Exhibit No.:
Issue(s): Class Cost of Service Study; Rate Design
Witness/Type of Exhibit: Kind/Direct
Sponsoring Party: Public Counsel
Case No.: GR-98-374

DIRECT TESTIMONY

OF

RYAN KIND

Submitted on Behalf of
the Office of the Public Counsel

LACLEDE GAS COMPANY

Case No. GR-98-374

(Rate Design)

August 21, 1998

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Laclede Gas Company's Tariff Sheets Designed to Increase Rates for Gas Service Provided to Customers in the Missouri Service Area of the Company	))))	Case No. GR-98-374

AFFIDAVIT OF RYAN KIND

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Ryan Kind, of lawful age and being first duly sworn, deposes and states:

1. My name is Ryan Kind. I am the Chief Utility Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my direct testimony (rate design) consisting of pages 1 through 15 and Schedules 1 and 2.

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.

Ryan Kind

Subscribed and sworn to me this 21st day of August, 1998.

Mary S. Koestner
Notary Public

My commission expires August 20, 2001

DIRECT TESTIMONY

OF

RYAN KIND

LACLEDE GAS COMPANY

CASE NO. GR-98-374

Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.

A. Ryan Kind, Chief Utility Economist, Office of the Public Counsel, P.O. Box 7800, Jefferson City, Missouri 65102.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL AND EMPLOYMENT BACKGROUND.

A. I have a B.S.B.A. in Economics and a M.A. in Economics from the University of Missouri-Columbia (UMC). While I was a graduate student at UMC, I was employed as a Teaching Assistant with the Department of Economics, and taught classes in Introductory Economics, and Money and Banking, in which I served as a Lab Instructor for Discussion Sections.

My previous work experience includes three and one-half years of employment with the Missouri Division of Transportation as a Financial Analyst. My responsibilities at the Division of Transportation included preparing transportation rate proposals and testimony for rate cases involving various segments of the trucking industry. I have been employed as an economist at the Office of the Public Counsel (Public Counsel or OPC) since April 1991.

Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THIS COMMISSION?

A. Yes, prior to this case I submitted written testimony in: numerous gas rate cases, several electric rate design cases and rate cases, as well as other miscellaneous gas, water, electric, and telephone cases.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I will present Public Counsel's Class Cost of Service (COS) Study and the basis for Public Counsel's rate design recommendations for this case. My testimony will describe how the Class COS results were derived and explain the rationale behind Public Counsel's rate design recommendations.

I. CLASS COST OF SERVICE STUDY

Q. PLEASE OUTLINE THE BASIC ELEMENTS OF THE CLASS COS STUDY THAT YOU PERFORMED FOR THIS CASE.

A. The main purpose of a Class COS Study is to determine the cost of providing service to each of the customer classes by allocating costs to each of them in a reasonable manner. The three primary steps that must be taken in order to perform a Class COS Study are the functionalization, classification, and allocation of costs.

Functionalization of costs involves categorizing accounts by the type of function with which an account is associated. Accounts are categorized as being related to Production, Transmission, Distribution, Customer Accounts, Administrative and General, etc., depending on the gas Local Distribution Company (LDC) functions of which they are a

part. The FERC system of accounts is the starting point in functionalizing accounts since it already has most accounts grouped by functional area.

Once costs have been functionalized, they are classified as being customer (related to the number of customers), demand (related to the class portion of peak usage), commodity (related to annual throughput), or "other" related, depending on the classification with which they are most closely associated. For example, meter, regulator, and service line expenses are considered customer-related, since a certain amount of meter, regulator, and service line expense will be incurred solely for hooking a customer up to the LDC. These expenses will be incurred for each customer even during periods when no gas is used so it clearly would not be reasonable to classify them as being commodity-related.

Finally, after classifying costs, the analyst chooses allocation factors that will distribute a reasonable share of jurisdictional costs to each customer class. Allocation factors are based on ratios that reflect the proportion of total units (total number of customers, total annual throughput, etc.) attributable to a certain customer class. These ratios are then used to calculate the proportions of various cost categories for which a class is responsible.

Q. WHICH CUSTOMER CLASSES HAVE YOU USED?

A. I have used the following customer rate classes: Residential General Service (GS), Commercial and Industrial GS, Large Volume, Interruptible, Firm Sales and Transportation (Firm), Basic Sales and Transportation (Basic), L.P. Gas (LP) and Unmetered Gas Lights (UMGL).

Q. ARE PURCHASED GAS COSTS TREATED DIFFERENTLY FROM OTHER COSTS IN THIS GAS RATE CASE?

A. Yes. The Laclede Gas Company (Laclede or the Company) base tariff rates recover only its non-gas or margin costs. Laclede's Purchased Gas Adjustment factor recovers all of its gas cost.

Non-gas or margin costs are costs that a LDC incurs when it delivers gas from the city gate to its customers. These costs include the expenses and capital costs associated with the operation of the utility's gas plant as well as Customer and Administrative and General expenses. Margin costs and proposed margin rates are usually the main focus of rate design in a gas rate case.

Q. ON WHAT DATA IS YOUR CLASS COS STUDY BASED?

A. The Missouri Public Service Commission Staff (Staff) Accounting Schedules that were filed with the Staff's non-rate design testimony on August 14, 1998 were the source of most of the financial data that I utilized in my COS study. Most of the billing determinant information that I utilized was also provided by the Commission Staff. This data is from the year ending February 28, 1998. I have also utilized data received from Laclede in response to OPC Data Requests. My use of this information should not be viewed as an endorsement of either Staff's or Laclede's methods for calculating accounting costs or billing determinants. I have used this information because it was readily available and contains the level of detail necessary to perform a COS study.

Q. PLEASE DISCUSS THE METHODS THAT YOU USED TO ALLOCATE FUNCTIONALIZED COSTS. FIRST, HOW DID YOU ALLOCATE PLANT AND EXPENSE ACCOUNTS ASSOCIATED WITH MANUFACTURED GAS AND GAS STORAGE FACILITIES?

A. LP gas customers do not benefit from either manufactured gas or gas storage facilities so none of these costs were allocated to them.

I allocated gas production costs on the basis of estimated peak day coincident sales demand since manufactured gas facilities are used primarily during periods of peak system demand. Gas storage costs were allocated on the basis of weather normalized winter sales volumes.

Q. HOW DID YOU ALLOCATE UNSUCCESSFUL EXPLORATION AND DEVELOPMENT (E & D) COSTS AND OTHER UTILITY PLANT (ACCOUNTS 338 AND 118.3)?

A Since the amounts in these accounts arise from Laclede's E & D efforts to reduce per unit gas costs, I allocated both of them on a commodity basis (annual gas sales).

Q. PLEASE DESCRIBE HOW OPC ALLOCATED TRANSMISSION PLANT.

A. Transmission plant was allocated to all classes except for LP Gas based on the relative system utilization method (RSUM) allocator calculated by OPC witness Mr. Barry Hall. The same principles that apply to the "common" portion of distribution mains are applicable to transmission costs. For additional information, see the sections of Mr. Hall's direct testimony that address the applicability of the RSUM for allocating the common portion of distribution mains, and the methodology used to calculate this allocator.

Q. HOW WERE LAND AND LAND RIGHTS, STRUCTURES AND IMPROVEMENTS, AND MAINS PLANT (ACCOUNTS 374, 375, AND 376) ALLOCATED?

A. For these accounts, I used an allocator that was calculated by OPC witness Mr. Barry Hall. His direct testimony in this case describes the methods that he used to develop OPC's distribution mains allocator and the reasons why this method is appropriate for allocating Mains-related costs.

Q. HOW DID YOU ALLOCATE ACCOUNTS 380 THROUGH 383 (SERVICES, METERS, AND REGULATORS)?

A. For these accounts, I used allocators that were calculated by OPC witness Ms. Hong Hu. Her direct testimony in this case describes the methods that she used to develop OPC's allocators for Services, Meters, and Regulators and the reasons why these methods are appropriate.

Q. PLEASE DESCRIBE THE ALLOCATORS THAT YOU APPLIED TO THE REMAINING DISTRIBUTION ACCOUNTS.

A. I used total annual throughput to allocate Measuring and Regulating Station Equipment (Accounts 378 and 379). I allocated Other Equipment (Account 387) based on the allocation of all other previously allocated distribution plant.

Q. HOW DID YOU ALLOCATE GENERAL PLANT?

A. All General Plant accounts were allocated on the basis of each class' proportion of total non-general net plant.

Q. LET'S TURN NOW TO THE ALLOCATION OF OPERATION AND MAINTENANCE EXPENSES. HOW DID YOU ALLOCATE GAS DISTRIBUTION EXPENSES?

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

Q. HOW DID YOU ALLOCATE METER READING EXPENSES?

A. I used an allocator based on a weighted customer allocator that the Staff developed for MGE's predecessor, Western Resources, Inc. The weights developed for Western Resources were 1.44 for Small General Service, 5.3 for Large General Service, and 8.76 for Large Volume.

Q. HOW WERE CUSTOMER SERVICE AND SALES PROMOTION EXPENSES ALLOCATED?

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

Q. HOW DID YOU ALLOCATE ADMINISTRATIVE AND GENERAL (A & G) EXPENSES?

A. I divided these expenses into three categories. I allocated Property Insurance expense (Account 924) on the basis of net plant since this expense is linked to the amount of plant that the company requires in order to serve each customer class. Injuries and Damages and Employee Pensions and Benefits (Accounts 925 and 926) are both payroll related expenses so they were allocated on the basis of the amount of payroll expense that I had

previously allocated to each class. I believe all of the remaining A & G accounts represent expenditures that support the company's overall operation, so I have allocated them on the basis of each class's share of total company COS.

Q. HOW DID YOU ALLOCATE PROPERTY AND PAYROLL TAXES?

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

Q. HOW DID YOU ALLOCATE STATE AND FEDERAL INCOME TAXES?

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

Q. PLEASE DESCRIBE THE RESULTS OF PUBLIC COUNSEL'S CLASS COS STUDY.

A. Schedule 1 shows the results of OPC's Class COS Study which was based on the assumption that total company revenues remain constant. It is important to note that all of the numbers appearing in this testimony's tables and the attached schedules are in thousands (e.g. $10,000 in testimony tables is actually $10,000,000.) The fourth line from the bottom of this schedule (line number 36) shows the percentage by which non-gas rate revenues in each class would have to change in order to make all customer class rates of return equal to the company's overall rate of return. The fifth line from the bottom of this schedule (line number 35) shows the revenue shifts that would be needed to equalize class rates of return. The information from lines 35 and 36 of Schedule 1 is summarized below in Table 1 for the reader's convenience.

Table 1 – COS Indicated Class Revenue Shifts (000)

	GS Residential	GS Com. & Ind.	Large Volume	Inter-ruptible	Firm	Basic	LP	UMGL
Class Shifts	(16,389)	8,276	2,281	289	1,892	3,663	(3)	(11)
% Change	-10.37%	25.17%	76.38%	66.89%	48.27%	63.26%	-5.86%	-43.44%

As line 19 on Schedule 1 indicates, the margin rate levels for the Residential GS, LP and UMGL classes are currently producing returns that exceed the total company return. Conversely, the Commercial and Industrial GS, Large Volume, Interruptible, Firm, and Basic classes are currently producing a return below the level of the total company return. The results that my study shows for UMGL, and to a lessor extent for Interruptible, should be interpreted with caution since these classes are very small. This class rate of return information is summarized below in Table 2.

Table 2 – COS Indicated Customer Class Returns

	GS Residential	GS Com. & Ind.	Large Volume	Inter-ruptible	Firm	Basic	LP	UMGL
Returns	15.01%	2.12%	-6.05%	-4.60%	-1.88%	-4.19%	13.32%	35.76%

I will furnish the more detailed workpapers that support Public Counsel's COS study to any party requesting them.

Q. HOW WOULD YOU CHARACTERIZE THE REVENUE DEFICIENCIES THAT ARE INDICATED BY OPC'S STUDY FOR THE COMMERCIAL AND INDUSTRIAL GS, LARGE VOLUME, INTERRUPTIBLE, FIRM, AND BASIC CLASSES?

A. I would characterize these revenue deficiencies as very significant relative to each classes' total cost of service (revenue requirement). Table 1 shows that the rate levels for these classes are well below the level required to recover the costs associated with serving these class.

II. RATE DESIGN RECOMMENDATIONS

Q. WHAT RATE DESIGN CHANGES IS PUBLIC COUNSEL PROPOSING BASED ON THE REVENUE SHIFTS NEEDED TO EQUALIZE CLASS RATES OF RETURN INDICATED IN TABLE1?

A. OPC recommends that the Commission adopt a rate design that balances movement towards cost of service with rate impact and affordability considerations. To reach this balance, OPC believes that the Commission should impose, at a maximum, revenue shifts equal to one half of the revenue neutral shifts indicated by OPC's CCOS study.

Q. WHAT REVENUE NEUTRAL CLASS REVENUE SHIFTS IS PUBLIC COUNSEL RECOMMENDING IN THIS CASE?

A. These shifts are shown in lines 39 and 40 of Schedule 1 and have also been summarized below in table 3.

Table 3 – OPC Recommended Class Revenue Shifts (000)

	GS Residential	GS Com. & Ind.	Large Volume	Inter-ruptible	Firm	Basic	LP	UMGL
Class Shifts	(8,194)	4,138	1,140	145	946	1,832	(2)	(5)
% Change	-5.19%	12.58%	38.19%	33.45%	24.14%	31.63%	-2.93%	-21.72%

Q. PLEASE DESCRIBE THE INFORMATION CONTAINED IN SCHEDULE 2 AND EXPLAIN HOW IT WAS CALCULATED.

A. Schedule 2 shows the combined impact of spreading the various potential revenue requirement increase amounts (including a zero increase) to customer classes and the revenue neutral class revenue shifts recommended by OPC. Lines 14 through 17 of this Schedule show how the different revenue requirement increases have been spread to the various customer classes. The spread of these revenue requirement increase amounts are based on the percentages that appear in line 12 of Schedule 2.

Q. HOW WERE THE RECOMMENDED REVENUE PERCENTAGES IN LINE 12 OF SCHEDULE 2 CALCULATED?

A. These percentages were calculated by taking the recommended revenue neutral shifts that appear in line 10 of Schedule 2 (also in line 39 of Schedule 1) and adding them to total current class revenues (line 12 of Schedule 1). This percentage is equal to the ratio of the sum of these two amounts to the amount of total company non-gas revenues (see line 12 of Schedule 1).

Q. PLEASE EXPLAIN HOW THE COMBINED IMPACT AMOUNTS THAT APPEAR IN LINES 20 THROUGH 22 OF SCHEDULE 2 WERE CALCULATED.

A. For various revenue requirement increase levels, the combined impact was derived by adding each classes' share of the overall revenue requirement increase to the revenue neutral shifts that OPC has recommended for each class. For example, under the residential column in line 17, we see the $10,995 (actually $10,995,000) that results from spreading a revenue requirement increase of $15,000,000 to the residential class. This $10,995 amount is then added to the negative $8,194 revenue neutral shift amount for the

residential class that appears in line 10. The sum of these two amounts, $2,801, appears in line 22 under the residential column and represents OPC's recommendation (prior to adjustment for equity considerations) for the combined impact of revenue neutral shifts and share of overall revenue requirement increase that should be reflected in rates resulting from this case.

Q. YOU JUST NOTED THAT EQUITY CONSIDERATIONS SHOULD BE TAKEN INTO ACCOUNT IN DETERMINING ANY APPROPRIATE INTERCLASS REVENUE SHIFTS THAT WOULD BE PART OF THE RATE DESIGN RESULTING FROM THIS CASE. PLEASE EXPLAIN HOW THIS CONSIDERATION SHOULD BE APPLIED.

A. As I pointed out earlier in this testimony, Public Counsel's CCOS study in this docket demonstrates that there are some significant interclass subsides incorporated in the Company's rate design. In other words, the class revenues that are being collected from each of the classes as a result of the currently tariffed margin rates are causing certain classes to make payments for service that greatly exceed the cost of the service that is being provided to them. For the most part, OPC's results are not showing anything significantly different that OPC's CCOS study showed in the most recent Laclede rate case, GR-96-193.

There is, however, one significant difference in the study that OPC has performed for this docket. That difference is the separation of the GS class into a Residential portion and a Commercial and Industrial portion. This separation is long overdue, especially in light of the intra-class subsidies that have been revealed by OPC's study.

Public Counsel has recommended that the Commission adopt a rate design that only goes, at most, half-way towards our study results, due to rate impact, equity, and affordability considerations. The Commission could reasonably determine that even going half-way

towards OPC's study results is too big of a jump to make in one step due to these same considerations

Q. PLEASE SUMMARIZE OPC'S RATE DESIGN RECOMMENDATION FOR THE CLASS REVENUE REQUIREMENTS THAT SHOULD RESULT FROM ANY INCREASE IN OVERALL REVENUE REQUIREMENT THAT THE COMMISSION DETERMINES TO BE REASONABLE IN THIS CASE.

A. In this testimony OPC has proposed and illustrated the application of a method for increasing class revenue requirements to go along with any increase in the overall revenue requirement. This method could be utilized to calculate class revenue requirements for any level of overall revenue requirement increase that is ultimately decided in this case. Schedule 2 shows the result of applying OPC's recommended method for determining class revenue requirements to a range of potential revenue requirement increase levels. As noted in the preceding question and answer, the Commission could reasonably determine that, due to rate impact, equity, and affordability considerations, it is not appropriate to move fully to the rate design illustrated in Schedule 2.

Q. DID YOU PERFORM ANY ANALYSIS TO SEE IF LACLEDE'S PROPOSED RESIDENTIAL CUSTOMER CHARGE INCREASE IS JUSTIFIED BASED ON THE CUSTOMER-RELATED COSTS THAT ARE ATTRIBUTABLE TO THE RESIDENTIAL CLASS?

A. Yes, my analysis showed that the customer-related cost, which is one of the factors considered in the determination of a the customer charge level, is $5.53. My customer-related cost calculation was based on the assumption that Laclede's costs are accurately reflected in the accounting schedules contained in the Staff's direct testimony filing.

Q. WHAT CATEGORIES OF COSTS ARE INCLUDED IN YOUR CUSTOMER CHARGE ANALYSIS?

A. I have included costs that are related to services, meters, regulators, and customer accounts expenses. The costs associated with services, meters, and regulators include the return on rate base for the relevant plant accounts, distribution operation and maintenance expenses associated with services, meters, and regulators, plus the depreciation expense associated with services, meters, and regulators.

Q. WHAT IS OPC'S PROPOSAL FOR THE CUSTOMER CHARGE FOR RESIDENTIAL CUSTOMERS?

A. Public Counsel recommends decreasing the residential customer charge from its current level of $12.00 to $8.50. Reducing Laclede's residential customer charge to this level would put this charge more in line with the residential customer charges of other Missouri LDCs. Laclede's residential customer charge is currently the highest for any Missouri LDC and may be one of the highest in the nation. We are not making any recommendations at this time regarding customer charges for the other customer classes.

Q. IN LACLEDE'S LAST RATE CASE, OPC'S STUDY INDICATED THAT THE AMOUNT OF CUSTOMER-RELATED COST THAT SHOULD BE CONSIDERED FOR COLLECTION IN THE RESIDENTIAL CUSTOMER CHARGE WAS $12.69. HOW DO YOU EXPLAIN THE LARGE DECLINE IN THE AMOUNT OF CUSTOMER-RELATED COSTS SHOWN IN YOUR CURRENT CCOS STUDY?

A. This decline is mostly, if not totally, the result of splitting the residential customers away from the rest of the GS class. Just as this split allowed our study to reveal the intra-class subsidy from residential to commercial and industrial customers within the GS class in

terms of the appropriate portion of this class' revenue requirement that should be borne by the residential class, this split allowed OPC's study to focus more precisely on the customer-related costs of residential customers.

Q. BASED ON THE INTRA-CLASS SUBSIDIES REVEALED BY YOUR CCOS STUDY IN THIS CASE WHERE YOU SEPARATED THE RESIDENTIAL CUSTOMERS FROM THE REST OF THE GS CUSTOMERS, DO YOU BELIEVE IT IS POSSIBLE TO HAVE A COST STUDY ON WHICH INFORMED RATE DESIGN RECOMMEDATIONS CAN BE MADE FOR LACLEDE'S RESIDENTIAL CUSTOMERS WITHOUT TREATING RESIDENTIAL CUSTOMERS AS A SEPARATE CLASS?

A. Definitely not. My experience from treating residential customers as a totally separate class in the CCOS study that I performed for this case leads me to believe that any Residential rate design recommendations that are made without the important information provided by a CCOS study that treats residential customers as a totally separate class should be treated with great skepticism.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

Ryan Kind
Direct (Rate Design)
GR-98-374

TOTAL COST OF SERVICE SUMMARY (000)		TOTAL	GS RESIDENTIAL	GS COM. & INDUSTRIAL	LARGE VOLUME	INTER-RUPTIBLE	FIRM	BASIC	LP	UMGL
1 O & M Expenses		102,968	74,199	19,675	2,347	316	2,433	3,965	28	5
2 Depreciation Expenses		20,646	13,825	4,153	605	84	748	1,225	5	2
3 Taxes		36,856	24,706	7,826	1,038	144	1,192	1,939	8	3
4										
5 TOTAL - Expenses and Taxes		160,471	112,730	31,654	3,991	543	4,373	7,129	41	10
6										
7 Current Revenue (non-gas)										
8 Rate Revenue (non-gas)		204,122	158,028	32,887	2,986	432	3,920	5,791	53	24
9 Late Payment Charges	20	3,485	2,415	705	90	12	100	162	1	0
10 Other Revenue (reverse S6.5)	20	1,677	1,162	339	43	6	48	78	0	0
11										
12 TOTAL - Current Revenues		209,284	161,605	33,931	3,120	451	4,068	6,031	55	25
13 Current Revenue Percentage		100.00%	77.22%	16.21%	1.49%	0.22%	1.94%	2.88%	0.03%	0.01%
14										
15 OPERATING INCOME		48,814	48,875	2,277	(871)	(93)	(305)	(1,098)	13	14
16		48,814								
17 TOTAL RATE BASE		491,872	325,635	107,215	14,397	2,012	16,246	26,229	99	40
18										
19 Implicit Rate of Return (ROR)		9.92%	15.01%	2.12%	-6.05%	-4.60%	-1.88%	-4.19%	13.32%	35.76%
20										
21 OPC Recommended Rate of Return		8.80%	8.80%	8.80%	8.80%	8.80%	8.80%	8.80%	8.80%	8.80%
22										
23 Recommended Operating Income With										
24 Equalized (OPC) Rates of Return		43,285	28,656	9,435	1,267	177	1,430	2,308	9	4
25		43,285								
26 Class COS at OPC's Recommended Rate of Return		203,755	141,385	41,089	5,258	720	5,802	9,437	50	14
27 Revenue Percentage		100.00%	69.39%	20.17%	2.58%	0.35%	2.85%	4.63%	0.02%	0.01%
28										
29 Allocation of Difference Between Current										
30 Revenue and Recommended Revenue	20	(5,529)	(3,831)	(1,118)	(143)	(20)	(158)	(257)	(1)	(0)
31		(5,529)								
32 Margin Revenue Required to Equalize										
33 Class ROR - Revenue Neutral		209,284	145,216	42,207	5,401	740	5,961	9,694	51	14
34 Revenue Percentage		100.00%	69.39%	20.17%	2.58%	0.35%	2.85%	4.63%	0.02%	0.01%
35		209,284								
36 Rev. Neutral Shift to Equalize Class ROR		(0)	(16,389)	8,276	2,281	289	1,892	3,663	(3)	(11)
37 Rev. Neutral Shift Percentage to Equalize Class ROR			-10.37%	25.17%	76.38%	66.89%	48.27%	63.26%	-5.86%	-43.44%
38										
39 Recommended Revenue Neutral Shift = 1/2 indicated shift			(8,194)	4,138	1,140	145	946	1,832	(2)	(5)
40 OPC Recommended Revenue Neutral Shift Percentage			-5.19%	12.58%	38.19%	33.45%	24.14%	31.63%	-2.93%	-21.72%
41 Class Revenue Percentages After Rec. Rev. Neutral Shift			73.30%	18.19%	2.04%	0.28%	2.40%	3.76%	0.03%	0.01%

Rate Design Analysis (000)	TOTAL	GS RESIDENTIAL	GS COM. & INDUSTRIAL	LARGE VOLUME	INTER-RUPTIBLE	FIRM	BASIC	LP	UMGL
1 Revenue Neutral Shifts (RNS) to Equalize Class									
2 Rates of Return (ROR)	($0)	($16,389)	$8,276	$2,281	$289	$1,892	$3,663	($3)	($11)
3									
4 Percentage Revenue Change to Equalize Class ROR	0.00%	-10.37%	25.17%	76.38%	66.89%	48.27%	63.26%	-5.86%	-43.44%
5									
6 Current Class Revenue Percentages	100.00%	77.22%	16.21%	1.49%	0.22%	1.94%	2.88%	0.03%	0.01%
7									
8 COS Indicated Class Revenue Percentages	100.00%	69.39%	20.17%	2.58%	0.38%	2.85%	4.63%	0.02%	0.01%
9									
10 **OPC's Recommended Revenue Neutral Shifts**	$ -	$ (8,194)	$ 4,138	$ 1,140	$ 145	$ 946	$ 1,832	$ (2)	$ (5)
11									
12 OPC's Recommended Revenue Percentages	0.00%	73.30%	18.19%	2.04%	0.28%	2.40%	3.76%	0.03%	0.01%
13									
14 **Spread of Proposed Revenue Requirement Increases**									
15 $0 Revenue Requirement Increase	-	-	-	-	-	-	-	-	-
16 $7.5 Million Revenue Requirement Increase	7,500	5,498	1,364	153	21	180	282	2	1
17 $15 Million Revenue Requirement Increase	15,000	10,995	2,729	305	43	359	564	4	1
18									
19 **Combined Impact of Revenue Increase and OPC's RNS**									
20 Combined Impact $0 Increase and OPC Shifts	-	(8,194)	4,138	1,140	145	946	1,832	(2)	(5)
21 Combined Impact $7.5 Million Increase and OPC Shifts	7,500	(2,697)	5,502	1,293	166	1,126	2,113	0	(5)
22 Combined Impact $15 Million Increase and OPC Shifts	15,000	2,801	6,867	1,446	187	1,306	2,395	2	(4)
23									
24 **Percentage Change in Class Rate Revenue**									
25 Combined Impact $0 Increase and OPC Shifts	0.00%	-5.07%	12.20%	36.55%	32.08%	23.26%	30.37%	-2.86%	-21.41%
26 Combined Impact $7.5 Million Increase and OPC Shifts	3.58%	-1.67%	16.22%	41.44%	36.82%	27.68%	35.04%	0.62%	-18.59%
27 Combined Impact $15 Million Increase and OPC Shifts	7.17%	1.73%	20.24%	46.34%	41.55%	32.09%	39.72%	4.10%	-15.77%