weather conditions to determine the variability of the premium as a function of weather conditions.

Staff agrees with MGE's proposal for caps being placed on gains and losses. Staff proposes that a pipeline fixed cost incentive mechanism be added to MGE's proposal. MGE has not agreed to this component of Staff's proposal.

The DOE and MGUA state that either incentive mechanism fails because of the prohibition against single-issue ratemaking.

OPC states that MGE's and Staff's proposals still focus merely on one cost component of MGE's cost of service, gas supply costs. OPC states that this focus solely on one component of the cost of service is not prudent regulatory policy nor consistent with the regulatory framework established by the Missouri Legislature. OPC states that if the Commission adopts an incentive PGA mechanism, the as-filed Staff proposal should be adopted.

The Commission finds that MGE should implement a gas cost incentive mechanism on a three-year experimental basis. The Commission is of the opinion that certain modifications to MGE's proposal are necessary to ensure the provision of natural gas at just and reasonable rates. The Commission finds that the premium above the weighted average of WNG and PEPL Inside F.E.R.C. indices shall be set at four percent rather than 5.04 percent. Naturally, this premium above the weighted average of the published spot market indices requires removal of the Wyoming Tight Sands contracts from the calculations under the plan. Thus, the Commission finds that the benchmark is the weighted average of WNG and PEPL Inside F.E.R.C. indices plus four percent. The Commission finds that a tolerance zone of four percent (of the benchmark amount) above the benchmark is appropriate. The benchmark is the same as the floor of the tolerance zone. The ceiling of the tolerance zone is 1.04 multiplied by the benchmark. The tolerance zone is a band in which ratepayers will fund 100 percent of the incurred cost of gas, as they do under the current mechanism.

The Commission is of the opinion that the benchmark should be set at level where the likelihood of MGE achieving results in the upper sharing grid is equal to the likelihood of MGE achieving results in the lower sharing grid." MGE's proposal of having the benchmark set at a level approximating the results achieved for the twelve months ended January 31, 1995, is built upon an implicit assumption that the mean of the probability distribution for results should be at the benchmark level. To achieve an even-handed and symmetrical financial incentive mechanism, however, the Commission believes that the benchmark should be set in a manner so that the most likely level of gas costs is equal to the benchmark plus one-half of the tolerance zone. Thus, if the tolerance zone is four percent, then the benchmark should be an estimate of the most likely level of gas costs less two percent. This approach makes it equally likely that MGE shareholders will gain or lose under the plan. After reviewing the historical data presented in this record about the difference between actual costs and Theide F. E.R.C. indices, the Commission finds that six percent is a reasonable estimate of the difference between actual gas costs and the weighted average of the Inside F.E.R.C. indices. Thus, the appropriate benchmark is four percent above the weighted average of the Inside F.E.R.C. indices because this is two percent below the Commission's estimate of the most likely level of gas costs to be incurred by MGE.

The Commission has found that setting the benchmark at four percent above the weighted average of the Inside F.E.R.C. indices promotes just and reasonable rates because this is designed to achieve balance and symmetry in the financial incentive mechanism. In addition, the Commission finds that a reduction in the benchmark from 5.04 percent to four percent promotes just and reasonable rates because the level of actual gas costs which will trigger a prudence review will be correspondingly reduced by 1.04 percent of the benchmark level. Thus, ratepayers are protected more from unusually high gas costs than

they would be using MGE's proposed benchmark at 5.04 percent above the weighted average of the Inside F.E.R.C. indices.

The Commission shall adopt MGE's proposal that the incentive mechanism contain two distinct ranges within which ratepayers and MGE share on a 50/50 basis. The Commission will refer to these ranges as an upper sharing range and a lower sharing range. The Commission finds that the ceiling of the lower sharing range shall be the benchmark level. The floor of the lower sharing range shall be 94 percent of the benchmark level. The Commission finds that the floor of the upper sharing range shall be the ceiling of the tolerance zone. The ceiling of the upper sharing range shall be 1.10 multiplied by the benchmark.

Delow the floor of the lower sharing grid, 100 percent of the savings achieved below that floor shall be passed through to ratepayers. If actual results during a twelve-month ACA period place MGE's costs above the ceiling of the upper sharing grid, a rebuttable presumption of imprudence will be associated with any costs in excess of that ceiling. The ceiling of the upper sharing grid is approximately 14 percent above the weighted average spot market indices. If natural gas costs during a twelve-month ACA period exceed that level, the Commission would automatically have serious concerns about the gas purchasing practices that lead to those results and, using the rationale of the Callaway case (RE: Union Electric Company, 27 Mo. P.S.C. (N.S.) 183, 192 (1988)), which was repeated in GR-93-140, MGE would then have the burden to dispel these serious concerns in the mind of the Commission.

If natural gas costs during a twelve-month ACA period exceed the ceiling of the upper sharing grid, an ACA prudence review is necessary. However, so long as actual natural gas costs are equal to or below the ceiling of the upper sharing grid for a twelve-month ACA period, no ACA period prudence review as necessary.

The Commission will not require MGE to incorporate Staff's recommendation for inclusion of a pipeline fixed cost incentive mechanism because this Commission does not see sufficient justification for this component in the record. However, the Commission is of the opinion that MGE's gas cost incentive mechanism should include Staff's recommendation for the treatment of capacity release revenues.

The Commission is concerned that the use of the gas cost incentive mechanism has the potential of causing MGE to modify its purchasing strategy too much in favor of short term supply and, thus, potentially jeopardizing gas supply reliability. Thus, the Commission shall order MGE to file gas supply reliability data no later than May 1, 1996. The filing shall relate to MGE's gas procurement strategy for its next ACA period (July 1, 1996, through June 30, 1997). The purpose of the filing is to ensure that MGE procures natural gas in a manner consistent with the goal of maintaining gas supply reliability. The Commission shall further order MGE to file gas supply reliability data by May 1, 1997, and May 1, 1998, for the then immediately subsequent ACA periods. The Staff shall file, and other parties to GO-96-243 may file, a response to MGE's gas supply reliability filing in GO-96-243 no later than June 1, 1996 June 1, 1997, and June 1, 1998, for the then immediately subsequent ACA period. The response(s) shall indicate whether the filing party is in agreement with MGE. If there are areas of disagreement, those areas shall be identified and party positions provided for Commission determination. The Commission shall create docket no. GO-96-243 in this Report And Order for the receipt of the gas supply reliability filings and other filings pertaining to the financial incentive mechanism. All parties to GO-94-918 shall be made parties to GO-96-243. - Any party wishing to withdraw from GO-96-243 should file a notice of withdrawal from GO-96-243.

The Commission would point out that this is an experimental program and, as such, new and useful information should come about in the course of utilizing the gas cost incentive mechanism. To facilitate appropriate analysis of the results of this experimental program, the Commission shall require that a monitoring report be filed no later than August 1, 1997, which report will contain actual gas costs of MGE during the July I, 1996, through June 30, 1997, ACA period, and any other information necessary for the Staff, Commission, and other interested persons to verify that the financial incentive mechanism has been followed. The monitoring report will be filed in GO-96-243. The Commission will further order MGE to file monitoring reports no later than August 1, 1998, and August 1, 1999, for the then immediately preceding twelve-month ACA period. The purpose of the monitoring report is to ensure that MGE is following the gas cost incentive mechanism prescribed by this order. The Staff shall file, and other parties to GO-96-243 may file, a response to MGE's monitoring report no later than September 1, 1997, September 1, 1998, and September 1, 1999. The response(s) shall indicate whether the filing party is in agreement with MGE. If there are areas of disagreement, those areas shall be identified and party positions provided for Commission determination.

The Staff, OPC, and MGE shall file recommendations, jointly or severally, regarding whether the gas cost incentive mechanism should be retained, modified or eliminated. These recommendations shall be filed no later than January 4, 1999, in Case No. GO-96-243.

The Commission makes no finding as to the necessary components of the gas supply reliability filings and monitoring reports. In order to facilitate the ability of the parties to reach a consensus regarding the necessary contents of the gas supply reliability data filings and the monitoring reports, the Commission shall schedule a technical workshop. The technical workshop shall commence at 10:00 a.m. on February 26 and continue through February 27, 1996.

The technical workshop shall be held in Room 520A of the Harry S Truman State Office Building.

of the components of the gas supply reliability data and monitoring reports no later than March 5, 1996. The Commission requests that the parties endeavor to identify the components in a concise fashion while providing enough explanation that one can fairly discern what information is requested. The Commission further requests that the parties use their best efforts to try to agree on the components of the filing. If there are matters upon which the parties are unable to agree, then the parties may file a pleading showing the areas of disagreement and party positions no later than March 5, 1996. In addition, responses to party positions may be filed no later than March 19, 1996.

The Commission will issue an order in Case No. GO-96-243 which will specifically identify the components of the gas supply reliability filing and monitoring reports on or about April 1, 1996.

There may be issues relating to the mechanical details of the gas cost incentive mechanism as described in this order that the parties have identified but have not resolved. If such issues exist, the Commission would prefer being apprised of these matters early in this process. Thus, if the parties have identified matters upon which they do not agree in relation to the mechanical operation of the gas cost incentive mechanism, a statement of these issues and party positions on them should be filed in GO-96-243 no later than March 5, 1996. In addition, responses to party positions may be filed no later than March 19, 1996.

A timeline is attached to this Report And Order to show required actions and filings. (See Attachment A.)

Conclusions of Law

The Missouri Public Service Commission has arrived at the following conclusions of law.

Missouri Gas Energy, a division of Southern Union Company, is an investor-owned public utility engaged in the provision of natural gas service in the state of Missouri and, therefore, subject to the general jurisdiction of the Missouri Public Service Commission under Chapters 386 and 393, R.S.Mo.

Legality of PGA/ACA Mechanism

The DOE, MGUA, and OPC all maintain that the PGA/ACA mechanism is unlawful single-issue ratemaking because it conflicts with the Missouri Supreme Court's decision in State ex rel. Utility Consumers Council of Missouri, Inc. v. Public Service Commission, 585 S.W.2d 41 (Mo. banc 1979). This case struck down a fuel adjustment clause which had been used by electric utilities.

The Commission determines that there are policy reasons of paramount importance for retaining the PGA/ACA mechanism for the recovery of gas costs paid by Missouri local distribution companies. The Commission finds that natural gas costs fluctuate widely on a month-to-month and year-to-year basis. The Commission further finds that approximately 60 percent of the total costs of Missouri Gas Energy's costs are the costs of gas purchased by it. The Commission finds that the elimination of the PGA/ACA mechanism could result in large windfall profits to Missouri Gas Energy at the expense of ratepayers or losses so large as to threaten the financial viability of Missouri Gas Energy.

The Commission makes the following observation in connection with the views expressed by the parties about the legality of the PGA/ACA mechanism. Missouri statutes provide that the Commission has a duty to ensure that charges made for natural gas are just and reasonable. Section 393.130.1, R.S.Mo. The Commission finds that rates resulting from use of the PGA/ACA mechanism are just

and reasonable. The Commission finds that use of a gas cost incentive mechanism as described in this Report And Order takes advantage of the introduction of Competitive forces into the wholesale natural gas market, and decreases the regulatory burden on the state and MGE while achieving an appropriate balance between the interests of MGE and MGE's ratepayers. The UCCN case is readily distinguishable from the situation presented here because forcing consideration of natural gas costs into a rate case would seriously jeopardize the viability of MGE, which would eventually be to the detriment of MGE's ratepayers as well as MGE.

The PGA/ACA mechanism was initially introduced into Missouri in 1962 by Laclede Gas Company. At that time, most gas costs handled through the PGA/ACA mechanism were subject to FERC approval. The fact that the rates paid by Missouri LDCs for gas were set by the FERC supports use of the PGA/ACA mechanism. The FERC has moved towards deregulation of the wholesale gas market primarily with FERC Order 636. Thus, the wellhead price of natural gas is no longer regulated. However, other components of the cost of gas are still regulated by the FERC. Transportation charges from interstate pipelines are set by the FERC. In addition, transition costs and take-or-pay costs which flow through the PGA result from FERC actions. The Commission concludes that a substantial portion of the cost of gas continues to be subject to FERC regulation and the PGA/ACA mechanism continues to fit well with the underlying nature of the gas costs incurred by LDCs.

The Commission finds that the natural gas industry is in the midst of a transition towards competition from regulation. The Commission finds that removal of the PGA/ACA mechanism at this time would be inappropriate. Moreover, the Commission is skeptical as to the feasibility of handling gas costs in a traditional rate case format. The evidence is clear that wide fluctuations in gas prices occur on weekly, and even daily, bases. Yet OPC, MGUA and DOE

recommend that the Commission be put in a position of extimating these volatile costs months or even years into the future. In addition, since gas costs account for approximately 60 percent of LDC expenses, if the Commission's estimates are wrong, the LDC could reap enormous windfall profits, or the LDC could experience such drastic losses that the LDC will have to pursue emergency rate relief. At the same time, the Commission anticipates that the LDC would have to be compensated for the increased business risk that results from treating gas costs in a rate case. It appears to the Commission that this scenario, quite simply, is far from a practical solution and was clearly not intended in DCC.

Faced with these circumstances and the statutory obligation to set just and reasonable rates, the Commission concludes that it has the lawful authority to authorize the continued use of the PGA/ACA mechanism. The Commission further concludes that the gas cost incentive mechanism authorized by this Report And Order allows MGE to take advantage of a more competitive wholesale natural gas market while placing appropriate limits on risk borne by MGE.

IT IS THEREFORE ORDERED:

- 1. That Missouri Gas Energy, a division of Southern Union Company, shall file no later than May 31, 1996, tariff sheets to implement a gas cost incentive mechanism identical to the mechanism proposed earlier in this proceeding by Missouri Gas Energy but with the modifications described by the Commission and contained in this Report And Order, with such tariff sheets to become effective for service rendered on and after July 1, 1996.
- 2. That Case No. GO-96-243 be, and is hereby, established for the receipt of gas supply reliability data and monitoring reports, the specifics of which will be prescribed by subsequent Commission order.
- 3. That a technical workshop will be held on February 26-27, 1996, in Room 520A of the Harry S Truman State Office Building, 100 West High Street,

Jefferson City, Missouri, which workshop shall commence at 10:00 a.m. on February 26, 1996.

- 4. That the parties shall jointly file the recommended components of Missouri Gas Energy's gas supply reliability data no later than March 5, 1996. in GO-96-243.
- 5. That Missouri Gas Energy shall file gas supply reliability data in GO-96-243 no later than May 1, 1996, May 1, 1997, and May 1, 1998, for the then immediately subsequent ACA period.
- 6. That the Staff shall file, and other parties to GO-96-243 may file, a response to Missouri Gas Energy's gas supply reliability filing in GO-96-243 no later than June 1, 1996, June 1, 1997, and June 1, 1998, for the then immediately subsequent ACA period.
- 7. That the parties shall jointly file the recommended components of Missouri Gas Energy's gas cost incentive mechanism monitoring report no later than March 5, 1996, in GO-96-243.
- 8. That Missouri Gas Energy shall file a gas cost incentive mechanism monitoring report in GO-96-243 no later than August 1, 1997, August 1, 1998, and August 1, 1999, for the then immediately preceding ACA period.
- 9. That the Staff shall file a response to Missouri Gas Energy's monitoring reports in GO-96-243 no later than September 1, 1997, September 1, 1998, and September 1, 1999, for the then immediately preceding ACA period.
- 10. That Missouri Gas Energy, the Staff, and the Office of the Public Counsel shall file in Case No. GO-96-243, no later than January 4, 1999, recommendation(s), jointly or severally, regarding whether Missouri Gas Energy's gas cost incentive mechanism should be retained, modified or eliminated.
- 11. That a copy of this Report And Order shall be placed in the official case papers of Case No. GO-96-243.

- 12. That those motions and objections not specifically ruled on in this Report And Order are hereby denied or overruled.
- 13. That this Report And Order shall become effective on the

BY THE COMMISSION

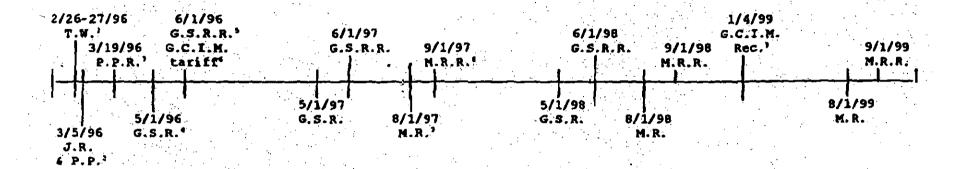
David L. Rauch Executive Secretary

(SEAL)

Mueller, Chm., McClure, Kincheloe, Crumpton and Drainer, CC., concur and certify compliance with the provisions of Section 536.080, R.S.Mo. 1994.

Dated at Jefferson City, Missouri, on this 31st day of January, 1996.

TIMELINE



- ' T.W. means technical workshop.
- ² J.R. means joint recommendation on gas supply reliability data and monitoring reports. P.P. means pleading showing areas of disagreement and party positions.
- P.P.R. means responses to party positions.
- G.S.R. means gas supply reliability data.
- 'G.S.R.R. means responses to gas supply reliability data.
- G.C.I.M. tariff means MGE's tariff sheets necessary to implement MGE's gas cost incentive mechanism.

 (Note: tariff sheets must be filed no later than 5/31/96.)
- ' M.R. means monitoring report.
- M.R.R. means responses to monitoring report.
- 'G.C.I.M. Rec. means recommendations regarding whether MGE's G.C.I.M. should be retained, modified or eliminated.