

FILED²

AUG 15 2000

Missouri Public
Service Commission

Exhibit No.: _____

Issue(s): Meters and Services Allocators
Witness/Type of Exhibit: Busch/Direct
Sponsoring Party: Public Counsel
Case No.: GR-2000-512

DIRECT TESTIMONY
(Rate Design)

OF

JAMES A. BUSCH

Submitted on Behalf of the Office of the Public Counsel

UNION ELECTRIC COMPANY
D/B/A AMERENUE

Case No.: GR-2000-512

NP

**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 gas service)
provided to customers in the company's)
Missouri service area.)

Case No. GR-2000-512

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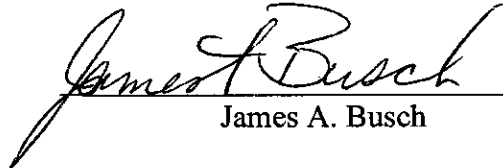
AFFIDAVIT OF JAMES A. BUSCH

STATE OF MISSOURI)
)
COUNTY OF COLE)

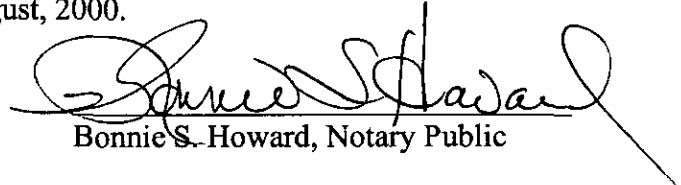
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James A. Busch, of lawful age and being first duly sworn, deposes and states:

1. My name is James A. Busch. I am the Public Utility Economist for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my direct testimony consisting of pages 1 through 4 and Schedules JAB RD-1 through JAB RD-4.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.


James A. Busch

Subscribed and sworn to me this 15th day of August, 2000.


Bonnie S. Howard, Notary Public

My Commission expires May 3, 2001.



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DIRECT TESTIMONY
OF
JAMES A. BUSCH
CASE NO. GR-2000-512
UNION ELECTRIC COMPANY
d/b/a AmerenUE

Q. Please state your name and business address.

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

Q. Are you the same James A. Busch who filed testimony previously in Case No.
GR-2000-512?

A. Yes I am.

Q. What is the purpose of your testimony in the rate design portion of Case No. GR-
2000-512?

A. The purpose of my testimony is to explain the allocators Public Counsel utilized
to allocate services and meters.

Q. Have you obtained a copy of the Company's Distribution Inventory (DI) Study
that the Company used in preparing its supplemental cost study?

A. Yes, I have.

Q. Did you utilize the DI study in preparing your cost allocators for services and
meters?

A. I used a portion of the information in the study. The study provides the Company's estimate of the actual costs of transportation and interruptible customers services and meters. The Company deducted those estimated costs from the total cost of each FERC account (services and meters) to determine the amount of those two accounts that the Company allocates to the residential and general service customers.

Q. Has Public Counsel adopted the Company's methodology?

A. No. Public Counsel has not adopted the Company's methodology. Public Counsel has used the Company's estimated costs attributable to the transportation and interruptible customers and modified the way in which the rest of the costs were allocated to the other two classes, residential and general service.

SERVICES

Q. What is a service?

A. A service is a pipe that connects gas to a customer's house or business from the mains of a gas company's distribution system. There are different sizes of services used by different customers depending on their demand for gas. The most commonly used sizes of services include ½", 1", and 2".

Q. What costs are allocated with the services allocator?

A. In the class cost of service study, the costs recorded in FERC account 380 are allocated using the services allocator. These costs include the material costs of the service pipes, the labor costs of installations such as trenching and backfilling, tapping into the main, running the services to the customers, and pressure testing the line.

1 Q. Please describe Public Counsel's method for deriving the services allocator.

2 A. Public Counsel's method adjusts the Company's estimated allocated cost of
3 services for the transportation and interruptible by including an allocation of the
4 inventory costs. This adjustment was necessary because the Company omitted
5 inventory levels from its estimated costs. I based this adjustment on information
6 obtained from the response to Public Counsel Data Request No. 3521, attached as
7 schedule JAB RD-3. The inventory balances for the services greater than 2" were
8 allocated to the transportation and interruptible customer classes based on number
9 of meters between these two classes. The adjusted estimated proportion of costs
10 for the transportation and interruptible classes were subtracted from the total costs
11 for services based on Public Counsel's cost study. The remaining estimated costs
12 were then allocated between residential and general service customer classes
13 based on the relative number of meters used by each class. Attached to my
14 testimony is schedule JAB RD-1 that illustrates this methodology.

15 **METERS**

16 Q. What is a meter?

17 A. A meter is a device designed to measure the volume of gas that a customer uses.
18 The range of meter sizes is from 150 cubic foot hour to about 100,000 cubic foot
19 hour. The choice of meter is dependent on the distribution pressure at a particular
20 customer location and individual customer peak demands. Generally, larger
21 customers use larger meters.

22 Q. What costs are being allocated with the meters allocator?

1 A. In the class cost of service study, the costs recorded in FERC account 381 are
2 allocated using the meter allocator. These costs include both the material cost and
3 installation cost of meters.

4 Q. Please describe the methodology used to develop the meters allocator.

5 A. Upon review of the Company's estimates of inventory levels, it appeared that
6 there was additional information provided that could be used to refine the
7 allocators for residential and general services. Using the information provided in
8 the Company's response to Public Counsel Data Request No. 45 attached as
9 schedule JAB RD-4, I was able to reallocate the inventory levels for specific
10 customer classes. These new estimates were then used to determine the
11 residential and general services portion of the allocator. Attached to my
12 testimony is schedule JAB RD-2 illustrating this methodology.

13 Q. Has Public Counsel finished its review of the Company's DI Study?

14 A. Not at this time. The study was filed with supplemental direct testimony on
15 August 1, 2000. Public Counsel is still reviewing the results of the study and
16 acquiring information from the Company regarding the results. As Public
17 Counsel completes its review of the study and any additional information, it will
18 determine whether or not its cost study needs to be updated in the future. It is my
19 understanding that Public Counsel has filed a motion to allow supplemental direct
20 testimony regarding the changes in the Company's class cost of service study
21 occasioned by the DI study.

22 Q. Does this conclude your direct testimony?

23 A. Yes it does.

SERVICES ALLOCATORS

Union Electric Company d/b/a AmerenUE

Case No. GR-2000-512

(000's)

Residential	General Service	Transportation	Interruptible	
		\$ 526	\$ 109	Company's estimated costs
		\$ 167	\$ 45	Inventory levels added
		\$ 693	\$ 154	Estimated + Inventory
			\$ 847	Combined Total
				\$ 64,722 Account Total
				\$ 847 Trans. & Interr.
				\$ 63,875 Total for Res & GS

Total	\$ 56,700	\$ 7,175	\$ 693	\$ 154	\$ 64,722	Allocation Levels
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Total Meters in Each Class

Residential	General Service	Total	Transportation	Interruptible	Total
99,343	12,572	111,915	88	24	112
Percent Meters Res & GS			Percent Meters Trans & Interr.		
88.77%	11.23%		78.57%	21.43%	

Union Electric Company d/b/a AmerenUE

(000's)

Schedule JAB RD-2

This page is

Proprietary in its

Entirety

AmerenUE's Response to
Office of the Public Counsel Data Request
Case No. GR-2000-512

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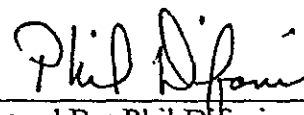
No. 45:

Regarding the meter cost study which is shown on the last two pages in the hard copy of Mr. Difani's workpapers, please provide an electronic copy. Please also explain the process of the meter cost study. For example, is a random sample used? If so, how was the random sample selected? How is "Ave. \$ per meter" decided? Please provide the workpapers for "Bob Kenny's average cost/gas meter" that is mentioned in the footnote. Are any rotary meters included in the study? Please provide a list of meter type descriptions corresponding to each meter code that is shown in the study.

Response:

The electronic file is provided in response to DR 44. A random sample was not used. Every attempt was made to identify, based on 100% sample of customer records, the meter type installed for each customer - by class. Average cost per meter code is based upon property records for meters, attached. Rotary meters are included as identified by customer records. <Listing of meters.xls>

Signed By:



Prepared By: Phil Difani

Title: Senior Rate Engineer

JUL 18 2000

GAS METER CODES

INDEX IN MANUFACTURER ORDER

<u>Manufacturer</u>	<u>Type</u>	<u>Size</u>	<u>Code</u>	<u>Set Type</u>
American	Tin Case	5M	00100	
	*Residential			
American	Tin Case	10B	00110	
	*Residential			
American	Tin Case	10M	00120	
	*Residential			
American	Tin Case	20A	00130	
	*Commercial			
American	Tin Case	30B	00180	
	*Commercial			
American	Tin Case	30M	00140	
	*Commercial			
American	Tin Case	60B	00190	
	*Commercial			
American	Tin Case	60M	00160	*Small
Rotary				
American	Tin Case	100B	00170	*Small
Rotary				

* WE NO LONGER USE TIN METERS.

American	Hard Case	AL175	01180	Residential
American	Hard Case	5B-225 & AL250 & 10B	01100	Residential
American	Hard Case	25B & AL425	01190	Residential
American	Hard Case	30B & AC630	01150	Commercial
American	Hard Case	AL800	01160	Commercial
American	Hard Case	60B & AL1000	01140	Commercial
American	Hard Case	80B	01110	Small Rotary
American	Hard Case	AL1400 & 3000METRIC	01170	Small Rotary
American	Hard Case	250B & AL2300 & 5000METRIC	01120	Small Rotary
American	Hard Case	500B & AL5000	01130	Large Rotary
American	Orifice	10 FS	03100	Large Industrial
American	Turbine	3" GT	03150	Large Rotary
American	Turbine	4"GT	03170	Large Rotary
American	Turbine	6"GT	03180	Large Industrial
American	Turbine	8"GT	03190	Large Industrial
American	Turbine	12"GT	03160	Large Industrial
American	Rotary	3.5M	04100	Small Rotary
American	Rotary	5.3M	04110	Small Rotary
American	Rotary	11M	04120	Large Rotary
American	Rotary	16M	04130	Large Rotary
American	Rotary	25M	04140	Large Industrial
American	Rotary	38M	04150	Large Industrial
American	Rotary	2M	04160	Small Rotary

GAS METER CODES

INDEX IN MANUFACTURER ORDER

<u>Manufacturer</u>	<u>Type</u>	<u>Size</u>	<u>Code</u>
Sprague	Hard Case	175 & 1A	01200 Residential
Sprague	Hard Case	240	01210 Residential
Sprague	Hard Case	250	01260 Residential
Sprague	Hard Case	305	01220 Residential
Sprague	Hard Case	400	01230 Residential
Sprague	Hard Case	675	01240 Commercial
Sprague	Hard Case	1000	01250 Commercial
Sprague	Hard Case-Combination	175 & 1A	02200 Residential
Sprague	Hard Case-Combination	240	02210 Residential
Sprague	Hard Case-Combination	305	02220 Residential
Sprague	Hard Case-Combination	250	02230 Residential
Sprague	Hard Case-Curb Type	175	05200 Residential
Sprague	Hard Case-Curb Type	240	05210 Residential
Sprague	Hard Case-Curb Type	250	05260 Residential
Sprague	Hard Case-Curb Type	305	05220 Residential
Sprague	Hard Case-Curb Type	400	05230 Residential
Sprague	Hard Case-Curb Type	675	05240 Commercial
EMCO	Hard Case	#0 & 175	01300 Residential
EMCO	Hard Case	#1	01310 Residential
EMCO	Hard Case	#2	01320 Residential
EMCO	Hard Case	#2-1/2	01330 Commercial
EMCO	Hard Case	#3	01340 Small Rotary
EMCO	Hard Case	#4	01350 Small Rotary
EMCO	Hard Case	#4-1/2	01360 Large Rotary
EMCO	Hard Case	#5	01370 Large Rotary
Rockwell	Tin Case	5-150	00500
	*Residential		
Rockwell	Tin Case	5-200	00510
	*Residential		
Rockwell	Tin Case	5-250	00520
	*Residential		
Rockwell	Tin Case	5-300	00530
	*Residential		
Rockwell	Tin Case	10-300	00540
	*Residential		
Rockwell	Tin Case	10-425	00550
	*Residential		
Rockwell	Tin Case	10-500	00560
	*Commercial		
* WE NO LONGER USE TIN METERS			
Rockwell	Hard Case	150	01500 Residential
Rockwell	Hard Case	R175	01510 Residential
Rockwell	Hard Case	R200	01520 Residential

GAS METER CODES

INDEX IN MANUFACTURER ORDER

<u>Manufacturer</u>	<u>Type</u>	<u>Size</u>	<u>Code</u>
Rockwell	Hard Case	250	01530 Residential
Rockwell	Hard Case	310	01540 Residential
Rockwell	Hard Case	415	01550 Residential
Rockwell	Hard Case	750	01560 Commercial
Rockwell	Hard Case	#3-1200	01570 Small Rotary
Rockwell	Hard Case	1600	01580 Small Rotary
Rockwell	Hard Case	#4-2500	01590 Small Rotary
Rockwell	Hard Case	3000	01600 Small Rotary
Rockwell	Hard Case	#5-5000	01610 Small Rotary
Rockwell	Hard Case	10000	01620 Large Rotary
Rockwell	Hard Case	R275	01630 Residential
Rockwell	Turbine	2"TP9	03510 Small Rotary
Rockwell	Turbine	3"TP9	03520 Large Rotary
Rockwell	Turbine	4"TI8	03530 Large Rotary
Rockwell	Turbine	6"TI30	03500 Large Industrial
Rockwell	Turbine	8"TI60	03540 Large Industrial
Rockwell	Turbine	10"TI140	03550 Large
Industrial			
Rockwell	Rotary	2"-3000	04500 Small Rotary
Rockwell	Rotary	3"-10000	04510 Large Rotary
Rockwell	Hard Case-Curb Type	175	05500 Residential
Rockwell	Hard Case-Curb Type	#2-415	05510 Residential
Superior	Hard Case	175-175A	01700 Residential
Superior	Hard Case	250	01710 Residential
Superior	Hard Case	340	01720 Residential
Arkla	Hard Case	250	01800 Residential
Roots	Rotary	11C175	04370 Small Rotary
Roots	Rotary	2M175	04380 Small Rotary
Roots	Rotary	102M125	04390 Large Industrial
Roots	Rotary	8C125	04400 Small Rotary
Roots	Rotary	1.5M125	04410 Small Rotary
Roots	Rotary	3M125 2-1/2 x 7	04420 Small Rotary
Roots	Rotary	5M125	04430 Small Rotary
Roots	Rotary	7M125	04440 Large Rotary
Roots	Rotary	11M125 3-1/2 x 10	04450 Large Rotary
Roots	Rotary	16M125 & 5 x 10	04460 Large Rotary

GAS METER CODES

INDEX IN MANUFACTURER ORDER

<u>Manufacturer</u>	<u>Type</u>	<u>Size</u>	<u>Code</u>
Roots	Rotary	23M125 & 5 x 15	04470 Large Industrial
Roots	Rotary	38M125 & 6 x 18	04480 Large Industrial
Roots	Rotary	56M125 & 8 x 24	04490 Large Industrial
Roots	Rotary	2M900	06380 Small Rotary
Romet	Rotary	2M175 (1 1/2")	04910 Small Rotary
Romet	Rotary	3M175 (2")	04920 Small Rotary
Romet	Rotary	5M175 (3")	04930 Small Rotary
Romet	Rotary	7M175 (3")	04940 Large Rotary
Romet	Rotary	11M175 (4")	04950 Large Rotary
Romet	Rotary	16M175 (4")	04960 Large Rotary