

Exhibit No.:
Issue: Cost-of-Service
Witness: Ross
Type of Exhibit: Direct
Sponsoring Party: MoPSC Staff
Case No.: GR-93-172

MISSOURI PUBLIC SERVICE COMMISSION

POLICY & PLANNING DIVISION

RECEIVED
JUN 02 1993

DIRECT TESTIMONY

OF

ANNE E. ROSS

ACCOUNTING DEPT.
PUBLIC SERVICE COMMISSION

FILED
MAY 28 1993
MISSOURI
PUBLIC SERVICE COMMISSION

MISSOURI PUBLIC SERVICE,

A DIVISION OF UTILICORP UNITED, INC.

CASE NO. GR-93-172

Jefferson City, Missouri

May, 1993

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3 DIRECT TESTIMONY

4 OF

5 ANNE E. ROSS

6 MISSOURI PUBLIC SERVICE,

7 A DIVISION OF UTILICORP UNITED, INC.

8 CASE NO. GR-93-172
9

10 Q. Please state your name and business address.

11 A. My name is Anne Ross and my business address
12 is Missouri Public Service Commission, P. O. Box 360,
13 Jefferson City, Missouri.

14 Q. What is your present position with the
15 Missouri Public Service Commission?

16 A. I am a Research Economist in the Economic
17 Analysis Department of the Policy and Planning Division.

18 Q. Would you please review your educational
19 background?

20 A. I have a Bachelor of Science in Business
21 Administration and an M.B.A. from the University of
22 Missouri - Columbia.

23 Q. Have you previously filed testimony before
24 the Commission?

25 A. Yes. I joined the Staff of the Missouri
26 Public Service Commission in September, 1989. Since that
27 time, I have filed testimony on class cost-of-service and
28 rate design, primarily in natural gas rate cases.

Direct Testimony of
Anne E. Ross

1 Q. What is the purpose of your direct testimony?

2 A. I am responsible for the development of the
3 Staff's class cost-of-service study and rate design
4 proposals for Missouri Public Service (MPS or Company).

5 Q. What is the purpose of the Staff's class
6 cost-of-service study?

7 A. The purpose of the Staff's class cost-of-
8 service study is to provide the Commission with a measure
9 of relative class cost responsibility for the overall
10 revenue requirement of MPS. For individual items of cost,
11 class cost responsibility can be either directly assigned
12 or allocated to customer classes using reasonable methods
13 for determining the class responsibility for that item of
14 cost. The results are then summarized so that they can be
15 compared to revenues being collected from each class on
16 current rates.

17 Q. What is the source of accounting information
18 used in your class cost-of-service study?

19 A. The study was done using costs developed by
20 the Missouri Public Service Commission Accounting
21 Department, and is based on a test year ending September
22 30, 1992, updated for known and measurable changes through
23 April 30, 1993.

24 Q. What customer classes are used in the Staff's
25 class cost-of-service study?

Direct Testimony of
Anne E. Ross

1 A. The customer classes used in this study are
2 as follows:

3 Residential
4 Small General Service
5 Medium General Service
6 Large Volume
7

8 Q. Please describe how you categorized the
9 individual items of cost in the Staff's class cost-of-
10 service studies.

11 A. Categorization of cost into functional areas
12 that are to be allocated in the same way is called cost
13 functionalization. The rate base and expense accounts are
14 assigned to one of ten functional categories. The
15 functional categories used in this study are as follows:

16 Transmission
17 Distribution Mains
18 Distribution Measuring and Regulating
19 Distribution Meters and Regulators
20 Distribution Services
21 Customer Related
22 Meter Reading
23 Assigned - Residential and Small General Service
24 Assigned - Large Volume
25 Revenue Related
26

27 Those costs which cannot directly be assigned to
28 any specific functional category are divided among several
29 functions based upon some causal factor. For example, it
30 seems reasonable to assume that social security taxes are
31 directly related to payroll costs and can therefore be
32 functionalized in the same manner as payroll costs.

Direct Testimony of
Anne E. Ross

1 Q. How were the usage levels and class peak
2 demand levels used in your class cost-of-service study
3 developed?

4 A. The annual and peak day usage levels for the
5 residential & small commercial sales customers were
6 developed by Staff witness James A. Gray, and will be
7 explained in his direct testimony. Staff witness Dr. Henry
8 E. Warren developed the usage levels and peak demands for
9 the interruptible, transportation, and industrial
10 customers, and will discuss this in his direct testimony.

11 Q. How were Transmission costs allocated?

12 A. Transmission costs were allocated using the
13 average and peak method. This method allocates a
14 percentage of the transmission functional costs, equal to
15 the system load factor, using Mcf volumes. The remaining
16 percentage is allocated using coincident peak day demands.

17 Q. How were the costs of Distribution Mains
18 allocated?

19 A. The allocation factor for Distribution Mains
20 was developed by Staff witness Dr. Eve A. Lissik and will
21 be discussed in her direct testimony.

22 Q. How were the costs of Distribution Meters and
23 Regulators allocated?

24 A. In response to DR 4110, MPS provided an
25 estimate of the replacement cost for various sizes of
26 meters and regulators. In a supplemental response to DR

Direct Testimony of
Anne E. Ross

1 4110, replacement cost information was provided on an
2 individual customer basis for the industrial,
3 interruptible, and transportation customers. This
4 information was used to develop customer weights reflecting
5 the relative cost of the meters and regulators required to
6 serve an average customer in each cost-of-service class. I
7 then multiplied the appropriate weight by the number of
8 customers in each class. The resulting weighted customer
9 numbers were used to develop a weighted customer allocation
10 factor for meters and regulators.

11 Q. How were the costs of Distribution Service
12 Lines allocated?

13 A. These costs were allocated using factors
14 developed by Staff witness Dr. Eve A. Lissik.

15 Q. How were costs associated with Distribution
16 Measuring and Regulating allocated?

17 A. These costs were allocated using Mcf volumes.

18 Q. How were the Customer Related costs
19 allocated?

20 A. Customer related costs were allocated on
21 number of customer bills.

22 Q. How were the costs associated with Meter
23 Reading allocated?

24 A. These costs were allocated using density
25 weighted customers. The density weights were developed by
26 Dr. Eve A. Lissik.

Direct Testimony of
Anne E. Ross

1 Q. How were the costs assigned to the
2 Residential and Commercial Firm Sales customers allocated?

3 A. These costs were allocated between the two
4 classes based on number of bills.

5 Q. How were the costs assigned to the Large
6 Volume customer class allocated?

7 A. These costs were assigned only to the Large
8 Volume class.

9 Q. How were the Revenue Related costs allocated?

10 A. These costs were allocated using the Staff's
11 test year margin revenues.

12 Q. What are the results of your class cost-of-
13 service study?

14 A. The results are shown on Schedule 1 and are
15 presented in terms of class revenue requirements.

16 Q. How have you compared the class cost-of-
17 service study results to current revenues?

18 A. Since the revenue requirement deficiency from
19 current revenues is a major issue in this case, the
20 Commission must have a recommendation about class revenue
21 requirements that it can apply to the increase in revenue
22 requirements that is ultimately decided. In order to make
23 such a recommendation, I have factored the class cost-of-
24 service study to be equal to the revenue level collected
25 from current rates. The same factor was applied to the
26 allocated costs for each class; i.e., each class' costs

Direct Testimony of
Anne E. Ross

1 were decreased by an equal percentage. Subtracting the
2 results from current revenues shows the revenue
3 deficiency(-) or surplus(+) for each class.

4 Q. How can the Commission apply the results to
5 the revenue requirements coming from this case?

6 A. The Staff will propose rates which will
7 collect the factored class cost-of-service. Then any
8 increase should be allocated to the classes by applying an
9 equal percentage increase to the class revenues collected
10 from the Staff's proposed rates.

11 Q. What is the impact of your class cost-of-
12 service study on the various customer classes?

13 A. The class cost-of-service study shows that
14 revenues should be collected differently than is occurring
15 under current rates. Specifically, the results show that
16 Residential and Small General Service rates should be
17 increased while all other class rates should be decreased.

18 Q. How did you determine the customer charges
19 that you are sponsoring in this case?

20 A. I allocated the direct costs associated with
21 the Customer-Related function as well as costs directly
22 functionalized to the Distribution Meters & Regulators and
23 Distribution Services functional areas, then divided these
24 dollars by the number of bills per class to arrive at the
25 customer charge.

26

Direct Testimony of
Anne E. Ross

1 Q. Are you sponsoring the commodity rate
2 proposals in this case?

3 A. No. The commodity rates were designed by
4 Staff witness Dr. Michael S. Proctor, and will be discussed
5 in his direct testimony.

6 Q. Does this conclude your direct testimony?

7 A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of Missouri Public Service)
tariff sheets designed to increase rates for)
gas service provided to customers in the) CASE NO. GR-93-172
Missouri service area of the company.)

AFFIDAVIT OF ANNE E. ROSS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Anne E. Ross, of lawful age, on her oath states: that she has participated in the preparation of the foregoing written testimony in question and answer form, consisting of 8 pages of testimony to be presented in the above case, that the answers in the attached written testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true to the best of her knowledge and belief.

Anne E. Ross
Anne E. Ross

Subscribed and sworn to before me this 27th day of May, 1993.

Beverly S. Schreimann
Beverly S. Schreimann, Notary Public

My commission expires March 8, 1994.

**CLASS COST-OF-SERVICE SUMMARY
MISSOURI PUBLIC SERVICE-
TEST YEAR ENDED SEPTEMBER 30, 1992**

	TOTAL	RESIDENTIAL	SMALL GENERAL SERVICE	MEDIUM GENERAL SERVICE	LARGE VOLUME
RATE BASE	\$43,989,121	\$32,744,030	\$8,414,214	\$1,176,291	\$1,654,586
REQUESTED RETURN	10.2000%	10.2000%	10.2000%	10.2000%	10.2000%
RETURN ON RATE BASE	\$4,486,890	\$3,339,891	\$858,250	\$119,982	\$168,768
O & M EXPENSES	\$7,607,999	\$5,665,782	\$1,163,953	\$292,062	\$486,202
DEPRECIATION EXPENSE	\$2,359,765	\$1,728,324	\$440,609	\$63,294	\$127,537
TAXES OTHER THAN INCOME	\$904,675	\$671,925	\$155,503	\$29,349	\$47,898
INCOME TAXES	\$1,122,620	\$835,641	\$214,734	\$30,019	\$42,226
TOTAL EXPENSES	\$11,995,059	\$8,901,672	\$1,974,800	\$414,725	\$703,862
TOTAL C-O-S	\$16,481,949	\$12,241,563	\$2,833,050	\$534,707	\$872,630
OTHER REVENUES	\$61,271	\$45,508	\$10,532	\$1,988	\$3,244
REQUIRED MARGIN REVENUE	\$16,420,678	\$12,196,055	\$2,822,518	\$532,719	\$869,386
CURRENT MARGIN REVENUES	\$15,768,124	\$9,881,443	\$2,675,614	\$1,222,021	\$1,989,046
ZERO REVENUE INCREASE PLUG	\$652,554	\$484,669	\$112,166	\$21,170	\$34,549
C-O-S MARGIN REVENUES @ 0%	\$15,768,124	\$11,711,386	\$2,710,352	\$511,549	\$834,837
REVENUE ABOVE (BELOW) COS	\$0	(\$1,829,943)	(\$34,738)	\$710,472	\$1,154,209
% INCREASE WITHOUT GAS COSTS	0.00%	18.52%	1.30%	-58.14%	-58.03%
% INCREASE WITH GAS COSTS	0.00%	9.03%	0.61%	-22.54%	-41.80%
AVERAGE GAS COSTS	\$16,081,716	\$10,382,638	\$2,997,147	\$1,929,921	\$772,010

**MISSOURI PUBLIC SERVICE
CASE NO. GR-93-172
CUSTOMER CHARGE TABLE**

	TOTAL	RESIDENTIAL	SMALL GENERAL SERVICE	MEDIUM GENERAL SERVICE	LARGE VOLUME
TOTAL REVENUES TO COLLECT FROM CLASS	\$15,768,124	\$11,711,386	\$2,710,352	\$511,549	\$834,837
AMOUNT TO BE COLLECTED IN CUSTOMER CHARGE:					
DIRECT SERVICE LINE COSTS	\$2,992,602	\$2,342,309	\$622,461	\$20,350	\$7,482
DIRECT METER/REGULATOR COSTS	\$994,608	\$771,086	\$93,199	\$97,113	\$33,210
DIRECT METER READING COSTS	\$150,427	\$116,945	\$30,107	\$1,973	\$1,402
DIRECT CUSTOMER RELATED COSTS	\$1,008,738	\$895,126	\$108,192	\$4,632	\$788
TOTAL AMOUNT TO COLLECT IN CUSTOMER CHARGE	\$5,146,374	\$4,125,466	\$853,960	\$124,068	\$42,881
NO. OF BILLS	487,792	432,853	52,318	2,240	381
CUSTOMER CHARGE FROM COS		\$9.53	\$16.32	\$55.39	\$112.55
CUSTOMER CHARGE (ROUNDED)		\$9.50	\$16.30	\$55.40	\$113.00
AMOUNT COLLECTED IN PROPOSED CUSTOMER CHARGE:	\$5,132,036	\$4,112,104	\$852,783	\$124,096	\$43,053
TOTAL AMOUNT TO COLLECT IN COMMODITY CHARGE	\$10,636,088	\$7,599,283	\$1,857,568	\$387,453	\$791,784