Exhibit No: _____
Issues: Purchased Gas Cost Rate Design
Witness: Johnstone
Type of Exhibit: Direct Testimony
Sponsoring Party: Missouri Industrial Energy Consumers
Case No: GR-94-328

Before the

Missouri Public Service Commission

In the matter of Laclede Gas Company's PGA Rate Design	))))	**Case No. GR-94-328**

Testimony and Schedules of

Donald E. Johnstone

On behalf of

Missouri Industrial Energy Consumers

July 1994
Project 5775

Drazen-Brubaker & Associates, Inc.
St. Louis, Missouri 63105-1819

Before the
Missouri Public Service Commission

In the matter of Laclede Gas Company's PGA Rate Design	)	Case No. GR-94-328

Affidavit of Donald E. Johnstone

STATE OF MISSOURI)
) SS
COUNTY OF JEFFERSON)

Donald E. Johnstone, being of lawful age and duly affirmed, states the following:

1. My name is Donald E. Johnstone, I am a consultant in the field of utility regulation and a member of Drazen-Brubaker & Associates, Inc.

2. Attached hereto and made a part hereof for all purposes is my Testimony consisting of Pages 1 through 17; Appendix A, Pages 1-2; and Schedules 1 through 4, filed on behalf of the Missouri Industrial Energy Consumers.

3. I have reviewed the attached testimony and schedules and hereby affirm that my testimony is true and correct to the best of my knowledge and belief.

Donald E. Johnstone

Duly affirmed before this 7th day of July, 1994.

Notary Public

My commission expires February 26, 1996.

Before the

Missouri Public Service Commission

In the matter of Laclede Gas Company's PGA Rate Design	)	**Case No. GR-94-328**

Testimony of Donald E. Johnstone

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Donald E. Johnstone; 7730 Forsyth Boulevard, Suite 200; St. Louis, MO 63105-1819.

Q PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A This is set forth in Appendix A to my testimony.

Q ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?

A I am testifying on behalf of the Adam's Mark Hotel, Anheuser-Busch Cos., Inc., BJC Health System, Chrysler Corporation, Emerson Electric Company, Ford Motor Company, MEMC Electronic Materials Company, Inc., McDonnell Douglas Corporation, Monsanto Company, Nooter Corporation and Ralston Purina Company. This Group may be referred to as the Missouri Industrial Energy Consumers (MIEC).

Q **ON WHAT SUBJECTS HAVE YOU BEEN ASKED TO TESTIFY?**

A I have been asked to testify regarding the class responsibility for purchased gas cost and the structure of charges under the PGA mechanism that would collect the cost responsibility appropriately from each customer and each customer class.

Q **PLEASE SUMMARIZE YOUR TESTIMONY?**

A My testimony may be summarized as follows:

(1) There is both a year-round and a seasonal component to demand-related gas supply costs.

(2) There are separate cost-causative factors associated with year-round and seasonal demand-related gas supply cost and these separate factors should form the basis for the allocation of cost responsibility.

(3) I recommend that year-round gas supply costs be allocated among customer classes based upon contribution to the noncoincident peak, with lesser weights being ascribed to off-peak, interruptible, and as-available usages.

(4) Seasonal cost should be allocated among customers based on a 50/50 combination of winter design demands and seasonal usage. Also, the factor should be weighted to give effect to the lower cost responsibility associated with the interruptible and as-available gas supply services.

(5) The cost associated with providing the firm backup service to firm transportation customers is primarily a function of demands placed on the system and should be collected as a demand charge.

(6) As-available gas supply service should be priced based upon incremental gas cost and a contribution to fixed cost.

Variations in Usage and Cost Responsibility

Q ARE THE GAS COSTS THE SAME FOR EVERY CUSTOMER AND EVERY CUSTOMER CLASS?

A No. Laclede has available to it a variety of mechanisms for purchasing gas and arranging the delivery to its system. Depending on the load characteristics of the customer, Laclede draws more or less on each of the particular resources, all of which have a different cost. In addition, some of the costs are capacity-related while others are related to the volume of gas purchased over a period of time. Thus, for a variety of reasons the cost of purchased gas and transportation varies among customers.

Q HOW DO THE SERVICE REQUIREMENTS OF CUSTOMERS VARY?

A They vary in many important respects. First, there are customers which make their own arrangements for gas supply, the "transportation" customers. These customers are presently served under the Large Volume Transportation and Sales Service rate schedule (LVTS). Under this rate two types of service are provided, Basic and Firm. Basic customers have full responsibility for their own gas supplies and purchase gas from Laclede only on an as-available basis. While this service is described as basic, the transportation component is firm. Consequently, any customer which has arranged for an adequate contract capacity with Laclede is free to make firm arrangements upstream, which would allow it to obtain a firm delivered gas supply without reliance on Laclede for anything other than the redelivery of its gas from the city gate to its meter--on a reliable basis.

In contrast to Basic transportation, under Firm LVTS transportation Laclede retains the obligation to provide gas supplies as well as a reliable delivery service. Consequently, such a customer would be expected to obtain lower cost interruptible supplies and arrangements upstream from Laclede since it compensates Laclede for standing ready to provide its gas supply requirements on demand on a reliable basis.

Q CAN YOU SUMMARIZE THE SIMILARITIES AND DIFFERENCES BETWEEN THE GAS SUPPLY REQUIREMENTS AND TRANSPORTATION REQUIREMENTS OF FIRM AND BASIC TRANSPORTATION SERVICE?

A Yes. In each case the transportation component, that is, the delivery of gas from the city gate to the customer meter is on a firm basis. The difference is in the gas supply. The gas supplies from the Laclede system that are available to Basic customers are completely interruptible and subject to availability while the gas supplies provided as backup to firm transportation customers are firm.

Q PLEASE TURN YOUR ATTENTION NOW TO SALES CUSTOMERS. ARE THERE BOTH FIRM AND INTERRUPTIBLE SALES CUSTOMERS?

A Yes. Unlike transportation customers all of what are referred to as "sales" customers rely on Laclede for the preponderance of their gas supply needs. The important difference in these customers is that the gas supply to interruptible customers may be withheld during high load periods so that the capacity ordinarily used to provide gas supplies to interruptible customers may be used to provide service to firm

customers. Therefore, while the gas supply for interruptible customers is not fully reliable, there is a significant difference in a degree to which interruptible "sales" customers depend on Laclede for system gas supply as compared to Basic transportation customers.

Q **IS THERE A DIFFERENCE IN THE SEASONAL REQUIREMENTS AMONG THE CUSTOMER CLASSES?**

A Yes. Customers of Laclede that use gas primarily for heating have a usage which is extremely seasonal. Since some of the cost of purchased gas depends entirely on the maximum capacity requirements, such seasonal customers cause Laclede to incur a higher average gas supply cost as opposed to customers that have a year-round usage.

Q **DOES LACLEDE HAVE AVAILABLE TO IT VARIOUS MEANS TO MANAGE THE GAS SUPPLY ARRANGEMENTS FOR SEASONAL USAGE?**

A Yes. For example, Laclede purchases a storage service from its principle pipeline supplier, Mississippi River Transmission Corporation (MRT). Other important tools in the management of gas supply include Laclede on-system storage, Laclede on-system propane peaking facilities, and the interruption of service to interruptible "sales" customers.

Q **SINCE LACLEDE HAS AVAILABLE TO IT A VARIETY OF MECHANISMS FOR MANAGING ITS GAS SUPPLY, WOULD IT BE APPROPRIATE TO ASSIGN RESPONSIBILITY FOR FIXED GAS SUPPLY COSTS SOLELY ON THE BASIS OF MAXIMUM CAPACITY REQUIREMENTS?**

A No. It is important to consider the cost on a seasonal basis since Laclede uses a variety of mechanisms to manage its gas supply to meet the seasonal load requirements.

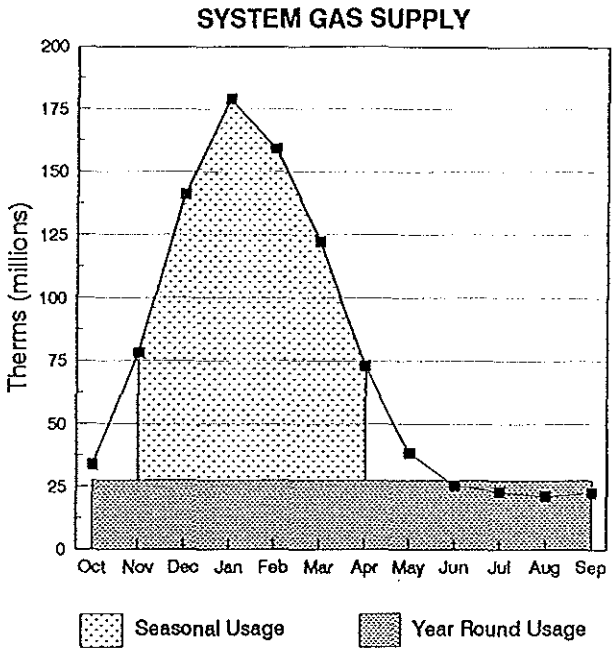
Q HOW MAY THE SEASONAL REQUIREMENTS OF CUSTOMERS BE SEPARATED FROM THE YEAR-ROUND REQUIREMENTS?

A With the exception of air-conditioning customers, the summer is the period when customers' usage generally reflects average year-round gas supply needs. Thus, the summer period is very important to the definition of year-round cost responsibility.

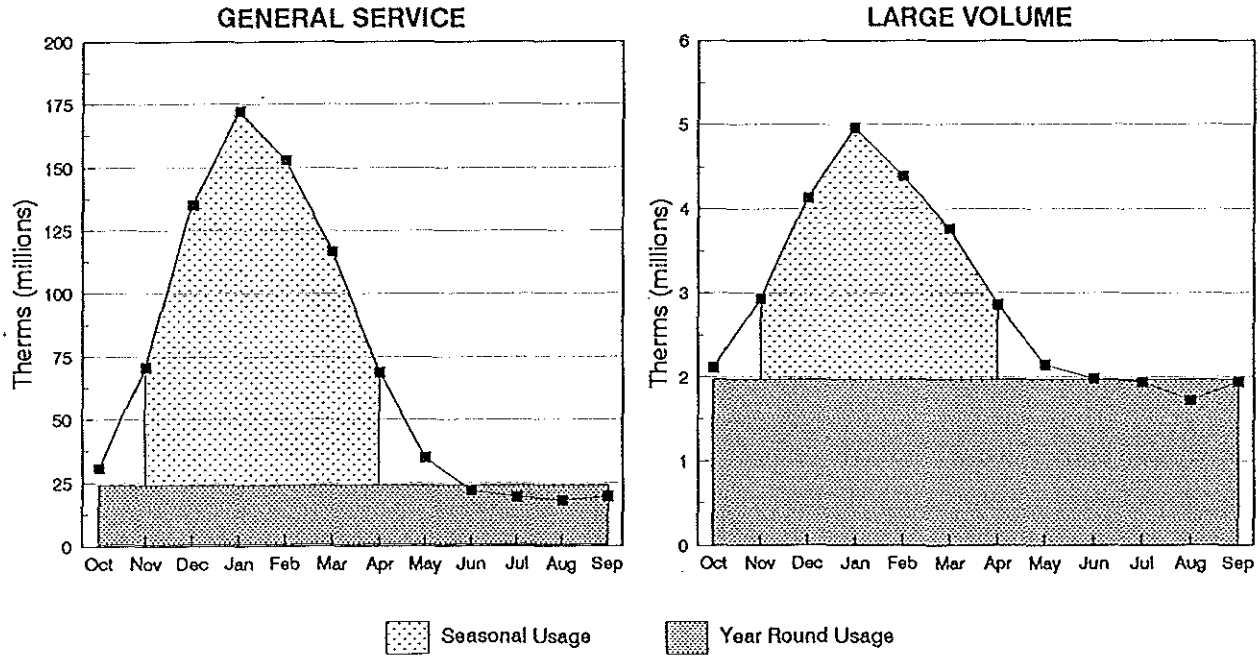
The seasonal usage of customers is, by definition, that which is not year-round usage. Seasonal usage (other than for the limited usage for air-conditioning) is associated with the use of gas for space heating. Since the year-round usage and the seasonal usage in total represent the total annual usage of customers, the seasonal usage may be derived by subtracting the year-round usage from the total usage.

Q PLEASE ILLUSTRATE THE DIFFERENCE BETWEEN SEASONAL AND YEAR-ROUND USAGE.

A The following graph illustrates year-round and seasonal usage of the system. The winter seasonal usage depends a great deal on weather and the highest usage will occur on the coldest days. Storage and peaking gas supply costs are incurred to meet the needs of customers on a design day and a design winter season. The purpose of such an approach is to assure reliable service to firm customers.



1 Q HOW DOES THE USAGE OF THE MAJOR CUSTOMER CLASSES COMPARE TO SYSTEM GAS
2 SUPPLY USAGE?
3 A For illustration, I have prepared the year-round and seasonal usage
4 illustration for the General Service rate and Large Volume "sales"
5 customers.



For both classes of customers there is an important seasonal component. The General Service seasonal usage in December is approximately 6 times as high as the year-round monthly usage and the Large Volume maximum monthly seasonal usage is approximately 1.5 times as high as the year-round monthly usage level.

Q HOW IS THE YEAR-ROUND USAGE LEVEL DEFINED?

A The summer period provides the basis for the definition of year-round usage. Average usage in the six months when sales are lowest is representative of year-round usage. While there is a small amount of seasonal usage in the spring and fall months, it does not rise to the level that it would create a large demand for seasonal gas supply mechanisms. In addition, six month periods correspond well with the storage injection and withdrawal cycle for purchased gas storage capacity. Thus, the separation of the year into a sixth month summer and a winter period generally reflects important differences in usage and the important differences in gas supply acquisition mechanisms that are used to accommodate the two primary types of usage.

Gas Supply Cost

Q WHICH GAS SUPPLY COST WILL YOU BE ADDRESSING IN YOUR TESTIMONY?

A I will be addressing the gas supply demand cost and the capacity reservation cost. I believe the PGA mechanism presently does an adequate job of tracking commodity-related costs and MIEC has recently reached agreement in principle with the parties with respect to other

noncommodity-related cost. Thus, the aspects of cost which remain to be addressed in this proceeding are primarily demand and capacity-related costs of gas supply and upstream transportation, including off-system storage cost.

Q IS IT POSSIBLE TO SEPARATE THE GAS SUPPLY DEMAND COST AND THE CAPACITY RESERVATION COST INTO YEAR-ROUND AND SEASONAL COMPONENTS?

A Yes, it is. A summary of that separation is set forth on Schedule 1-1. Approximately one-third of the costs are related to year-round usage and the other two-thirds are related to seasonal usage.

Q PLEASE EXPLAIN HOW YOU SEPARATED THE ANNUAL GAS SUPPLY DEMAND COST INTO YEAR-ROUND AND SEASONAL COMPONENTS.

A Laclede provided the monthly cost expressed as a percent of the monthly average cost. There is a definite seasonal pattern with most summer months at 44% of average and most winter months at 183% of average. This pattern of cost results in 23% of the annual cost being incurred during the six summer months. Since the six summer months are representative of the year-round usage level, I adjusted the summer cost to the year-round cost level with the ratio of 12 months over six months. The resulting year-round cost component is 46% of the gas supply demand-related cost. The other 54% is associated with seasonal usage. The analysis and spread of the cost between year-round and seasonal components is set forth on Schedule 1-2.

Q WHAT IS THE BREAKDOWN OF TRANSPORTATION AND STORAGE CAPACITY COST AS BETWEEN YEAR-ROUND AND SEASONAL COMPONENTS?

A The seasonal component of this cost consists of the cost of southbound MRT firm transportation which is required to inject gas into storage, the capacity cost associated with storage, and the cost of northbound transportation that is required to deliver the storage gas to the city gate. These cost components are developed and set forth on Schedule 1-3. Approximately 68% of the total demand-related transportation and storage costs are related to the provision of service that will supply the seasonal usage of system customers.

Seasonal and Year-Round Cost Allocation to Customers

Q WHAT DATA IS USED TO DEVELOP THE ALLOCATION FACTORS WHICH WILL SPREAD THE YEAR-ROUND AND SEASONAL COST AMONG THE VARIOUS CUSTOMER CLASSES?

A The parties have agreed to use data prepared by the Staff in conjunction with Docket No. GR-92-165. When the revised PGA mechanism is implemented it would be my recommendation that then current weather normalized therm sales and design day demand therms be used in the development of the allocation of cost among the customer classes.

Design day conditions govern the amount of daily delivery capacity that is required by Laclede. Thus, design day demands should be used in cost allocation.

While it would also be appropriate to reflect seasonal design conditions, I believe it would be reasonable for this purpose to use weather normalized therm sales. For the purpose of my presentation in

this proceeding, I have simply accepted the Staff volumes and demands so that my analysis will remain comparable to those of the other parties. The monthly therm sales that have been used in my analysis are set forth on Schedule 2.

Q HOW SHOULD THE YEAR-ROUND DEMAND-RELATED COST BE ALLOCATED?

A Year-round costs are primarily a function of the capacity requirements that are placed on the system by the respective customer classes. The starting point for capacity requirements in the procedure I recommend is the noncoincident peak demands (NCP) of the customer classes. I then applied a weight to the demands of the customer classes to give recognition to the degree of cost responsibility that each class of service should bear. For example, all firm customer classes have received a weight of one. I assigned a weight of .5 to the air-conditioning and interruptible classes. While neither class places a capacity requirement on the system that would lead to the purchase of additional daily delivery capacity, both rely on the system supply gas to a significant degree. Thus, while the additional demand cost incurred to serve each of these classes is zero, I have given their demands a weight of .5 to develop what I believe in these circumstances is a reasonable contribution to the daily capacity-related costs of the system.

The basic transportation customers do not rely on system supply gas to any extent and it is provided solely on an as-available basis. Since this gas supply service is significantly lower in quality than

that provided to interruptible customers, I have assigned a weight of .25 to the demands associated with system gas supplied to basic transportation customers. Since no system gas supply costs are related to the contract demand of basic transportation customers (which is used to allow Laclede to recoup its delivery cost), I have assigned a weight of zero to the contract transportation demands of basic transportation customers.

The NCP demands so weighted result in the allocation factor developed on Schedule 3-1. The $28.3 million of year-round capacity costs are spread among the customer classes based on that allocation factor, as also set forth on Schedule 3-1.

Q HOW SHOULD THE COST ASSOCIATED WITH SEASONAL USAGE BE SPREAD AMONG THE CUSTOMER CLASSES?

A These costs should be spread among the classes based on winter seasonal usage and winter peak demands. The seasonal usage is defined as usage in the winter months which exceeds the average summer monthly usage. The seasonal usage of each customer class is developed on Schedule 3-2. Of course, there is no winter seasonal component to usage for the air-conditioning rate class or for gas lighting where usage is constant throughout the year. I again assigned a weight of one for firm usage, a weight of .5 for interruptible usage and a weight of .25 to the gas supplies sold to basic transportation customers. The volumes so weighted and the seasonal usage allocation factor are set forth on Schedule 3-2.

The other half of the allocation factor for seasonal demand-related cost should be dependent upon the maximum daily capacity requirements placed upon the system in the winter. For the purpose of developing this factor, I used the winter NCP demands of the customer classes. As such, the air-conditioning demand was zero. For the firm usage I assigned a weight of one, for the interruptible class a weight of .5 and for gas supply to basic transportation customers a weight of .25. Since firm transportation customers have the right to call on system supplies at any time, the firm transportation contract demands are given a weight of one. However, since any gas supply to firm customers is within contract demand, the demands associated with gas actually supplied to firm transportation customers are given a weight of zero to avoid double counting. The demands so weighted are developed on Schedule 3-3. Also set forth on the schedule is the combined average seasonal factor which is the combination of the seasonal usage factor and the seasonal demand factor. The combined average seasonal factor is used to allocate the $57 million of seasonal capacity cost among the customer classes, as set forth on Schedule 3-3.

Summary of Cost Allocation and Rate Design Considerations

Q WHAT IS THE RESULT OF YOUR RECOMMENDED ALLOCATION OF SEASONAL AND YEAR-ROUND DEMAND-RELATED GAS SUPPLY COST?

A I have developed a summary on Schedule 4. As would be expected, the customer classes with relatively higher annual load factors and relatively lower seasonal usage are responsible for somewhat less than

system average cost. For example, the annual capacity cost per demand therm for large volume sales customers is approximately 5% less than system average while the comparable figure for general service customers is approximately 6% greater than average.

Q CAN THE COST ALSO BE EXAMINED ON A SEASONAL BASIS?

A Yes. Since half of the year-round usage is in the summer, I divided one-half of the year-round cost for each class by the summer therm sales to develop the summer period cost per therm. On a per therm basis the spread between the classes is somewhat larger and appears to vary primarily with load factor and whether or not the service is provided on a firm basis. For example, in comparison to the 6.3¢ per therm average cost for the system during the summer period the average cost per therm for large volume customers is 3.1¢ and it is 1.8¢ for interruptible customers. For firm transportation customers the cost is 1.8¢ per therm.

The winter capacity costs per therm are significantly higher for most customer classes. The winter capacity costs include one-half of the year-round cost and all of the seasonal cost. The only class with consistent year-round cost is unmetered gas lights. This load operates at 100% load factor throughout the year and it is logical that the same cost per therm would be incurred throughout the year.

Q SHOULD A DIFFERENT PGA FACTOR BE DESIGNED FOR EACH OF THE CUSTOMER CLASSES?

A I don't believe that would be necessary. It would be reasonable, for example, to combine the air-conditioning and interruptible factor during the summer period. On the other hand, the demand cost responsibility associated with gas supply to basic transportation customers is very low compared to any of the other customer classes. Since this is strictly an as-available supply, the .3¢ per therm I have defined as a contribution to fixed cost should be applied not in conjunction with average commodity cost but rather incremental commodity cost. Under this procedure, Laclede would always be assured of obtaining a positive contribution to fixed cost from these customers. In addition, it is reasonable to move to the incremental cost approach because these customers have reserved no gas supplies and will continue to have the option of either third party gas or alternative fuels. Thus, this separate treatment is appropriate in these particular circumstances.

Q **HOW SHOULD THE COST ASSOCIATED WITH MAKING FIRM BACKUP SUPPLIES AVAILABLE TO FIRM TRANSPORTATION CUSTOMERS BE COLLECTED?**

A The cost associated with the backup gas supply service to these customers is primarily associated with the capacity requirements they place on the system. Their seasonal usage in contrast to their capacity requirement is relatively small. Consequently, in this circumstance it is appropriate to design the rate as a demand charge based on contract demand. This procedure will assure that the costs are spread equitably among the firm customers as well as to the class as a whole.

Q **HOW OFTEN SHOULD THE DEMAND COST ALLOCATION FACTORS ASSOCIATED WITH THE PGA MECHANISM BE REVISED?**

A I recommend annual revisions. Data such as LVTS contract demands and normalized monthly usage for each class should be readily available and, given availability of the data, it would be a relatively straightforward procedure to update the allocation of these costs annually.

Q **IF THERE IS AN ALLOCATION THAT IS SPECIFIC TO DEMAND-RELATED GAS SUPPLY COST SHOULD THERE ALSO BE A SEPARATE RECONCILIATION?**

A Yes. I recommend a reconciliation for demand-related gas supply cost in total (not class specific). Thus, there would be a separate demand-related and commodity-related reconciliation amount.

Q **WOULD IT BE YOUR RECOMMENDATION TO MOVE TO A FORECAST GAS COST PROCEDURE AS OPPOSED TO THE CURRENT MECHANISM?**

A No. If there is to be a gas cost tracking mechanism, changes should be allowed on a sufficiently frequent basis so that large reconciliation amounts will not develop. For example, forecasts of annual cost in today's relatively volatile environment could easily lead to either large errors or the need for special proceedings to revise the forecast. Therefore, so long as there is a mechanism to track these cost, it is my recommendation that filings be made with sufficient frequency to avoid any large reconciliation problems. In my opinion, the present mechanism has worked acceptably well in this regard.

Q **DOES THIS CONCLUDE YOUR TESTIMONY?**

A Yes, it does.

Qualifications of Donald E. Johnstone

Q PLEASE STATE YOUR NAME AND ADDRESS.

A Donald E. Johnstone, 572 Highland Ridge Drive, Ballwin, Missouri.

Q PLEASE STATE YOUR OCCUPATION.

A I am a consultant in the field of public utility regulation and am a principal in the firm of Drazen-Brubaker & Associates, Inc., regulatory and economic consultants.

Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A In 1968, I received a Bachelor of Science Degree in Electrical Engineering from the University of Missouri at Rolla. After graduation, I worked in the customer engineering division of a computer manufacturer until I entered the United States Air Force in 1969. From 1969 to 1973, I was an officer in the Air Force, where most of my work was related to the Aircraft Structural Integrity Program in the areas of data processing, data base design and economic cost analysis. Also in 1973, I received a Master of Business Administration Degree from Oklahoma City University.

From 1973 through 1981, I was employed by a large midwestern utility and worked in the Power Operations and Corporate Planning Functions. While in the Power Operations Function, I had assignments relating to the peak demand and net output forecasts and load behavior studies which included such factors as weather, conservation and

seasonality. I also analyzed the cost of replacement energy associated with forced outages of generation facilities. In the Corporate Planning Function, my assignments included developmental work on a generation expansion planning program and work on the peak demand and sales forecasts. From 1977 through 1981, I was Supervisor of the Load Forecasting Group where my responsibilities included the Company's sales and peak demand forecasts and the weather normalization of sales.

In November 1981, I joined Drazen-Brubaker & Associates, Inc. Since that time, I have participated in the analysis of various utility rate cases, including the analysis and preparation of cost-of-service studies and rate analyses. In addition to rate cases, I have participated in electric fuel and gas cost reviews, generic policy proceedings, and least-cost planning proceedings.

I have testified before the state regulatory commissions of Delaware, Hawaii, Illinois, Iowa, Kansas, Massachusetts, Missouri, Montana, New Hampshire, Ohio, Pennsylvania, Tennessee, Virginia and West Virginia.

The firm of Drazen-Brubaker & Associates, Inc. provides consulting services in the field of public utility regulation to many clients, including large industrial and institutional customers, some utilities, and on occasion, state regulatory agencies. In addition, we have also prepared depreciation and feasibility studies relating to utility service. We also assist in the negotiation of contracts for utility services for large users. In general, we are engaged in regulatory consulting, rate work, feasibility, economic and cost-of-service studies, design of rates for utility service and contract negotiations.

LACLEDE GAS COMPANY

Seasonal and Year-Round Components of
Gas Supply Demand and Capacity Reservation Costs

Line	Description	Gas Supply Demand (1)	Capacity Reservation (2)	Total (3)
1	Year-Round	$2,780,931	$25,482,855	$28,263,786
2	Seasonal	$3,247,766	$53,732,016	$56,979,782
3	Total	$6,028,697	$79,214,871	$85,243,568

LACLEDE GAS COMPANY

Demand Costs Associated with Gas Supply

Line	Description	Percent of Monthly Average (1)	Winter (2)	Summer (3)	Gas Supply Demand Cost (4)
1	Oct	69%	69%		
2	Nov	143%	143%		
3	Dec	183%	183%		
4	Jan	183%	183%		
5	Feb	183%	183%		
6	Mar	163%	163%		
7	Apr	57%		57%	
8	May	44%		44%	
9	Jun	44%		44%	
10	Jul	44%		44%	
11	Aug	44%		44%	
12	Sep	44%		44%	
13	Total	1201%	924%	277%	
14	Summer percent of annual			23.0641%	
15	Year-Round			46.1282%	$2,780,931
16	Seasonal			53.8718%	$3,247,766
17	Total			100.0000%	$6,028,697

LACLEDE GAS COMPANY

Transportation Capacity & Cost Worksheet

Line	Description	Capacity (1)		Annual Cost (2)	Seasonal (3)	Year Round (4)
1	Total transportaton cost			$79,214,871		
2	Southbound MRT firm transportation	150,000			$1,373,000	
3	Storage Cost				$9,677,844	
4	Cost of northbound transportation			$68,164,027		
5	Northbound MRT firm transportation	655,160				
6	Capacity to support storage deliverability	410,231	62.6154%		$42,681,172	
7	Seasonal usage cost				$53,732,016	
8	Year-round cost					$25,482,855
9	Summary			$79,214,871	$53,732,016	$25,482,855

LACLEDE GAS COMPANY

Therms Sold & Transported
Data from GR-92-165

Line	Rate	Oct (1)	Nov (2)	Dec (3)	Jan (4)	Feb (5)	Mar (6)	Apr (7)	May (8)	Jun (9)	Jul (10)	Aug (11)	Sep (12)	Total (13)
1	General Service	30,713,708	70,783,852	135,089,369	172,096,135	152,942,073	116,812,391	68,752,337	34,991,495	21,820,400	19,226,463	17,838,918	19,326,922	860,394,063
2	Air Conditioning	79,755	0	0	0	0	0	0	350,438	754,046	1,109,317	944,974	427,776	3,666,306
3	Large Volume	2,115,430	2,935,213	4,136,787	4,960,202	4,391,929	3,764,584	2,862,701	2,146,066	1,980,460	1,937,954	1,722,186	1,939,250	34,892,762
4	Interruptible	443,307	699,979	911,978	1,025,973	861,115	789,102	538,070	415,693	364,938	352,831	337,410	357,240	7,097,636
5	Southwestern Bell	3,799	32,365	63,147	90,658	71,477	66,171	32,281	8,852	253	479	284	782	370,548
6	Unmetered Gas Light	11,730	11,730	11,730	11,730	11,730	11,730	11,730	11,730	11,730	11,730	11,730	11,730	140,760
	Transportation													
7	Firm TS	3,807,036	4,732,200	5,318,386	5,884,345	5,208,519	4,622,846	3,651,084	3,469,215	3,205,414	3,423,861	3,660,296	3,627,047	50,610,249
8	Firm Gas Supplied	310,043	384,137	384,137	384,137	384,137	384,137	384,137	310,043	310,043	310,043	310,043	310,043	4,165,078
9	Firm Subtotal	4,117,079	5,116,337	5,702,523	6,268,482	5,592,656	5,006,983	4,035,221	3,779,258	3,515,457	3,733,904	3,970,339	3,937,090	54,775,327
10	Basic	7,147,201	7,819,978	9,198,534	9,310,660	8,303,736	7,977,049	6,765,478	6,370,019	6,134,821	5,779,960	6,198,339	6,084,101	87,089,876
11	Basic Gas Supplied	185,841	279,631	279,631	279,631	279,631	279,631	279,631	185,841	185,841	185,841	185,841	185,841	2,792,834
12	Authorized Overrun	97,908	131,055	131,055	131,055	131,055	131,055	131,055	97,908	97,908	97,908	97,908	97,908	1,373,778
13	Subtotal	11,548,029	13,347,001	15,311,743	15,989,828	14,307,078	13,394,718	11,211,385	10,433,026	9,934,027	9,797,613	10,452,427	10,304,940	146,031,815
14	Natural Gas Total	44,915,758	87,810,140	155,524,754	194,174,526	172,585,402	134,838,696	83,408,504	48,357,300	34,865,854	32,436,387	31,307,929	32,368,640	1,052,593,890

Schedule 2

LACLEDE GAS COMPANY

Allocation of Year Round Gas Supply Demand and Capacity Reservation Costs

Line	Rate	NCP Demand (1)	Year-Round Gas Supply Weight (2)	Weighted Year-Round Demand (3)	Weighted Year-Round Demand Factor (4)	Year-Round Cost (5)
1	General Service	8,922,530	1.000	8,922,530	93.8689%	$26,530,905
2	Air Conditioning	36,467	0.500	18,233	0.1918%	54,210
3	Large Volume	248,024	1.000	248,024	2.6093%	737,487
4	Interruptible	56,075	0.500	28,038	0.2950%	83,378
5	Southwestern Bell	5,865	1.000	5,865	0.0617%	17,439
6	Unmetered Gas Light	386	1.000	386	0.0041%	1,159
	Transportation					
7	Firm TS	279,932	1.000	279,932	2.9450%	832,368
8	Firm Gas Supplied	0	1.000	0	0.0000%	0
9	Firm Subtotal	279,932		279,932	2.9450%	832,368
10	Basic	426,778	0.000	0	0.0000%	0
11	Basic Gas Supplied	9,192	0.250	2,298	0.0242%	6,840
12	Authorized Overrun	0	0.000	0	0.0000%	0
13	Subtotal	715,902	1.000	282,230	2.9692%	839,208
14	Natural Gas Total	9,985,249		9,505,306	100.0000%	$28,263,786

Schedule 3-1

LACLEDE GAS COMPANY

Development of Seasonal Usage Volumetric Allocation Factor

Line	Rate	Average Summer Months (1)	Total Winter Months (2)	Seasonal Usage (3) (2) - (1)*6	Weight (4)	Weighted Volumes (5)	Seasonal Factor (6)
1	General Service	23,986,318	716,476,157	572,558,251	1.000	572,558,251	96.3583%
2	Air Conditioning	611,051	0	(3,666,306)	0.000	0	0.0000%
3	Large Volume	1,973,558	23,051,416	11,210,070	1.000	11,210,070	1.8866%
4	Interruptible	378,570	4,826,217	2,554,798	0.500	1,277,399	0.2150%
5	Southwestern Bell	2,408	356,099	341,650	1.000	341,650	0.0575%
6	Unmetered Gas Light	11,730	70,380	0	0.000	0	0.0000%
	Transportation						
7	Firm TS	3,532,145	29,417,380	8,224,511	1.000	8,224,511	1.3841%
8	Firm Gas Supplied	310,043	2,304,823	444,568	1.000	444,568	0.0748%
9	Firm Subtotal	3,842,187	31,722,203	8,669,079		8,669,079	1.4590%
10	Basic	6,285,740	49,375,435	11,660,994	0.000	0	0.0000%
11	Basic Gas Supplied	185,841	1,677,785	562,736	0.250	140,684	0.0237%
12	Authorized Overrun	97,908	786,330	198,882	0.000	0	0.0000%
13	Subtotal	10,411,677	83,561,753	21,091,691		8,809,763	1.4826%
14	Natural Gas Total	37,375,311	828,342,022	604,090,154		594,197,133	100.0000%

LACLEDE GAS COMPANY

Development of Seasonal Cost Allocation

Line	Rate	Winter NCP Demand (1)	Weight (2)	Weighted Seasonal Demand (3)	Seasonal Demand Factor (4)	Average Seasonal Factor (5)	Seasonal Cost (6)
1	General Service	8,922,530	1.00	8,922,530	94.0533%	95.2059%	$54,248,114
2	Air Conditioning	0	0.00	0			
3	Large Volume	248,024	1.00	248,024	2.6144%	2.2505%	$1,282,330
4	Interruptible	56,075	0.50	28,038	0.2955%	0.2552%	$145,412
5	Southwestern Bell	5,865	1.00	5,865	0.0618%	0.0596%	$33,960
6	Unmetered Gas Light	386	0.00	0		0.0000%	
	Transportation						
7	Firm TS	279,932	1.00	279,932	2.9508%	2.1675%	$1,235,037
8	Firm Gas Supplied	12,628	0.00	0	0.0000%	0.0374%	$21,310
9	Firm Subtotal	292,560		279,932	2.9508%	2.2049%	$1,256,347
10	Basic	426,778	0.00	0	0.0000%	0.0000%	$0
11	Basic Gas Supplied	9,192	0.25	2,298	0.0242%	0.0239%	$13,618
12	Authorized Overrun	4,308	0.00	0	0.0000%	0.0000%	$0
13	Subtotal	732,838		282,230	2.9750%	2.2288%	$1,269,965
14	Natural Gas Total	9,965,718		9,486,687	100.0000%	100.0000%	$56,979,782

Schedule 3-3

LACLEDE GAS COMPANY

Summary of Gas Supply Demand and Capacity Reservation Cost
per Demand Therm and per Volumetric Therm

Line	Rate	Annual Cost per Demand therm (1)	Summer Cost per therm (2)	Winter Cost per therm (3)	Annual Cost per therm (4)
1	General Service	$9.053	$0.092	$0.094	$0.094
2	Air Conditioning	NM	$0.015	NM	$0.015
3	Large Volume	$8.144	$0.031	$0.072	$0.058
4	Interruptible	NM	$0.018	$0.039	$0.032
5	Southwestern Bell	$8.764	$0.603	$0.120	$0.139
6	Unmetered Gas Light	$3.003	$0.008	$0.008	$0.008
	Transportation				
7	Firm TS	-	-	-	-
8	Firm Gas Supplied	-	-	-	-
9	Firm Subtotal	$7.462	$0.018	$0.053	$0.038
10	Basic	$0.000	$0.000	$0.000	$0.000
11	Basic Gas Supplied	NM	$0.003	$0.010	$0.007
12	Authorized Overrun	$0.000	$0.000	$0.000	$0.000
13	Natural Gas Total	$8.554	$0.063	$0.086	$0.081

NM denotes "no meaning"

Schedule 4