

Exhibit No.:

Issues: Allocated Class Cost
of Service

Witness: Philip B. Difani, Jr.

Type of Exhibit: Supplemental Direct Testimony

Sponsoring Party: Union Electric Company
d/b/a AmerenUE

Case No.: GR-2000-512

FILED²

AUG 02 2000

Missouri Public
Service Commission

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. GR-2000-512

SUPPLEMENTAL DIRECT TESTIMONY

OF

PHILIP B. DIFANI, JR.

St. Louis, Missouri
August 1, 2000

MISSOURI PUBLIC SERVICE COMMISSION

STATE OF MISSOURI

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

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 Supplemental Direct Testimony consisting of pages 1 through 8, and including Supplemental Schedules 6 through 9, 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 1st day of August, 2000.

Donald E. Niemeyer
Notary Public

DONALD E. NIEMEYER
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES AUGUST 15, 2000
COMMISSIONED IN THE COUNTY OF ST. LOUIS



1 **SUPPLEMENTAL DIRECT TESTIMONY**

2 **OF**

3 **PHILIP B. DIFANI, JR.**

4 **UNION ELECTRIC COMPANY**

5 **d/b/a AmerenUE**

6 **CASE NO. GR-2000-512**

7
8 **Q. Please state your name and business address.**

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

11 **Q. Are you the same Philip B. Difani, Jr. that submitted direct**
12 **testimony on behalf of Union Electric Company d/b/a AmerenUE in this**
13 **case?**

14 A. Yes I am.

15 **Q. What is the purpose of your supplemental direct testimony in**
16 **this proceeding?**

17 A. The purpose of this supplemental direct testimony is to reflect
18 required updates in two areas of the Company's allocated class cost of service
19 study. Specifically, this testimony: 1) updates the cost of service study
20 reflecting the current availability of additional information pertaining to the
21 specific on-site facilities and equipment used by the Company in providing gas
22 delivery service to each of its individual Interruptible and Transportation Rate

1 customers, and 2) corrects the allocations of the Industrial Regulator plant
2 account (385), A&G expense, and income taxes.

3 **Q. Please comment on item (1), the incorporation of additional**
4 **customer specific on-site plant investment information.**

5 **A.** This information, which I shall refer to as a Distribution
6 Inventory (DI) Study, is the result of recent efforts to more accurately reflect the
7 Company's investment in customer specific equipment such as services, meters,
8 regulators and mains in our cost of service study. The DI Study concentrated on
9 the Interruptible and Transportation customer classes only because these classes
10 are composed of approximately 100 customers in total, which made such a study
11 manageable, as compared to performing a similar inventory of the Residential or
12 General Service classes of nearly 95,000 and 12,000 customers, respectively.

13 **Q. Please describe the general nature of the DI Study.**

14 **A.** At the time this case was filed, district personnel were in the
15 process of conducting a detailed site inventory of the delivery facilities used to
16 provide gas delivery service to all Interruptible and Transportation customers in
17 order to identify the actual meters, valves, regulators, and length and size of
18 service pipe installed on their premises, and to provide the installation date of
19 such equipment. This information was gathered from a combination of
20 Company installation records and actual site field visits. The study further
21 identified the size of the main to which each customer's service pipe is
22 connected.

1 **Q. Does the information gathered in the DI Study improve the**
2 **accuracy of the Company's allocated class cost of service study?**

3 A. Yes, it does. Generically, if a certain component or element of
4 cost can be clearly identified and directly associated with a specific customer or
5 customer group, a direct assignment of such costs to such customers will always
6 be more accurate than any form of cost allocation. In addition, after all direct
7 assignments are made a lower overall level of costs will remain to be allocated,
8 which in turn should enhance the accuracy of the allocations to those remaining
9 customers. In the Company's particular DI Study, the actual on-site equipment
10 and the year of installation of such equipment was identified for all of the
11 Interruptible and Transportation customers. Using such information, the
12 Company's Property Accounting Department priced the Company's investment
13 in the equipment according to each plant item's original cost. This information
14 was then used to directly assign such costs in the Company's updated cost of
15 service study, as will be explained later in my testimony.

16 **Q. You said that the DI Study identified the size of the**
17 **distribution main serving each of the Interruptible and Transportation**
18 **customers. How was that information used to improve the accuracy of the**
19 **Company's allocated class cost of service study?**

20 A. The Company's investment in various sized mains was also
21 provided by the Company's Property Accounting Department. Combining this
22 information with the individual Interruptible and Transportation customer non-

1 coincident peak demands associated with each size of main, along with the
2 demands of the other customer classes, a more accurate allocation of all mains
3 results. As an example of this process, based on non-coincident peak usage, the
4 Interruptible and Transportation classes represent 2.4 percent of the usage on 2-
5 inch mains. Therefore, the cost of service study allocates 2.4 percent of the \$35
6 million dollar original cost investment in such 2-inch mains to the Interruptible
7 and Transportation customers. Such actual non-coincident peak day data was
8 also used to allocate 2 inch – 4 inch mains, 4 inch – 6 inch, 6 inch – 10 inch, and
9 mains over 10 inches to each class in a similar manner.

10 **Q. Has the Company previously made the other parties in this**
11 **case aware of the preparation of the DI Study you just described?**

12 **A.** Yes, it has. The Company initiated a technical workshop with
13 Commission Staff and the Office of the Public Counsel (OPC) on June 28, 2000.
14 The preliminary results and details of the DI Study were discussed with the
15 attendees at that meeting. The Company described its DI Study as a “work in
16 progress” at that time, indicating that it would be provided to all parties when
17 finalized. Details of the DI Study were subsequently sent to the Commission
18 Staff, OPC and Midwest Gas Users’ Association on July 27, 2000.

19 **Q. Please describe the correction required in your cost of service**
20 **study to reflect the proper allocation and categorization of the Industrial**
21 **Regulator Account 385.**

1 A. Account 385 was originally allocated only to the Interruptible and
2 Transportation customer classes in the cost of service study contained in my
3 direct testimony. However, the results of the DI Study indicated that the
4 Company had a greater level of investment in this account than what was
5 actually used to provide service to the Interruptible and Transportation
6 customers. As a result, it became necessary to allocate the excess investment in
7 this account to the General Service class.

8 **Q. Please describe the correction required in your cost of service**
9 **study to reflect the proper categorization of A&G expenses.**

10 A. In the case of A&G expenses, the error being corrected was the
11 use of an allocator which originally had misallocated such expenses between the
12 customer and the commodity portion within the cost of service results of each
13 rate class. The incorrect allocator overallocated A&G expense to the commodity
14 component of each class and underallocated the same level of such expense to
15 the customer component of each customer class. Thus, unlike the correction for
16 the Regulator Account, this error does not revise any allocation of A&G expense
17 between classes, but is only a correction of the customer and commodity
18 components of cost within each of the rate classes.

19 **Q. Please describe the correction required in your cost of service**
20 **study to reflect the proper allocation of income taxes.**

21 A. This element of cost of service is directly related to the
22 Company's investment in its plant and was allocated according to each of the

1 customer classes on the basis of the net rate base allocated to each class in the
2 updated cost of service study. In the Company's original cost of service study
3 this expense was inadvertently allocated to each class on a gross plant basis.

4 **Q. Has the Company updated its cost of service study to reflect**
5 **its allocation corrections and to incorporate the direct allocation of its**
6 **investment derived from the DI Study?**

7 A. Yes. This updated study is based on the same jurisdictional
8 accounting study that was used in my direct testimony. Various allocation
9 factors have been changed – again, to make the corrections referred to earlier,
10 and to incorporate the additional and more accurate information obtained
11 through the DI Study. Supplemental Direct Schedule 6 is a comparison, by rate
12 class, of rates of return, using current rates applicable to each individual
13 customer class. Supplemental Direct Schedule 7 provides class revenue
14 requirements based on equal class rates of return, but at the level of total revenue
15 requirements developed by AmerenUE witness Weiss in his direct testimony.

16 **Q. Please describe the updated allocation of Meter and**
17 **Regulator investment?**

18 A. The DI Study enabled the Company to directly assign a portion of
19 Meter and Regulator original cost investment to the Interruptible and
20 Transportation classes to reflect the equipment actually used to serve such
21 customers. The Company also maintains meters and regulators in inventory, and
22 a portion of such investment is for these two classes. The allocation of the

1 remaining investment in meters to the Residential and General Service classes
2 was based on computerized Company records for meter investment. The
3 Company's record file of House Regulators was sorted by cost and apportioned
4 to the Residential and General Service classes based on the number of customers
5 in each class. In making this assignment, the least expensive regulators were
6 allocated to the Residential class, as typically lower cost regulators are used for
7 residential service. Regulators in the Industrial Regulator account were directly
8 assigned to the Interruptible and Transportation classes based on the results of
9 the DI Study and its allocation of inventory, with the remainder of the account
10 assigned to the General Service class.

11 **Q. How was the Company's investment in Service Pipe updated**
12 **and re-allocated in your updated cost of service study?**

13 A. Based on the DI Study I was able to directly assign the actual cost
14 of the Service Pipe used by the Interruptible and Transportation classes to those
15 classes. The remaining investment was allocated equally, based on customer
16 counts of the Residential and General Service classes.

17 **Q. How were the Meter Reading costs updated in your cost of**
18 **service study?**

19 A. The Company's original cost of service study allocated meter
20 reading costs on the basis of an electric meter reading cost study. However, with
21 the automated meter reading system (AMR) having been nearly fully
22 implemented for our Missouri gas customers, the allocation of meter reading

1 expenses has been revised to directly assign the reading costs associated with the
2 Transportation customers read with the Metscan System and the Interruptible
3 customers read manually, and to allocate the remaining costs on a per meter
4 basis based on AMR costs, solely to the Residential and General Service
5 customer classes.

6 **Q. Have you developed a schedule showing the allocation factors**
7 **used in your updated class cost of service study?**

8 A. Yes, such information is contained in Supplemental Direct
9 Schedule 8.

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

13 A. Yes, I did. Supplemental Direct Schedule 9 indicates cost-based
14 customer charges based on customer-related cost as determined in the updated
15 cost of service study. These results, along with each class' allocated total
16 revenue requirement, were used by Company witness William M. Warwick to
17 develop updated rates for each of the customer classes.

18 **Q. Do you believe that this updated cost of service study, which**
19 **is being sponsored by this supplemental direct testimony, better reflects the**
20 **current relative cost responsibilities of AmerenUE's natural gas rate**
21 **classes?**

1 A. Yes, I do. I base this conclusion on the accuracy achieved
2 through the direct cost assignment process to Interruptible and Transportation
3 customers, which was discussed earlier in my testimony, and the correction of
4 the errors which were also described and referenced as a part of this testimony.

5 **Q. Does this conclude your Supplemental Direct testimony?**

6 A. Yes, it does.

UNION ELECTRIC COMPANY

GAS COST OF SERVICE ALLOCATION STUDY
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		<u>COST OF SERVICE SUMMARY</u>						
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	<u>667,515</u>	<u>549,595</u>	<u>106,924</u>	<u>1,726</u>	<u>9,270</u>
8								
9		TOTAL GAS OPERATING REVENUES		\$37,172,878	\$22,917,538	\$9,557,709	\$764,420	\$3,933,211
10								
11		EXPENSES:						
12		Total Gas O&M Expenses	Schedule	\$18,671,189	\$13,584,551	\$4,153,762	\$152,812	\$780,063
13		Depreciation Expense	Schedule	5,163,315	3,713,436	1,215,236	36,769	197,874
14		Taxes Other than Income Taxes	Schedule	3,985,882	2,849,135	948,612	29,583	158,552
15								
16		INCOME TAXES	A.F.14	<u>2,683,000</u>	\$1,835,586	\$718,734	\$20,059	\$108,620
17								
18		NET UTILITY OPERATING INCOME		\$6,669,492	\$934,830	\$2,521,366	\$525,196	\$2,688,101
19								
20		RATE BASE	Schedule	\$136,169,622	\$93,161,047	\$36,477,720	\$1,018,073	\$5,512,782
21								
22		RATE OF RETURN - REALIZED	Calculation	4.90	1.00	6.91	51.59	48.76
23								
24		INDEX OF RETURN		100	20	141	1053	996

UNION ELECTRIC COMPANY

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

TITLE: COST OF SERVICE SUMMARY (PROPOSED RATES)

LINE #	ACCOUNT #	ITEM	ALLOCATION BASIS	TOTAL MISSOURI	RESIDNTL	GENERAL	INTERR	TRANSPORT
1								
2		<u>COST OF SERVICE SUMMARY</u>						
3								
4								
5		GAS OPERATING REVENUE						
6		Sale of Gas (Margin)	Calculation	\$48,573,299	\$34,252,408	\$11,948,884	\$377,589	\$1,994,418
7		Other Operating Revenues	Worksheet	<u>\$667,515</u>	<u>\$549,595</u>	<u>\$106,924</u>	<u>\$1,726</u>	<u>\$9,270</u>
8								
9		TOTAL GAS OPERATING REVENUES		\$49,240,814	\$34,802,003	\$12,055,808	\$379,314	\$2,003,688
10								
11		EXPENSES:						
12		Total Gas O&M Expenses	Schedule	\$18,671,189	\$13,584,551	\$4,153,762	\$152,812	\$780,063
13		Depreciation Expense	Schedule	5,163,315	3,713,436	1,215,236	36,769	197,874
14		Taxes Other than Income Tax	Schedule	3,985,882	2,849,135	948,612	29,583	158,552
15								
16		INCOME TAXES	A.F.14	<u>7,365,000</u>	\$5,038,797	\$1,972,969	\$55,064	\$298,170
17								
18		NET UTILITY OPERATING INCOME		\$14,055,428	\$9,616,083	\$3,765,230	\$105,085	\$569,029
19								
20		RATE BASE	Schedule	\$136,169,622	\$93,161,047	\$36,477,720	\$1,018,073	\$5,512,782
21								
22		RATE OF RETURN - REALIZED	Schedule	10.32	10.32	10.32	10.32	10.32
23								
24		INDEX OF RETURN		100.00	100.00	100.00	100.00	100.00
25								

			ALLOCATION FACTORS				TOTAL
			Allocation Factor	RESIDENTIAL	GENERAL SVC	INTERRUPTIBLE	
PRODUCTION PLANT	PEAK DAY (mcf)	A.F.1	767,019 0.650405	411,831 0.349218	445 0.000377	0	1,179,295 1.000000
T&D PLANT, (Cust. Portion)	CUSTOMER BILLS	A.F.2	1,136,345 0.889328	140,185 0.109712	228 0.000178	999 0.000782	1,277,757 1.000000
T&D MAINS	PEAK DAY PLANT UTILIZATION	A.F.3	\$56,904,182 0.595451	\$30,553,228 0.319712	\$1,246,773 0.013046	\$6,860,674 0.071791	\$95,564,858 1.000000
T&D Plant (combined)	13% Cust. & 87% Demand	A.F.4	0.634478	0.291824	0.011337	0.062361	1.000000
CUST. ADV. & DEPOSITS	GROSS DISTRIBUTION PLANT	A.F.5	128,596,455 0.714777	42,919,121 0.238557	1,308,881 0.007275	7,086,801 0.039391	179,911,258 1.000000
MATERIALS & SUPPLIES	AMR METER READING	A.F.6	99,551 0.889523	12,364 0.110477	0 0.000000	0 0.000000	111,915 1.000000
	CUSTOMER RECORDS	A.F.7	998,956 0.856706	123,236 0.105687	8,148 0.006988	35,703 0.030619	1,166,043 1.000000
		A.F.8					
	Mat. And Supplies	A.F.9					
A&G EXPENSE	PROD, T&D & CUST ACCT/ SERVICE/SALES (Labor Only)	A.F.10	5,539,380 0.721223	1,750,509 0.227915	63,269 0.008238	327,379 0.042624	7,680,538 1.000000
	UNCOLLECTIBLE ACCOUNTS	A.F.11	0.920000	0.080000	0.000000	0.000000	1.000000
GAS STORED UNDERGROUND	FIRM COMMODITY SALES	A.F.12	75,610,384 0.634581	43,377,210 0.364055	162,425 0.001363	0	119,150,019 1.000000
	COMMODITY SALES	A.F.13	75,610,384 0.603177	43,377,210 0.346039	6,366,027 0.050785	0	125,353,621 1.000000
	NET ORIGINAL COST RATE BASE	A.F.14	93,161,047 0.684154	36,477,720 0.267884	1,018,073 0.007477	5,512,782 0.040485	136,169,622 1.000000
PREPAYMENTS	TOTAL GROSS PLANT	A.F.15	140,993,611 0.713766	47,334,605 0.239627	1,439,989 0.007290	7,766,466 0.039317	197,534,672 1.000000
OFFSETS (Cash working capital)							

			Residential		General Service		Interruptible		Transport	
			Labor	Other	Labor	Other	Labor	Other	Labor	Other
CUST. SERV. & SALES	CUSTOMER ACCOUNTS EXPENSE	A.F.16	1,851,905 0.851840	1,404,507 0.881801	229,430 0.105533	150,714 0.094624	10,229 0.004705	5,201 0.003266	82,443 0.037922	32,349 0.020310
	(FERC 902, 903, & 904)									

Schedule 6

TITLE: RATE DESIGN									
LINE #	ACCOUNT #	ITEM	MISSOURI	RESIDENTIAL	GEN SERVICE	INTERMITTIBLE	TRANSPORT	OTHER	
3		CUSTOMER CHARGE							
4		Services	32,014,538	28,147,703	3,472,436	55,411	338,988		
5	380	Meters	9,596,202	6,513,610	2,819,468	38,530	224,594		
6	381	House Regulators	5,602,271	3,078,738	2,523,533	0	103,160		
7	383	Meters & Reg - Industrial	812,100	0	684,803	24,137	0		
8	385								
9		Subtotal	48,025,111	37,740,051	9,500,240	118,078	666,742		
10									
11		@Fixed Charge Rate	10,585,353	8,318,401	2,093,977	26,026	146,959		
12									
13									
14									
15									
16									
17									
18		TOTAL							
19		EXPENSE							
20	874	Meters & Services Exp. (Service Portion	245,463	81,448	16,628	274	1,317	796	
21	876 & 878	Meter & House Reg Exp	477,212	-229,993	-115,509	2,104	-480	-3,487	
22	879	Customer Inst. Exp.	574,039	313,425	144,158	5,601	908	4,992	
23	882	Maint. of Services	377,485	66,344	32,759	634	1,317	7,538	
24	890 & 893	Maint. of Meter & Reg	713,571	141,436	80,648	172,775	3,593	7,538	
25	901, 916	Cust Acct, Cust Serv & Sales Exp	4,368,558	1,558,424	274,306	12,229	98,568	35,894	
26									
27									
28									
29		Sub-total	6,754,327	1,832,642	266,089	21,364	149,732	46,532	
30									
31	920-935	A & G	4,577,819	3,572,601	834,994	21,256	148,969		
32									
33									
34									
35									
36		Customer Related Cost	21,917,509	17,314,533	4,034,327	76,458	492,191		
37									
38		(line 14, 33 & 36)							
39									
40		# Of Annual Bills		1,136,345	140,185	228		999	
41									
42		Customer Charge		15,24	28,78	335,34		492,68	
43									

UNION ELECTRIC COMPANY
METER SERVICES COST OF SERVICE ALLOCATION STUDY
YEAR: 12 MONTHS ENDED JUNE 30, 1998