

Exhibit No.: \_\_\_\_\_

Issue(s):

Witness/Type of Exhibit:

Sponsoring Party:

Case No.:

Cost of Service Study

Busch/Direct

Public Counsel

GR-2001-629

**DIRECT TESTIMONY**  
**(Rate Design)**

**OF**

**JAMES A. BUSCH**

**FILED<sup>3</sup>**

**OCT 16 2001**

**Missouri Public  
Service Commission**

Submitted on Behalf of the Office of the Public Counsel

**LACLEDE GAS COMPANY**

**Case No. GR-2001-629**


October 16, 2001

In the matter of Laclede Gas Company's ) Case No. GR-2001-629  
Tariff to Revise Natural Gas Rate Schedules )

**STATE OF MISSOURI            )**  
**)**  
**COUNTY OF COLE             )**


SS

1. My name is James A. Busch. I am the Public Utility Economist for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my direct testimony consisting of pages 1 through 7 and Schedules JAB-RD-1.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

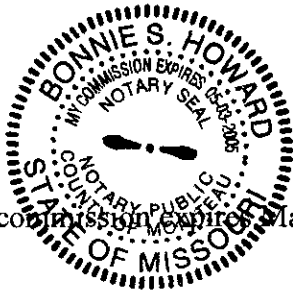
  
James A. Busch

Subscribed and sworn to me this 16th day of October, 2001.

October, 2001.

  
Bonnie S. Howard, Notary Public

My commission expires May 3, 2005.



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**DIRECT TESTIMONY**

**OF**

**JAMES A. BUSCH**

**CASE NO. GR-2001-629**

**LACLEDE GAS COMPANY**

Q. Please state your name and business address.

A. My name is James A. Busch and my business address is P. O. Box 7800,  
Jefferson City, MO 65102.

Q. Are you the same James A. Busch who filed testimony previously in Case No.  
GR-2001-629?

A. Yes I am.

Q. What is the purpose of your testimony in the rate design portion of Case No. GR-  
2001-629?

A. The purpose of my testimony is to explain the allocators Public Counsel utilized  
to allocate services, meters, and regulators, and present Public Counsel's cost of  
service study (COS). Public Counsel witness Hong Hu will provide the mains  
allocator and provide Public Counsel's rate design recommendation in her  
testimony.

**CLASS COST OF SERVICE STUDY**

Q. What is the primary purpose of a cost of service study?

A. The primary purpose of a COS study is to provide an estimate of the cost of  
providing service to each of the customer classes, and is to be used as a guide for

1        setting rates to the extent allowed by other rate design objectives of the  
2        Commission.

3        Q.    What are the primary steps in a COS study?

4        A.    There are three primary steps in performing a class cost of service study. These  
5        steps include the functionalization, classification, and allocation of costs.  
6        Functionalization of costs means categorizing accounts according to the type of  
7        function with which an account is associated. Accounts are categorized as being  
8        related to Production, Transmission, Distribution, Customer Accounts,  
9        Administrative and General, etc., depending on the natural gas local distribution  
10       company (LDC) functions that they are a part.

11  
12       Once costs have been functionalized, they are classified as being customer  
13       (related to the number of customers), demand (related to the portion of peak  
14       usage), or "other" costs, depending on the classification with which they are  
15       associated. For example, customer records and collection expense, meter plant,  
16       and meter reading expense are considered customer-related, since company  
17       expenditures in these areas are related to the number of customers that it serves.  
18       These expenses, although dependent to some extent on a customer's size, will be  
19       incurred for each customer whether or not the customer uses any natural gas so it  
20       would not be reasonable to classify them as being commodity-related.

21  
22       Allocation factors are then developed to distribute a reasonable share of  
23       jurisdictional costs to each customer class. Allocation factors are based on ratios

1           that reflect the proportion of total units (total number of customers, total annual  
2           throughput, etc.) attributable to a certain customer class. Applying these ratios to  
3           the appropriate cost categories produces an estimated cost for which each class is  
4           responsible.

5       Q. Which customer classes have you used?

6       A. I have utilized the following customer classes: Residential, Commercial and  
7           Industrial General Service, Large Volume, Interruptible, Firm and Basic Sales and  
8           Transportation, L. P. Gas, and Unmetered Gas Light.

9       Q. On what data is your class COS study based?

10      A. I utilized the Missouri Public Service Commission Staff (Staff) Accounting  
11         Schedules that Staff filed on October 11, 2001 in its non-rate design testimony in  
12         this proceeding for the source of most of the financial data that I utilized in my  
13         COS study. I have also used certain customer numbers, volumes, and class  
14         specific revenues developed by Staff witnesses Beck and Ross. I also used data  
15         received from Laclede in response to Public Counsel Data Requests. My use of  
16         this data is not an endorsement of either Staff's or Laclede's methods. I used this  
17         information because it was readily available and contains the level of detail  
18         necessary to perform a COS study.

19      Q. Please discuss the way you allocated the various Gas Plant Accounts.

20      A. Intangible accounts were allocated based on the overall cost of service. This is  
21         because these accounts affect all customer classes. Manufactured gas production  
22         accounts were allocated on the basis of estimated peak day coincident demand.  
23         This is because manufactured gas (peak shaving) is generally used during peak

1 days. Storage accounts were allocated based on winter sales volumes since winter  
2 demand is in part met by stored natural gas. Transmission Plant accounts were  
3 allocated based on the transmission allocator developed by OPC witness Hong  
4 Hu.

5 Q. Please continue.

6 A. Accounts in Distribution Plant were allocated in various ways. Accounts 374  
7 through 376 (Land and Land Rights, Structures and Improvements, and Mains)  
8 were allocated using the mains allocator developed by Public Counsel witness  
9 Hong Hu. All of the costs associated with these accounts (374 through 376) are  
10 mains related and allocated on that basis. Accounts 378 and 379 (Measuring &  
11 Regulating Station Equipment) are related to regulating system gas flow and are  
12 allocated based on annual margin sales. Accounts 380, 381, and 383 (Services,  
13 Meters, and Regulators) were allocated based on the services and meters  
14 allocators, respectively, developed by Ms. Hu in Case No. GR-99-315. I have  
15 updated these allocators to reflect current customer numbers and to address the  
16 study that Laclede performed concerning meters for the Commercial and  
17 Industrial class.

18 Account 385 (Industrial Measuring and Regulating Station Equipment) was  
19 allocated based on large customer bills since this account involves costs used for  
20 large customers. Account 386 (Other Property on Customer Premises) was  
21 allocated with a combined Mains/Services allocator since this account involves  
22 mains and services installed on customer premises which is not included in other  
23 accounts. Account 387 (Other Equipment) was simply allocated based on net

1 distribution plant. Finally, General Plant was based on each class's proportion of  
2 non-general net plant.

3 Q. Within Operation and Maintenance expense, how did you allocate gas distribution  
4 expense?

5 A. I used the "expenses follow plant principle" for allocating most of the accounts in  
6 this category. For example, the allocator that I applied to Mains plant (account  
7 376) was also applied to Mains maintenance (account 887).

8 Q. How did you allocate customer accounts expense?

9 A. Expenses within customer accounts were allocated based on allocators developed  
10 to address customer accounts expense and meter reading expense. Uncollectible  
11 expense was allocated based on the number of bills in each customer class.

12 Q. How were Customer Service and Sales Promotion expense allocated?

13 A. Customer Service accounts were allocated on the basis of unweighted customer  
14 numbers and Sales Promotion expenses were allocated based on my COS  
15 allocator. I chose to use my COS allocator for Sales Promotion expenses since  
16 these cost are incurred for the purpose of lowering the average margin cost (by  
17 increasing sales) of providing service to customers in each of the customer  
18 classes. The amount by which customers in each class benefit from a lower  
19 average cost will be proportional to the share of overall costs of service per  
20 customer that they are responsible for incurring.

21 Q. How did you allocate Administrative and General (A & G) expenses?

22 A. I divide these expenses into three categories. I allocated Property Insurance  
23 expense (account 924) on the basis of net plant since this expense is linked to the

1 amount of plant that the Company requires in order to serve each customer class.  
2 Injuries and Damages and Employee Pensions and Benefits (accounts 925 and  
3 926) are both payroll related expenses so they were allocated on the basis of the  
4 amount of payroll expense that I had previously allocated to each class. All  
5 remaining A & G accounts represent expenditures that support the Company's  
6 overall operation, so I have allocated them on the basis of each class' share of  
7 total Company COS.

8 Q. How did you allocate property and payroll taxes?

9 A. Property taxes were allocated on the basis of the amount of total plant that I had  
10 previously allocated to each class. Payroll taxes were allocated on the basis of the  
11 amount of payroll expenses that I had previously allocated to each class.

12 Q. How did you allocate state and federal income taxes?

13 A. These taxes are allocated on the basis of rate base since a utility company's  
14 income taxes are a function of the size of its rate base, and thus a class should  
15 contribute revenues for income taxes in accordance with the proportion of rate  
16 base that is necessary to serve it.

17 Q. What are the results of your study?

18 A. The following table shows the results of my COS study:

19 Table 1 – Results of OPC COS Study

	Residential	C & I	LV	Interruptible	Firm	Basic	LP	UMGL
Class Shifts	(6,352)	5,568	616	45	(409)	463	(4)	(18)
Percent	-3.81%	15.91%	24.35%	9.97%	-10.07%	7.46%	-11.28%	-68%



1           Public Counsel witness Hong Hu will recommend the appropriate rate design  
2           treatment based on the results of this study. Schedule JAB-RD-1 shows the  
3           results of Public Counsel's COS study.

4           Q. Does this conclude your direct testimony?

5           A. Yes it does.

**LACLEDE GAS COMPANY**

Cost of Service Study  
GR-2001-629

TOTAL COST OF SERVICE SUMMARY (000)		TOTAL	GS RESIDENTIAL	GS COM. & INDUSTRIAL	LARGE VOLUME	INTER- RUPTIBLE	FIRM	BASIC	LP	UMGL
1	O & M Expenses	115,207	87,130	21,621	1,521	233	1,672	3,005	20	4
2	Depreciation Expenses	23,657	17,345	4,551	384	61	463	849	3	1
3	Taxes	35,406	25,917	6,924	558	91	672	1,237	5	1
4										
5	TOTAL - Expenses and Taxes	174,270	130,392	33,096	2,463	386	2,807	5,091	28	6
6										
7	Current Revenue (non-gas)									
8	Rate Revenue (non-gas)	215,751	166,859	35,573	2,531	455	4,061	6,209	37	26
9	Late Payment Charges	4,201	3,020	1,031	88	13	23	25	1	-
10	Other Revenue	5,385	3,978	1,050	81	13	92	169	1	0
11										
12	TOTAL - Current Revenues	225,337	173,857	37,654	2,700	481	4,176	6,403	39	26
13	Current Revenue Percentage	100.00%	77.15%	16.71%	1.20%	0.21%	1.85%	2.84%	0.02%	0.01%
14										
15	OPERATING INCOME	51,067	43,465	4,558	237	95	1,369	1,311	11	20
16		51,067								
17	TOTAL RATE BASE	609,288	442,932	121,842	10,169	1,675	11,436	21,132	76	25
18										
19	Implicit Rate of Return (ROR)	8.38%	9.81%	3.74%	2.33%	5.69%	11.97%	6.20%	13.85%	79.53%
20										
21	OPC Recommended Rate of Return	8.53%	8.53%	8.53%	8.53%	8.53%	8.53%	8.53%	8.53%	8.53%
22										
23	Recommended Operating Income With									
24	Equalized (OPC) Rates of Return	51,972	37,782	10,393	867	143	976	1,803	6	2
25		51,972								
26	Class COS at OPC's Recommended Rate of Return	226,242	168,174	43,489	3,330	529	3,783	6,894	35	9
27	Revenue Percentage	100.00%	74.33%	19.22%	1.47%	0.23%	1.67%	3.05%	0.02%	0.00%
28										
29	Allocation of Difference Between Current									
30	Revenue and Recommended Revenue	905	669	177	14	2	16	28	0	0
31		905								
32	Margin Revenue Required to Equalize									
33	Class ROR - Revenue Neutral	225,337	167,505	43,313	3,317	526	3,767	6,866	35	9
34	Revenue Percentage	100.00%	74.34%	19.22%	1.47%	0.23%	1.67%	3.05%	0.02%	0.00%
35		225,337								
36	Rev. Neutral Shift to Equalize Class ROR	0	(6,352)	5,658	616	45	(409)	463	(4)	(18)
37	Rev. Neutral Shift Percentage to Equalize Class ROR		-3.81%	15.91%	24.35%	9.97%	-10.07%	7.46%	-11.28%	-68.00%