Exhibit No.:
Issues: Allocated Class Cost of Service
Witness: Philip B. Difani, Jr.
Type of Exhibit: Direct Testimony
Sponsoring Party: Union Electric Company d/b/a AmerenUE
Case No.: GR-2000-512

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. GR-2000-512

DIRECT TESTIMONY

OF

PHILIP B. DIFANI, JR.

St. Louis, Missouri
April 3, 2000

Exhibit No. 26
Date 10-4-00 Case No. GR-2000-512
Reporter KS

MISSOURI PUBLIC SERVICE COMMISSION

STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a AmerenUE for Authority to File Tariffs Increasing Rates for Gas Service Provided to Customers in the Company's Missouri Service Area.	))))	Case No. GR-2000-512

AFFIDAVIT OF PHILIP B. DIFANI, JR.

STATE OF MISSOURI)
) SS.
CITY OF ST. LOUIS)

Philip B. Difani, Jr., being first duly sworn on his oath, states:

1. My name is Philip B. Difani, Jr. I work in the City of St. Louis, Missouri, and I am a Senior Rate Engineer in the Rate Engineering Department of Ameren Services Company.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony consisting of pages 1 through 11, including Schedules 1 through 5, all of which testimony has been prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. GR-2000-512 on behalf of Union Electric Company.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

Philip B. Difani Jr.

Subscribed and sworn to before me this 30 day of March, 2000.

Carol A Head
Notary Public

CAROL A. HEAD
Notary Public - Notary Seal
STATE OF MISSOURI
St. Charles County
My Commission Expires: Sept. 23, 2002

DIRECT TESTIMONY

OF

PHILIP B. DIFANI, JR.

UNION ELECTRIC COMPANY

d/b/a AmerenUE

CASE NO. GR-2000-512

Q. Please state your name and business address.

A. My name is Philip B. Difani, Jr. My business address is 1901 Chouteau Avenue, St. Louis, Missouri, 63103.

Q. By whom are you employed and in what position?

A. I am employed by Ameren Services Company as a Senior Rate Engineer in the Rate Engineering Department.

Q. Please describe your educational background and work experience.

A. These are set forth in Schedule 1 to this testimony.

Q. What is the purpose of your testimony in this proceeding?

A. I will discuss the fully allocated class cost of service study for the Missouri jurisdictional gas operations of Union Electric Company d/b/a AmerenUE.

Q. What is generally meant by the term "cost of service"?

A. A cost of service study determines the utility's aggregate annual revenue requirement necessary to provide a fair return on the utility's net investment in property and plant and recover its operating and maintenance (O&M) expenses, depreciation expense, and taxes.

Q. Has the Company prepared such a study in this case?

A. Yes, it has. Company witness Gary Weiss addresses the Company's Missouri jurisdictional gas cost of service study (annual revenue requirement) for the year ending June 30, 1999, in his direct testimony.

Q. What is an allocated class cost of service study?

A. The general objective of an allocated class cost of service study is to determine as accurately as possible the annual revenue requirement for each of the Company's rate classes. To the extent that class revenues deviate from cost of service, an adjustment in class revenues is required.

Q. Has the Company prepared an allocated class cost of service study as part of its filing in this case?

A. Yes. This study, which I will refer to as the COS Study, is based on the same normalized test year ending June 30, 1999, that was used in Mr. Weiss' jurisdictional study. Schedule 2 is a comparison, by rate class, of the cost of service results utilizing revenues produced by current rates. Schedule 3 provides the same comparison, but at the level of total revenue requirements developed by Mr. Weiss's jurisdictional study, and on an equal class rate of return basis.

Q. What rate classes were used in the COS Study?

A. The Company's existing Residential, General Service, Interruptible, and Transportation classes were allocated their respective portions of the total Missouri gas jurisdictional costs in the COS Study.

Q. Does the COS Study include gas supply costs?

A. No. Gas supply costs, including purchased gas commodity, demand and reservation costs, are recovered on a dollar-for-dollar basis in the Purchased Gas Adjustment (PGA) Clause of the Company's tariffs. Therefore, gas supply costs were excluded from this Study.

Q. Please describe the first step involved in the preparation of the COS Study.

A. The first step is to functionalize costs according to major functional areas, such as production, transmission, and distribution plant, in order to determine which customer classes are jointly responsible for such costs.

Q. Following the functionalization of cost, what is the next step in the development of a class COS?

A. The next step was to classify each rate base component and expense into various categories of cost. The Company's natural gas investment and non-PGA operating expenses can be categorized into three basic classifications, insofar as their functional responsibility is concerned. These classifications are 1) customer-related costs, 2) demand-related costs, and 3)

variable or commodity-related costs, all of which are described in greater detail below.

Customer-related costs are those costs which result from the mere existence of a customer, i.e., making service available, and include the costs of meter reading and billing, as well as the fixed costs associated with the customer's meter, service pipe, and some portion of the investment in distribution mains. These costs do not vary significantly from month-to-month and are unaffected by year-to-year fluctuations in the gas consumption level of customers.

Demand-related costs are those costs that are incurred in order to meet the maximum daily gas demand imposed by customers, particularly those demands coincident with the total system peak demand. The capacity of AmerenUE's distribution systems above that needed for non-temperature related base use (i.e., June through September average monthly usage), and the investment related thereto, is a function of the peak or excess demand of each rate class.

Commodity-related costs are those costs, which are a function of the actual volume of gas used. Since commodity related gas supply costs are excluded from the COS Study, carrying costs for stored gas and commodity related production labor expense are the only costs included in the COS Study that are in this category.

Q. Please describe the Company's classification of its major gas rate base components.

A. Certain rate base components can easily and logically be categorized or assigned to a single cost classification. For example, customer meters and service pipe only serve individual customers and have no benefit to other customers, and are therefore assigned to the customer-related classification. However, the Company's investment in other rate base components, such as distribution plant, is driven by the number and geographical distribution of the customers served, along with the relative magnitude of their maximum gas usage. As such, a portion of these components are classified as customer-related and a portion as demand-related.

Q. What was the next step in the Company's gas COS Study?

A. The next step was to allocate the classified rate base components and operating expenses to the various rate classes, based upon appropriate cost allocation factors.

Q. Please describe the process used to make these allocations.

A. Rate base components and expenses were allocated to the rate classes by application of various customer-related, demand-related, and commodity-related allocators described as follows:

Customer-related allocators are generally proportional to the number of customer bills rendered annually to each rate class or to the weighted average of the customer-related costs of certain items, based on Company studies.

Demand-related allocators are proportional to either the coincident or non-coincident customer class peak day demands in excess of non-temperature related summer period demands.

Commodity-related allocators are proportional to the temperature normalized volumes sold or transported to each rate class.

Q. Please describe the limited number of rate base components and expenses that were allocated on a coincident peak day basis.

A. Propane production plant and inventory, and the demand-related portion of production expenses are the only such items allocated on a coincident peak basis. These items are primarily related to meeting customers' peak demands when the Company experiences the highest demand on its distribution system.

Q. How were the coincident peak day demands of the various rate classes determined?

A. The peak day demands for the Residential and General Service classes were determined based upon the day of maximum heating degrees during the test year. The coincident demand assigned to the Interruptible class was the assurance gas level contracted for by such customers under the Company's Interruptible Service tariff. Transportation customers' coincident peak is zero as they do not purchase their commodity gas supplies from AmerenUE.

Q. Please describe the items of rate base and expenses that were allocated on a non-coincident peak day basis.

A. T&D plant items and associated expenses not directly classified as customer related were allocated based on the number of customers and on the maximum non-coincident peak demand of each class. The maximum non-coincident class demands were used to reflect the fact that the sizing of the Company's distribution system is dictated by the total supply of gas being delivered to customer meters, regardless of the source of such gas.

Q. How did the Company determine the non-coincident peak day demand and allocator for the various classes?

A. The Company first summed the non-coincident peak day demand of each tariffed rate class. Then the base demand was determined using the normalized average daily sales and transport volumes during the four summer months of minimal temperature-related usage (June, July, August, and September). By subtracting this base demand from non-coincident peak demand, the excess demand was calculated. The weighted percentage of base (13%) and excess (87%) demands was used respectively to allocate the previously determined customer-related and non-coincident demand-related portions of each class' general T&D plant, such as the investment in distribution mains.

Q. Please describe the allocation of Meters and Regulator investment?

A. The Company conducted an analysis of its installed capitalized costs of meters in service for each of its respective rate classes and then summed

these costs to develop total system installed capitalized meter costs. The installed capitalized meter cost for each class as a percent of such total system cost was used to allocate meter and regulator investment.

Q. How was the Company's investment in Service Pipe allocated?

A. In the previous gas rate proceeding, Case No. GR-97-393, the Company determined the costs to install "typical" services for each customer class. This prior study was also used as the allocation methodology in this case.

Q. How were Meter Reading, Customer Records and Uncollectible Accounts expense allocated?

A. A Company study determined the Meter Reading and Customer Records costs for the tariffed rate classes. This study segregated customers by regular and special file, which are analogous to small and large customers. The meter reading portion of this study is based on electric meters in the St Louis Metropolitan Area, which we believe this is a reasonable proxy for the meter reading costs of gas meters, particularly since a large portion of our gas customers are also our electric customers. Meter reading costs for Transportation and Interruptible customer classes were calculated based on one on-site meter reading each quarter, which is used as a check of the normal monthly electronic reads assigned to these two customer classes. Uncollectible Accounts (904) represents the current ratio of Company losses by customer class

due to nonpayment. This allocation factor was also used to credit late payment charges back to the customer classes in "Other Revenues".

Q. Please describe the general procedure the Company followed in the classification of gas operating expenses.

A. In general, expenses that are directly related to a particular plant item were allocated in the same manner as that plant item. For example, depreciation of mains was allocated to customer classes using the same percentages used to allocate the various classifications of main investment. Administrative and general expenses (A&G) were allocated in proportion to the previously established labor expenses for production, T&D, and customer accounts/service and sales operations. This generic allocation of A&G expenses, referred to as the "labor ratio" methodology, is generally accepted and commonly used throughout the industry. Mr. Weiss also utilized this methodology in allocating administrative and general expenses in the Company's jurisdictional cost of service study.

Q. How did you allocate test year income taxes?

A. This element of cost of service is directly related to the Company's investment in its plant and was allocated according to each of the customer classes on the basis of previously allocated gross plant.

Q. Have you developed class revenue requirements necessary to produce a rate of return equaling the rate of return in the direct testimony of Mr. Weiss?

A. Yes. Schedule 3 is a summary of the class COS Study reflecting the Company's total Missouri gas revenue requirements developed by Mr. Weiss. Schedule 3 reflects an equal rate of return and the total revenue requirements of the Company's customer classes.

Q. Please explain the Company's treatment of its Other Revenues associated with fees such as late payment charges, and its tariffed Miscellaneous Charges such as insufficient funds check charges, disconnects/reconnects and meter testing charges.

A. The Company's "Other Revenues" were credited back to the respective revenue requirement of each customer class.

Q. Do you believe this class COS Study accurately reflects the current relative cost responsibilities of AmerenUE's natural gas rate classes?

A. Yes, I do.

Q. Have you developed a schedule showing the allocation factors used in your analysis?

A. Yes, such information is contained in Schedule 4.

Q. As a part of your class cost of service development, did you perform an analysis to develop cost based customer charges for each of the Company's rate classes?

A. Yes, I did. Schedule 5 indicates cost-based customer charges based on customer-related cost as determined in the COS Study. These results

along with each class' allocated total revenue requirement was used by Company witness William M. Warwick to develop the proposed rates for each of the customer classes.

Q. Does this conclude your testimony?

A. Yes, it does.

QUALIFICATIONS OF PHILIP B. DIFANI JR.

My name is Philip B. Difani, Jr., and I reside in St. Louis County, Missouri. I am a licensed Professional Engineer in the State of Missouri.

My educational background consists of a Bachelor of Science Degree in Mechanical Engineering from Washington University in May 1983 and a Master of Business Administration from Southern Illinois University in March 1993.

I was employed by Union Electric in April 1974. I began my engineering career at Union Electric in the Nuclear Function as a Mechanical Engineer in May, 1983. I was responsible for various modifications to the Callaway Plant including preparing specifications, drawings, and other design related matters.

I transferred to the Rate Engineering Department in February 1991 and I assumed my current position with Ameren Services Company upon completion of the merger of CIPSCO Inc. and Union Electric effective December 31, 1997. My duties and responsibilities include assignments related to the gas and electric rates of Union Electric, now doing business as AmerenUE, and Central Illinois Public Service Company, doing business as AmerenCIPS. This includes participation in regulatory proceedings, rate analyses, conducting class cost of service and property evaluation studies, the development and interpretation of gas and electric tariffs, including rules and regulations, and other rate or regulatory projects as assigned.

I have previously testified before the Missouri Public Service Commission and the Illinois Commerce Commission.

UNION ELECTRIC COMPANY

DATE:
FILENAME: COST99_direct_1
RANGE: A982..L1014

SCHED. # pbd-2
PAGE # 1

ALLOCATED CLASS COST-OF-SERVICE BASED ON REVENUE REQUIREMENTS
TEST YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: COST OF SERVICE SUMMARY (Current Rates)

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	TOTAL MISSOURI	RESIDNTL	GENERAL	INTERR	TRANSPORT
1								
2		COST OF SERVICE SUMMARY						
3								
4								
5		GAS OPERATING REVENUE						
6		Sale of Gas	Worksheet	$36,505,363	$22,367,943	$9,450,785	$762,694	$3,923,941
7		Other Operating Revenues	Worksheet	667,515	551,740	96,381	2,836	16,557
8								
9		TOTAL GAS OPERATING REVENUES		$37,172,878	$22,919,683	$9,547,166	$765,530	$3,940,498
10								
11		EXPENSES:						
12		Total Gas O&M Expenses	Schedule	$18,671,189	$13,388,154	$3,832,700	$224,890	$1,225,445
13		Depreciation Expense	Schedule	5,163,315	3,622,895	1,093,547	62,500	384,373
14		Taxes Other than Income Taxes	Schedule	3,985,882	2,782,417	858,549	48,829	296,088
15								
16		INCOME TAXES	A.F.6	2,683,000	1,865,988	580,388	33,022	203,603
17								
18		NET UTILITY OPERATING INCOME		$6,669,492	$1,260,229	$3,181,983	$396,291	$1,830,990
19								
20		RATE BASE	Schedule	$136,169,622	$90,474,342	$33,086,850	$1,773,122	$10,835,308
21								
22		RATE OF RETURN - REALIZED	Calculation	4.90	1.39	9.62	22.35	16.90
23								
24		INDEX OF RETURN		100	28	196	456	345

Schedule 2

UNION ELECTRIC COMPANY

DATE: 02/06/2000 | SCHED. # pbd-3
FILENAME: COS99_direct_1 | ALLOCATED CLASS COST-OF-SERVICE BASED ON REVENUE REQUIREMENTS | PAGE # 2
RANGE: A1062..L1094 | TEST YEAR: 12 MONTHS ENDED JUNE 30, 1999

TITLE: COST OF SERVICE SUMMARY

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	TOTAL MISSOURI	RESIDNTL	GENERAL	INTERR	TRANSPORT
1								
2		COST OF SERVICE SUMMARY						
3								
4								
5		GAS OPERATING REVENUE						
6		Sale of Gas (Margin)	Calculation	$48,573,299	$33,702,739	$10,696,839	$607,050	$3,566,671
7		Other Operating Revenues	Worksheet	$667,515	$551,740	$96,381	$2,836	$16,557
8								
9		TOTAL GAS OPERATING REVENUES		$49,240,814	$34,254,480	$10,793,220	$609,886	$3,583,228
10								
11		EXPENSES:						
12		Total Gas O&M Expenses	Schedule	$18,671,189	$13,388,154	$3,832,700	$224,890	$1,225,445
13		Depreciation Expense	Schedule	5,163,315	3,622,895	1,093,547	62,500	384,373
14		Taxes Other than Income Tax	Schedule	3,985,882	2,782,417	858,549	48,829	296,088
15								
16		INCOME TAXES	Schedule	7,365,000	5,122,252	1,593,200	90,646	558,902
17								
18		NET UTILITY OPERATING INCOME		$14,055,428	$9,338,762	$3,415,225	$183,022	$1,118,420
19								
20		RATE BASE	Schedule	$136,169,622	$90,474,342	$33,086,850	$1,773,122	$10,835,308
21								
22		RATE OF RETURN - REALIZED	Schedule	10.32	10.32	10.32	10.32	10.32
23								
24		INDEX OF RETURN		100	100.00	100.00	100.00	100.00

Schedule 3

UNION ELECTRIC COMPANY

DATE:
FILENAME: COS99_direct_1
RANGE: Y1..AL61

GAS COST OF SERVICE ACCLOCATION STUDY
TEST YEAR: 12 MONTHS ENDED JUNE 30, 1999

SCHED. # phd-4
PAGE # 11

TITLE: ALLOCATION FACTOR DEVELOPMENT:

LINE #	FACTOR #	ITEM	ALLOCATION BASIS		TOTAL MISSOURI	RESIDNTL	GENERAL	INTERRUPTIBLE	TRANSPORT
1	1	PRODUCTION PLANT	PEAK DAY (mcf)		1,179,295	767,019	411,831	445	0
2					1.000000	0.650405	0.349210	0.000377	0.000000
3									
4		TRANSMISSION PLANT,	Customer Bills	(Actual)	1,277,767	1,136,345	140,185	228	999
5	2.A	GENERAL DISTRIBUTION PLANT,	Meter Equivalent	(Meter)	1,678,621	1,136,345	495,404	10,601	36,270
6				(Meter)	1.000000	0.676951	0.295126	0.006315	0.021607
7									
8	2.B	TRANSMISSION PLANT,	PEAK DAY		1,419,938	767,019	411,831	31,842	209,246
9		GENERAL DISTRIBUTION PLANT,			1.000000	0.540178	0.290034	0.022425	0.147363
10									
11	2	TRANSMISSION PLANT,	Demand/Customer		1.000000	0.586546	0.266087	0.019471	0.127897
12		GENERAL DISTRIBUTION PLANT,							
13									
14	3	CUST ADV & DEPOSITS	GROSS DISTR PLANT		179,911,258	125,161,375	38,604,195	2,237,212	13,908,476
15					1.000000	0.695684	0.214574	0.012435	0.077307
16									
17	4	PRODUCTION EXPENSE	SALES (Ccf)		125,353,621	75,610,384	43,377,210	6,366,027	0
18		COMMODITY			1.000000	0.603177	0.346039	0.050785	0.000000
19									
20	5	PREPAYMENTS	O&M EXP LESS PUR GAS		18,671,190	13,388,155	3,832,700	224,890	1,225,445
21					1.000000	0.717049	0.205273	0.012045	0.065633
22									
23	6	MAT & SUPL, DEF INC TX	GROSS PLANT IN SERVICE		197,534,672	137,382,533	42,730,782	2,431,195	14,990,162
24					1.000000	0.695486	0.216320	0.012308	0.075886
25									
26	7	CUSTOMER ACCT. EXP. -	LOSSES-($)						
27		904			1.000000	0.920000	0.080000	0.000000	0.000000
28									
29									
30	8	CUSTOMER ACCT. EXP. -	CUST. ACCT. EXP.		2,181,533	1,902,435	236,152	7,921	35,025
31		901	LABOR		1.000000	0.872063	0.108250	0.003631	0.016055
32									
33			OTHER		1,665,778	1,458,812	171,327	6,045	29,594
34					1.000000	0.875764	0.102851	0.003629	0.017766
35									
36	9	CUSTOMER SERV & SALES EXP	CUST SERV & SALES EXP						
37		907 & 911	LABOR		191,747	167,216	20,757	696	3,079
38					1.000000	0.872063	0.108250	0.003631	0.016055
39									
40			OTHER		74,701	65,420	7,683	271	1,327
41					1.000000	0.875754	0.102851	0.003629	0.017766
42									
43	10	ADMIN & GEN EXP	PROD,T&D & CUST EXP		7,680,539	5,483,876	1,610,645	91,378	494,641
44			LABOR ONLY		1.000000	0.713996	0.209705	0.011897	0.064402
45									
46	11	SERVICES	TYPICAL SERVICES		98,036,728	87,119,783	10,747,517	31,483	137,945
47					1	0.888644	0.109627	0.000321	0.001407
48									
49	12	STORAGE GAS COSTS	FIRM COMMODITY SALES		119,150,019	75,610,384	43,377,210	162,425	0
50					1	0.634581384	0.364055418	0.001363197	0
51									
52	13	NET PLANT	NET PLANT		141,002,043	94,563,734	32,345,830	1,965,875	12126644.56
53					1	0.670654869	0.229399658	0.013942172	0.086003301
54									
55	14	Meter Reading	Electric Study		730,887	645,080	79,680	1,157	5,069
56					1	0.882600	0.108882	0.001583	0.006936
57									
58	15	Company Records	Electric Study		1,166,043	998,956	123,236	8,148	35,703
59					1	0.856706	0.105687	0.006988	0.030619

Schedule 4

UNION ELECTRIC COMPANY

DATE: 02/06/2000
FILENAME: COS99_direct_1
RANGE: A1..S56

GAS COST OF SERVICE ALLOCATION STUDY
TEST YEAR: 12 MONTHS ENDED JUNE 30, 1999

SCHED. # pbd-5
PAGE # iii

TITLE: RATE DESIGN

LINE #	ACCOUNT #	ITEM	TOTAL MISSOURI	RESIDNTL		GENERAL		INTERRUPTIBLE		TRANSPORT	
1											
2		CUSTOMER CHARGE									
3	380	Services	32,014,538		28,449,538		3,509,672		10,281		45,047
4	381	Meters	9,596,202		6,496,163		2,832,087		60,604		207,348
5	382	Meter Installation	0		0		0		0		0
6	383	House Regulators	5,602,271		3,792,465		1,653,375		35,381		121,050
7	384	House Reg - Installation	0		0		0		0		0
8											
9			$47,213,011		$38,738,166		$7,995,134		$106,266		$373,445
10											
11		@ Fixed Charge Rate	10,406,366		8,538,399		1,762,232		23,422		82,312
12											
13			TOTAL	LABOR	OTHER	LABOR	OTHER	LABOR	OTHER	LABOR	OTHER
14											
15	874	Mains & Services Exp. (Service Portion)	245,463	135,968	82,161	16,774	10,136	49	30	215	130
16	878	Meter & House Reg Exp	461,967	559,416	(246,687)	243,885	(107,547)	5,219	(2,301)	17,856	(7,874)
17	879	Customer Installation Exp	574,039	289,747	46,953	131,444	21,300	9,618	1,559	63,180	10,238
18	892	Maint. of Services	377,485	268,394	67,056	33,110	8,272	97	24	425	106
19	893	Maint. of Meters & House Reg	708,346	151,703	327,813	66,137	142,914	1,415	3,058	4,842	10,463
20	901-916	Cust Acct,Cust Serv & Sales Exp	4,366,558	2,266,700	1,547,738	281,368	181,771	9,437	6,413	41,732	31,398
21											
22			$6,733,858	$3,671,929	$1,825,034	$772,718	$256,847	$25,836	$8,782	$128,250	$44,461
23											
24	920-935	A & G Expense	2,367,679	1,890,510		397,838		13,302		66,030	
25											
26		Customer Related Expense									
27		(line 11,20 & 22)	$19,507,902		$15,925,871		$3,189,636		$71,342		$321,053
28											
29		# Of Annual Bills	1,277,757		1,136,345		140,185		228		999
30											
31		Customer Charge (per month)			$14.01		$22.75		$312.90		$321.37
32											
33		Operating Revenue Less:	$29,065,397		$17,776,868		$7,507,203		$535,708		$3,245,618
34		Customer Charge									
35											
36		Volumes	162,760,742		75,610,384		43,377,210		6,366,027		37,407,121

Schedule 5