

Exhibit No.:

Issue(s):

Witness/Type of Exhibit:

Sponsoring Party:

Case No.:

Class Cost of Service
& Rate Design

Meisenheimer/Direct

Public Counsel

GR-2007-0003

DIRECT TESTIMONY

OF

BARBARA A. MEISENHEIMER

Submitted on Behalf of the Office of the Public Counsel

AMERENUE
(RATE DESIGN)

CASE NO. GR-2007-0003

December 29, 2006

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company d/b/a)
AmerenUE for Authority to File Tariffs)
Increasing Rates for Natural Gas Service)
Provided to Customers in the Company's)
Missouri Service Area.)

Case No. GR-2007-0003

AFFIDAVIT OF BARBARA A. MEISENHEIMER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Barbara A. Meisenheimer, of lawful age and being first duly sworn, deposes and states:

1. My name is Barbara A. Meisenheimer. I am 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.
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.


Barbara A. Meisenheimer

Subscribed and sworn to me this 29th day of December 2006.



JERENE A. BUCKMAN
My Commission Expires
August 10, 2009
Cole County
Commission #05754036


Jerene A. Buckman
Notary Public

My Commission expires August 10, 2009.

**DIRECT TESTIMONY
OF
BARBARA A. MEISENHEIMER**

AMERENUE

(COST OF SERVICE & RATE DESIGN)

CASE NO. GR-2007-0003

Introduction and Summary

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

A. Barbara A. Meisenheimer, Chief Utility Economist, Office of the Public Counsel (OPC or Public Counsel), P. O. Box 2230, Jefferson City, Missouri 65102. I am also employed as an adjunct Economics and Statistics Instructor for William Woods University.

Q. PLEASE SUMMARIZE YOUR EDUCATION AND EMPLOYMENT BACKGROUND.

A. I hold a Bachelor of Science degree in Mathematics from the University of Missouri-Columbia (UMC) and have completed comprehensive exams for a Ph.D. in Economics for the same institution. My two fields of study are Quantitative Economics and Industrial Organization. My outside field of study is Economics.

I have been with the Office of Public Counsel since January 1996. I have testified on economic issues and policy issues in the areas of telecommunications, electric, gas, water and sewer.

Over the past 10 years I have also taught courses for the following institutions:
University Missouri-Columbia, William Woods University and Lincoln
University. I currently teach undergraduate and graduate level economics courses
and undergraduate statistics for William Woods University.

Q. HAVE YOU TESTIFIED PREVIOUSLY IN THIS CASE?

A. No.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. In this testimony I will present Public Counsel's recommendations regarding rate
design and class cost of service.

Class Cost of Service Study Results and Rate Design Recommendations

Q. WHAT IS THE REGULATORY PURPOSE OF A CLASS COST OF SERVICE STUDY?

A. A Class COS Study is a tool used by regulators to aid in determining an
appropriate rate structure. A class cost of service study can be used as a guide in
identifying, on a cost causative basis, the cost of serving a particular group of
customers. A Class COS Study can also be used to evaluate the relative cost of
service among classes. This comparison of relative cost is the focus of Public
Counsel's study and is reflected in the study assumption that the Company's
revenue requirement is equal to the level of current revenue.

1 **Q. WHAT IS THE RELATIVE IMPORTANCE OF CCOS STUDY RESULTS IN RATE DESIGN?**

2 A. A CCOS study provides the Commission with a general guide for a service based
3 on costs to determine the just and reasonable rate. Other relevant factors must
4 also be considered when setting rates, such as the value of a service, the
5 affordability of service, the rate impact, and rate continuity, to highlight a few.
6 The Commission must on a case by case basis balance the results of a cost of
7 service study with other relevant factors that go into the rate making decision
8 process.

9 **Q. IF THE COMMISSION DECIDES TO IMPLEMENT CLASS COST OF SERVICE**
10 **ADJUSTMENTS IN THIS CASE, DO YOU HAVE A CLASS COST OF SERVICE STUDY**
11 **AND A RATE DESIGN RECOMMENDATION FOR THE COMMISSION TO CONSIDER?**

12 A. Yes, I have prepared a CCOS study that should be used as a guide in setting rates.
13 The study results should be weighed against considerations of customer rate
14 impact and affordability.

15 **Q. WHAT IS YOUR GENERAL POSITION REGARDING CHANGES IN CLASS REVENUE**
16 **RESPONSIBILITY?**

17 A. More generally, OPC's rate design recommendation is that where the existing
18 revenue structure departs greatly from the class cost of service, the Commission
19 should impose, at a maximum, class revenue shifts equal to one half of the
20 "revenue neutral shifts" indicated by my class cost of service study. Revenue
21 neutral shifts are shifts that hold overall company revenue at the existing level but
22 allow for the share attributed to each class to be adjusted to reflect the cost
23 responsibility of the class. Moving halfway the revenue neutral shifts lessens the

1 impact on each class. In addition to moving halfway to the revenue neutral shifts,
2 I recommend that if the Commission determines that an overall increase in
3 revenue requirement is necessary, then no customer class should receive a net
4 decrease as the combined result of: (1) the revenue neutral shift that is applied to
5 that class, and (2) the share of the total revenue increase that is applied to that
6 class. Likewise, if the Commission determines that an overall decrease in revenue
7 requirement is necessary, then no customer class should receive a net increase as
8 the combined result of: (1) the revenue neutral shift that is applied to that class,
9 and (2) the share of the total revenue decrease that is applied to that class.

10 **Q. WHAT CONCLUSIONS ARE SUGGESTED BY PUBLIC COUNSEL'S COST OF SERVICE**
11 **STUDY?**

12 A. Based on the results of my class cost of service studies, (Schedule DIR-BAM1.1),
13 the following conclusions can be drawn: to equalize the classes' rates of return,
14 the Residential class revenues would need to be increased by 7.29%, the General
15 Service Class revenues would need to be reduced by 20.03%, the Interruptible
16 Class revenues would need to be reduced by 11.2% and Transportation Revenue
17 would need to increased by about 9.36%. The percent above or below cost of
18 service is shown for each class by district on Line 4, Schedule DIR-BAM 1.1.

19 **Q. WHAT SHIFTS IN CLASS REVENUE RESPONSIBILITY WOULD YOU PROPOSE BASED**
20 **ON YOUR CCOS STUDY RESULTS?**

21 A. It depends on the revenue requirement approved in this case. If the overall
22 change in revenue requirement in this case is negative, holding Residential and
23 Transport rates constant and decreasing General Services & Interruptible would

1 be appropriate. If the overall revenue requirement increases, I recommend
2 moving classes $\frac{1}{2}$ of Revenue Neutral Shifts indicated by my CCOS study,
3 consistent with the rate impact considerations described below.

4 **Q. HAVE YOU PREPARED EXAMPLES OF THIS METHOD APPLIED TO DIFFERENT**
5 **REVENUE REQUIREMENTS?**

6 A. Yes. Line 10 of Schedule DIR BAM-1.2 illustrates one half of the revenue neutral
7 shift indicated by my CCOS study. Line 20 illustrates the combined effect of one
8 half of the revenue neutral shift indicated by my CCOS study and a \$11 million
9 dollar increase or decrease in the total revenue requirement. Lines 26 illustrate
10 adjustments that ensure that no customer class receives a net increase as the
11 combined result of: (1) the revenue neutral shift that is applied to that class, and
12 (2) the share of the total revenue decrease that is applied to that class.

13 **Q. IF THE COMMISSION DETERMINES IT REASONABLE IN THIS CASE, CAN YOUR**
14 **METHOD BE APPLIED TO DIFFERENT REVENUE REQUIREMENTS?**

15 A. Yes, it can. This method could be utilized to calculate class revenue requirements
16 for any practical level of overall revenue requirement.

17 **Q. DO YOU RECOMMEND ANY CHANGE IN THE RESIDENTIAL CUSTOMER CHARGE AT**
18 **THIS TIME?**

19 A. No. My class of cost of service study results indicate the current level of the
20 customer charge is less than the customer specific costs included in the
21 calculation. Those costs included the meter, service, regulator, and a portion of
22 customer accounts and operation and maintenance expenses. Currently the

1 Company has a \$10.20 residential customer charge and a \$24.00 general service
2 customer charge.

3 Based on my study results and given the increases in revenue requirements
4 proposed by some parties in this case, a moderate increase in the customer charge
5 would be acceptable if the Company is granted an increase in revenue
6 requirement. I would encourage you to limit the residential customer charge to
7 \$12 or less. The Commission in Case No. GR-2004-0209 recognized the public
8 policy the benefits of maintaining a customer charge as low as reasonably
9 possible.

10 **Class Cost of Service Study Method**

11 **Q. WHAT ARE THE REPRESENTATIVE CLASSES INCLUDED IN PUBLIC COUNSEL’S**
12 **CLASS COS STUDY?**

13 A. In performing a Class COS Study, customers should be grouped into “classes”
14 based on type of customer and utilization patterns. Public Counsel’s Class COS
15 Study identifies four distinct classes of customers: Residential, General Services,
16 Interruptible and Transport. I chose these classes based on accessibility to data.

17 **Q. PLEASE DESCRIBE THE ASSIGNMENT OF COST TO THE CUSTOMER CLASSES.**

18 A. The assignment of costs to customer classes is a three-step process in which costs
19 are first functionalized, then classified, and finally allocated. Public Counsel’s
20 Class COS Study primarily reflects the booked cost incurred through the test year
21 as determined by the Staff’s accounting run.

1 **Q. ARE PURCHASED GAS COSTS TREATED DIFFERENTLY THAN OTHER COSTS?**

2 A. Yes. The Company's base tariff rates recover only its non-gas or margin costs. A
3 purchased gas adjustment cost factor is used to recover gas costs. The cost of
4 service study will develop the non-gas or margin costs incurred by the LDC in
5 delivering gas from the city-gate to its customers.

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

7 A. The data is associated with a test year ending June 30, 2006. The Accounting
8 Schedules filed with the Staff's non-rate design testimony were the source of most
9 of the financial and revenue data that I utilized in preparing my study and adjusted
10 by the Staff. I utilized annual, monthly and winter customer usage data provided
11 by the Company. I have also utilized peak day volumes received from the Staff.
12 My use of this information should not be viewed as an endorsement of either
13 Staff's or the Company's method for calculating accounting costs, billing
14 determinants or peak demands. I have used this information because it contained
15 the best level of detail available to perform my study.

16 **Q. IS THERE A POSSIBILITY THAT SOME INFORMATION USED IN YOUR STUDY WILL**
17 **BE UPDATED AND REVISED AS THIS CASE PROGRESSES?**

18 A. Yes. I will update my studies to reflect changes that significantly impact my
19 results.

1 **Q. PLEASE DESCRIBE THE FUNCTIONALIZATION OF COSTS.**

2 A. Functionalization is achieved by categorizing cost accounts by associated
3 function. Functional categories include; Production, Storage, Transmission,
4 Distribution, Customer Accounts and Administrative and General (A&G). Some
5 functional categories contain accounts that are identifiable as being directly or
6 jointly caused by particular customer classes. Other functional categories contain
7 costs associated with common facilities or common overheads.

8 **Q. PLEASE DESCRIBE THE CLASSIFICATION OF COSTS.**

9 A. The next step, Classification, is achieved by further categorizing costs into
10 customer related, commodity related, demand related or “other related” costs.

11 **Q. PLEASE DESCRIBE CUSTOMER RELATED COSTS.**

12 A. Customer related costs should vary directly with the number of customers served.
13 Examples of customer related costs include: expenses associated with metering,
14 reading, billing, and the costs associated with metering equipment and service
15 connections

16 **Q. PLEASE DESCRIBE COMMODITY RELATED COSTS.**

17 A. Commodity related costs vary with the quantity of gas purchased. Historically,
18 commodity related costs primarily have included purchased gas cost. Today local
19 distribution companies recover purchased gas cost through the PGA but other
20 plant accounts may still be categorized as commodity related.

1 **Q. PLEASE DESCRIBE DEMAND RELATED COSTS.**

2 A. Demand related costs vary with the capacity requirement of plant or equipment.
3 They are related to the maximum system requirements that reflect the capacity
4 necessary to serve demand during peak periods. Demand related costs include:
5 production, transmission and storage costs and expenses associated with these
6 types of plant. In addition, some distribution plant and related expenses are
7 demand related costs.

8 **Q. PLEASE DESCRIBE THE ALLOCATION PROCESS.**

9 A. Following functionalization and classification, allocation factors are applied to
10 distribute a reasonable share of jurisdictional costs to each customer class. Some
11 allocation factors are based on a simple ratio of a particular class' share of total
12 costs. Other allocation factors are based on usage, sales, or weighted share of
13 customers. Allocation factors are designed to reflect the appropriate classification
14 in allocating costs.

15 **Q. HOW ARE INTANGIBLE PLANT ACCOUNTS ALLOCATED?**

16 A. Intangible plant accounts include expenses related to organizing the enterprise,
17 obtaining franchise and consent and other miscellaneous items. These costs are
18 not attributable to a particular subset of customer classes, instead they are
19 considered to be common costs and are allocated on the basis of the portion of
20 total non-general plant cost assigned to each customer class.

1 **Q. HOW ARE GAS PRODUCTION COSTS ALLOCATED?**

2 A. Gas production costs are generally considered demand related and/or energy
3 related and are allocated on the basis of weather normalized annual sales volumes.

4 **Q. HOW ARE TRANSMISSION PLANT ACCOUNTS ALLOCATED?**

5 A. Transmission plant is generally viewed as demand related. I considered two
6 methods, an average in peak A & 2CP Method and a 12CP Method. I selected the
7 12CP. The two methods gave similar results.

8 **Q. HOW ARE DISTRIBUTION PLANT ACCOUNTS ALLOCATED?**

9 A. Land and Land Rights, Structures and Improvements, and Mains Plant (Accounts
10 374, 375, and 376) are allocated on the basis of a distribution mains allocator.

11 . Based on the current Commission's past decision to reject the mains allocation,
12 the method previously used by Public Counsel, I have developed alternative
13 allocators for this case.

14 I developed a weighted allocation factor of which 10% weight is given to service
15 weighted customer counts and the remaining 90% weight is given to a demand
16 related component of the allocator. For the demand portion, I used the same
17 12CP used to allocate the transmission.

18 The result of using these transmission and distribution allocators instead of the
19 RSUM method is that Residential customers who are responsible for 42.5% of ccf
20 throughput will be responsible for 47.4% of transmission mains and related costs
21 and 50.4% of distribution mains and related costs.

Q. PLEASE CONTINUE.

A. Measuring and Regulating Station Equipment (Accounts 378 and 379) are classified as commodity related and allocated on the basis of annual volumes. Accounts 380 through 386 are customer related. The following summary identifies the allocation factor for each account.

Table 1.

<u>Account</u>	<u>Description</u>	<u>Allocator</u>
380	Services	Services Allocator
381	Meters	Meter Allocator
383	House Regulators	Regulator Allocator
385	Meas. and Reg. Station Equip. - Industrial	Commercial and Industrial Customers

Q. HOW ARE GENERAL PLANT ACCOUNTS ALLOCATED?

A. General plant accounts are allocated on the basis of the overall class cost of service.

Q. PLEASE DESCRIBE HOW OPERATION AND MAINTENANCE EXPENSES ARE ALLOCATED?

A. For allocating most of the accounts in this category, I used the “expenses follow plant principle” and relied on the same or similar allocator to those used for allocating associated plant accounts.

Q. HOW ARE CUSTOMER ACCOUNTS, CUSTOMER SERVICE, AND SALES PROMOTION EXPENSES ALLOCATED?

A. Certain accounts such as some Customer Accounts expenses are customer related and are allocated on the basis of number of customer bills or weighted customers. Sales promotion expenses are allocated on the basis of the overall class cost of service and the following summary outlines the allocation of customer accounts expenses.

Table 2.

<u>Account</u>	<u>Description</u>	<u>Allocator</u>
901	Supervision	Customer Accounts
902	Meter Reading Expenses	Meter Reading Weighted Customers
903	Customer Records and Collections	Meter Weighted Customers Allocator
904	Uncollectible Accounts	Class Cost of Service
905	Misc. Customer Accounts	Customer Accounts Allocator

1 **Q. HOW ARE ADMINISTRATIVE AND GENERAL (A & G) EXPENSES ALLOCATED?**

2 A. Property insurance (Account 924) is allocated on the basis of net plant. Injuries
3 and damages and employee salaries, pensions and benefits (Accounts 921, 922,
4 923, 925 and 926) are allocated on the basis of payroll. The remainder of A & G
5 expenses are allocated on the basis of the overall class cost of service.

6 **Q. HOW ARE TAXES ALLOCATED?**

7 A. Franchise taxes are allocated on the basis of rate base. Payroll taxes are allocated
8 as a function of payroll expense. Income taxes are allocated according to the rate
9 base attributable to each class.

10 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

11 A. Yes.

OPC Cost of Service Results and Rate Design Analysis

TOTAL COST OF SERVICE SUMMARY					
	TOTAL	Residential	General Service	Interruptible	Transportation
1 O & M Expenses	28,386,182	19,749,066	5,468,767	301,764	2,866,586
2 Depreciation Expenses	7,433,713	4,492,183	1,704,213	100,975	1,136,342
3 Taxes	12,419,978	7,990,660	2,623,501	160,020	1,645,797
4					
5 TOTAL - Expenses and Taxes	48,239,873	32,231,908	9,796,481	562,758	5,648,725
6					
7 Current Revenue (non-gas)					
8 Rate Revenue (non-gas)	59,271,850	35,370,144	15,777,620	861,543	7,262,542
9 Late Payment Charges	-	-	-	-	-
10 Other Revenue	2,207,866	1,780,306	331,270	12,012	84,277
11					
12 TOTAL - Current Revenues	61,479,716	37,150,451	16,108,890	873,556	7,346,819
13 Current Revenue Percentage	100.00%	60.43%	26.20%	1.42%	11.95%
14					
15 OPERATING INCOME	13,239,843	4,918,543	6,312,409	310,798	1,698,094
16					
17 TOTAL RATE BASE	201,075,627	113,836,308	47,873,646	3,254,494	36,111,179
18					
19 Implicit Rate of Return (ROR)	6.58%	4.32%	13.19%	9.55%	4.70%
20					
21 Equalized Rate of Return	6.585%	6.585%	6.585%	6.585%	6.585%
22					
23 Recommended Operating Income With Equalized ROR	13,239,843	7,495,562	3,152,245	214,292	2,377,744
24					
25 Class COS at Equalized Rate of Return	61,479,716	39,727,471	12,948,726	777,051	8,026,469
26 Revenue Percentage	100.00%	64.62%	21.06%	1.26%	13.06%
27					
28					
29					
30					
31 Margin Revenue Required to Equalize					
32 Class ROR - Revenue Neutral	61,479,716	39,727,471	12,948,726	777,051	8,026,469
33 Revenue Percentage	100.00%	64.62%	21.06%	1.26%	13.06%
34					
35 Rev. Neutral Shift to Equalize Class ROR	0	2,577,020	(3,160,164)	(96,505)	679,650
36 Rev. Neutral Shift Percentage to Equalize Class ROR		7.29%	-20.03%	-11.20%	9.36%
37					
38 Recommended Revenue Neutral Shift = 1/2 indicated shift		1,288,510	(1,580,082)	(48,253)	339,825
39 OPC Recommended Revenue Neutral Shift Percentage		3.64%	-10.01%	-5.60%	4.68%
40 Class Revenue Percentages After Rec. Rev. Neutral Shift		62.52%	23.63%	1.34%	12.50%

OPC Cost of Service Results and Rate Design Analysis

Rate Design Analysis		TOTAL	Residential	General Service	Interruptible	Transportation					
1	Revenue Neutral Shifts (RNS) to Equalize Class										
2	Rates of Return (ROR)	\$0	\$2,577,020	(\$3,160,164)	(\$96,505)	\$679,650					
3	Percentage Revenue Change to Equalize Class ROR	0.00%	7.29%	-20.03%	-11.20%	9.36%					
4	Current Class Revenue Percentages	100.00%	60.43%	26.20%	1.42%	11.95%					
5											
6	COS Indicated Class Revenue Percentages	100.00%	64.62%	21.06%	1.26%	13.06%					
7											
8	OPC's Recommended Revenue Neutral Shifts	\$	-	\$	1,288,510	\$	(1,580,082)	\$	(48,253)	\$	339,825
9	OPC's Recommended Revenue Percentages	0.00%	62.52%	23.63%	1.34%	12.50%					
10											
11	Spread of Proposed Revenue Requirement Increases	11,000,000	6,877,530	2,599,506	147,664	1,375,301					
12	\$11 Million Revenue Requirement Increase	3,000,000	1,875,690	708,956	40,272	375,082					
13	\$3 Million Revenue Requirement Increase	-	-	-	-	-					
14	\$0 Increase	-	-	-	-	-					
15											
16	Combined Impact of Revenue Increase and OPC's RNS	11,000,000	8,166,039	1,019,424	99,411	1,715,125					
17	\$11 Million Revenue Requirement Increase	3,000,000	3,164,200	(871,126)	(7,981)	714,907					
18	\$3 Million Revenue Requirement Increase	-	1,288,510	(1,580,082)	(48,253)	339,825					
19	\$0 Increase	-	-	-	-	-					
20											
21	Adjusted Impact of Revenue Increase and OPC's RNS	11,000,000	8,166,039	1,019,424	99,411	1,715,125					
22	\$11 Million Revenue Requirement Increase	3,000,000	2,447,110	-	-	552,890					
23	\$3 Million Revenue Requirement Increase	-	-	-	-	-					
24	\$0 Increase	-	-	-	-	-					
25											
26	Adjusted Percentage Change in Class Rate Revenue	17.89%	21.98%	6.33%	11.38%	23.35%					
27	\$11 Million Revenue Requirement Increase	4.88%	6.59%	0.00%	0.00%	7.53%					
28	\$3 Million Revenue Requirement Increase	0.00%	0.00%	0.00%	0.00%	0.00%					
29	\$0 Increase	-	-	-	-	-					
30											
31	RECOMMENDED ADJUSTED CLASS REVENUE	\$	72,479,716	\$	45,316,490	\$	17,128,314	\$	972,967	\$	9,061,945
32	\$11 Million Revenue Requirement Increase	\$	64,479,716	\$	39,597,561	\$	16,108,890	\$	873,556	\$	7,899,710
33	\$3 Million Revenue Requirement Increase	\$	61,479,716	\$	37,150,451	\$	16,108,890	\$	873,556	\$	7,346,819
34	\$0 Increase	-	-	-	-	-	-	-	-	-	-
35											
36											
37	ADJUSTED REVENUE PERCENTAGE	62.52%	23.63%	1.34%	12.50%						
38	\$11 Million Revenue Requirement Increase	61.41%	24.98%	1.35%	12.25%						
39	\$3 Million Revenue Requirement Increase	60.43%	26.20%	1.42%	11.95%						
40	\$0 Increase	-	-	-	-						
41											
42											
43											
44											
45											
46											