

EXHIBIT

Exhibit No.:

Issue(s):

Updated Class Cost of Service/
Rate Design

Witness/Type of Exhibit:

Meisenheimer/Direct

Sponsoring Party:

Public Counsel

Case No.:

ER-2004-0570

FILED

DEC 28 2004

DIRECT TESTIMONY

OF

Missouri Public
Service Commission

BARBARA A. MEISENHEIMER

Submitted on Behalf of the Office of the Public Counsel

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2004-0570

(Rate Design)

October 4, 2004

Exhibit No. 93
Case No(s) ER-2004-0570
Date 12-06-04 Rptr xf

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

In the Matter of the tariff filing of The Empire)
District Electric Company to implement a)
general rate increase for retail electric service)
provided to customers in its Missouri service area.)

Case No. ER-2004-0570

AFFIDAVIT OF BARBARA A. MEISENHEIMER

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

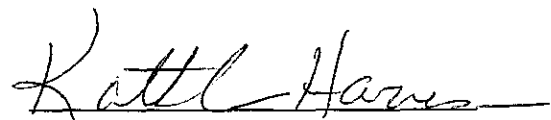
Barbara A. Meisenheimer, of lawful age and being first duly sworn, deposes and states:

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 consisting of pages 1 through 7 and Schedules 1 through 2.
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 4th day of October 2004.

KATHLEEN HARRISON
Notary Public - State of Missouri
County of Cole
My Commission Expires Jan. 31, 2006


Kathleen Harrison
Notary Public

My Commission expires January 31, 2006.

1 **Q. WHAT COST AND REVENUE DATA DID YOU USE IN PREPARING YOUR PREVIOUSLY**
2 **FILED CCOS STUDY?**

3 A. My September 27, 2004, CCOS study utilized accounting and other data produced
4 by the Missouri Public Service Commission Staff (Staff). Traditionally, Public
5 Counsel has used similar information provided by the Staff in preparing our
6 CCOS studies. As part of the information provided, Staff developed for its own
7 use an EMS run that assumed a natural gas price of approx. \$3.20. At that time, it
8 was the best information available to our office. However, in this case, the Staff
9 and Public Counsel have significantly different positions on the level of natural
10 gas cost to include in base rates. Public Counsel witness James Busch
11 recommends that the natural gas price that should be used in developing cost
12 estimates should be approximately \$4.59. Following the filing of my initial
13 CCOS testimony, on October 1, 2004, the Staff completed for Public Counsel's
14 use, a new EMS run based on Mr. Busch's proposed \$4.59 natural gas price. A
15 portion of the testimony I present below is based on the October 1, 2004, EMS
16 run that Staff prepared for Public Counsel's use.

17 **Q. Q. DO YOUR UPDATED STUDY RESULTS REFLECT ADDITIONAL ADJUSTMENTS**
18 **THAT PUBLIC COUNSEL PROPOSES OTHER THAN USING A \$4.59 NATURAL GAS**
19 **PRICE TO ESTIMATE COSTS?**

20 A. Yes, in our original CCOS study, we also incorporated adjustments to the revenue
21 and cost data to better reflect Public Counsel's witness' positions on rate of
22 return, depreciation and accounting adjustments. For this testimony, I have

1 prepared two CCOS studies. The first is based on the October 1, 2004, EMS run
2 performed by Staff that reflects a natural gas price of \$4.59 with no additional
3 adjustments. The second also uses October 1, 2004, EMS run performed by Staff
4 that reflects a natural gas price of \$4.59 but reflects additional adjustments based
5 on Public Counsel witness' recommendations for depreciation and rate of return.

6 **II. UPDATED CLASS COST OF SERVICE STUDY RESULTS**

7 **Q. ARE YOUR ALLOCATION METHODS AND CHOICE OF CUSTOMER CLASSES**
8 **CONSISTENT WITH THOSE USED IN YOUR PREVIOUS CCOS STUDY?**

9 A. Yes, they are. In preparation of this testimony, I utilized the same allocation
10 methodologies and customer classes as were used in my previous study. For a
11 description of the allocation methods, please see my direct testimony filed
12 September 27, 2004.

13 **Q. PLEASE DESCRIBE THE RESULTS OF YOUR FIRST UPDATED CLASS COST OF**
14 **SERVICE STUDY.**

15 A. Schedule BAM Updated RD DIR-1.1 shows the results of the first Class Cost Of
16 Service Study. This study is based on the October 1, 2004 Staff EMS run that
17 reflects a natural gas price of \$4.59.

18 Schedule BAM Updated RD DIR-1.1, line 18, shows that on a revenue neutral
19 basis, the Residential and SGS classes are providing a rate of return above the
20 system average return while the LGS, Special Contract (Praxair), Large Power
21 and Other classes are providing lower rates of return than the system-wide

1 average. Line 35 of Schedule BAM RD DIR-1.1 shows the revenue shifts that
2 would be needed to equalize class rates of return. Line 36 of Schedule BAM
3 Updated RD DIR-1.1 shows the percentage by which rate revenues in each class
4 would have to change in order to make all customer class' rates of return equal to
5 the company's overall rate of return. This information from lines 18, 35 and 36
6 of Schedule BAM RD DIR-1.1 is summarized below in Table 1.

7 **Q. PLEASE DESCRIBE THE RESULTS OF YOUR SECOND UPDATED CLASS COST OF**
8 **SERVICE STUDY.**

9 A. Schedule BAM Updated RD DIR-2.1 shows the results of the second Class Cost
10 Of Service Study. This study is based on the October 1, 2004 Staff EMS run that
11 reflects a natural gas price of \$4.59. It also reflects adjustments to rate of return
12 proposed by Public Counsel witness Travis Allen and the depreciation
13 adjustments proposed by Public Counsel witness Michael Majoros.

14 Schedule BAM Updated RD DIR-2.1 illustrates that the conclusions from the
15 second CCOS are similar to the results of the first study on a revenue neutral
16 basis. On a revenue neutral basis, the Residential and SGS classes are providing a
17 rate of return above the system average return while the LGS, Special Contract
18 (Praxair), Large Power and Other classes are providing lower rates of return than
19 the system-wide average. Information from lines 18, 35 and 36 of Schedule BAM
20 RD DIR-2.1 is summarized below in Table 1.

1 Table 1 – COS Indicated Revenue Neutral Class Revenue Shifts

	TOTAL	Residential	SGS (Commercial , Small Heating & Feed Mill)	LGS (Gen Power & TEB)	Special Contract (Praxair)	Large Power	Other (Elec Furnace, Misc, & Ltg)
First CCOS							
(The results reflect a natural gas price of \$4.59.)							
Class Rate of Return	7.28%	7.88%	11.32%	7.19%	-8.79%	3.02%	4.23%
Revenue Neutral Shift	(0)	(1,549,337)	(2,840,934)	169,560	868,275	2,950,692	401,745
%	0.00%	-1.38%	-9.07%	0.27%	35.86%	9.65%	9.31%
Second CCOS							
(The results reflect a natural gas price of \$4.59, depreciation and ROR adjustments.)							
Class Rate of Return	7.17%	7.80%	11.10%	7.08%	-8.92%	2.91%	4.18%
Revenue Neutral Shift	(0)	(1,592,506)	(2,759,544)	164,525	863,604	2,916,895	407,026
%	0.00%	-1.42%	-8.81%	0.26%	35.67%	9.54%	9.43%

2
3 **III. RATE DESIGN RECOMMENDATIONS**

4 **Q. WHAT RATE DESIGN DO YOU RECOMMEND?**

5 A. Based on the second Class Cost Of Service Study results, which reflect
6 depreciation and ROR adjustments, I recommend the same methodology for
7 establishing inter-class shifts as described in my September 27, 2004, direct
8 testimony. Generally, I recommend that the Commission adopt a rate design that
9 balances movement toward cost of service with rate impact and affordability
10 considerations. The Commission should impose, at a maximum, class revenue
11 shifts equal to one half of the “revenue neutral shifts” indicated by Public

1 Counsel's class cost of service study. Revenue neutral shifts are shifts that hold
2 overall company revenue at the existing level but allow for the share attributed to
3 each class to be adjusted to reflect the cost responsibility of the class. In addition
4 to moving half way to the revenue neutral shifts, I recommend that if the
5 Commission determines that an overall increase in revenue requirement is
6 necessary, then no customer class should receive a net decrease as the combined
7 result of: (1) the revenue neutral shift that is applied to that class, and (2) the share
8 of the total revenue increase that is applied to that class. Likewise, if the
9 Commission determines that an overall decrease in revenue requirement is
10 necessary, then no customer class should receive a net increase as the combined
11 result of: (1) the revenue neutral shift that is applied to that class, and (2) the share
12 of the total revenue decrease that is applied to that class.

13 **Q. HAVE YOU ILLUSTRATED THE CLASS RECOVERY YOU WOULD RECOMMEND**
14 **BASED ON THE SECOND COST STUDY RESULTS SHOWN IN TABLE 1?**

15 **A.** Yes, Schedule BAM RD DIR-2.2 shows the result of applying Public Counsel's
16 recommended method for determining class revenue requirements at two different
17 levels of revenue requirement increase (approx. \$7 million and \$10 million). The
18 final results of applying Public Counsel's method appear in lines 26 through 32 of
19 Schedule BAM RD DIR-2.2.

20 **Q. WHAT ARE THE CUSTOMER-RELATED COSTS THAT ARE ATTRIBUTABLE TO THE**
21 **TYPICAL RESIDENTIAL CUSTOMER?**

22 **A.** My analysis estimates the customer-related costs ranging from \$11.53-\$11.61.

1 **Q. DO YOU RECOMMEND CHANGES TO INTRA-CLASS RESIDENTIAL AND SGS RATE**
2 **STRUCTURES?**

3 A. I would recommend that the customer charge and volumetric rates increase in
4 equal percentages to reach the class revenue requirement with the condition that
5 any customer charge increase be capped at \$1.00 to achieve the class revenue
6 requirement.

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

8 A. Yes.
9

***The results reflect a natural gas price of \$4.59 in the Staff EMS run.

OPC CCOS Study Summary

10/4/2004	TOTAL	Residential	SGS (Commercial, Small Heating, FM)	LGS (Gen Power & TEB)	Special Contract (Praxair)	Large Power	Other (El Furnace*, Misc, & Ltg)
1 O & M EXPENSES	165,457,088	73,406,390	18,330,869	44,045,963	2,332,074	25,004,088	2,337,704
2 DEPREC. & AMORT. EXPENSE	24,914,170	11,363,883	3,737,037	6,114,994	191,875	2,631,211	875,170
3 TAXES	24,165,445	11,500,802	2,854,986	6,165,970	208,776	2,761,024	673,887
4							
5 TOTAL EXPENSES AND TAXES	214,536,703	96,271,075	24,922,892	56,326,926	2,732,726	30,396,322	3,886,762
6							
7 CURRENT RATE REVENUE	244,826,669	112,292,660	31,316,710	63,894,793	2,421,236	30,585,036	4,316,234
8 OFFSETTING REVENUES:	14,244,773	6,473,856	1,616,846	3,739,537	172,250	1,960,351	281,933
9 ** Adj to eliminate El Furnace	0	6,477,475	1,617,750	3,741,627	172,347	1,961,447	274,129
10 Revenue Credits	(342,912)	0	0	0	(342,912)	0	0
11 Total Offsetting Revenues	13,901,861	6,477,475	1,617,750	3,741,627	(170,565)	1,961,447	274,129
12							
13 TOTAL CURRENT REVENUE	259,728,530	118,770,135	32,934,460	67,636,420	2,250,671	32,546,483	4,590,363
14 CLASS % OF CURRENT REVENUE	100.00%	45.91%	12.73%	26.14%	0.87%	12.58%	1.77%
15							
16 OPERATING INCOME	44,191,827	22,499,060	8,011,568	11,309,494	(482,055)	2,150,161	703,601
17							
18 TOTAL RATE BASE	607,082,229	285,696,288	70,778,217	157,358,415	5,485,469	71,148,232	16,615,608
19							
20 IMPLICIT RATE OF RETURN	7.28%	7.88%	11.32%	7.19%	-8.79%	3.02%	4.23%
21							
22 OPC RECOMMENDED RATE OF RETURN	8.09%	8.09%	8.09%	8.09%	8.09%	8.09%	8.09%
23							
24 REQUIRED OPERATING INCOME							
25 Equalized (OPC) Rates of Return	49,112,952	23,112,830	5,725,958	12,730,296	443,774	5,755,892	1,344,203
26							
27 TOTAL COST OF SERVICE Adj to eliminate El Furnace	263,649,655	119,383,905	30,648,850	69,057,222	3,176,500	36,152,214	5,230,964
28 CLASS % of COS	100.00%	45.31%	11.63%	26.21%	1.21%	13.72%	1.93%
29							
30 Allocation of difference between							
31 current revenue and recommended revenue	4,921,125	2,229,589	572,391	1,289,698	59,324	675,171	94,952
32 MARGIN REVENUE REQUIRED	0	0	0	0	0	0	0
33 to Equalize Class ROR - Revenue Neutral	258,728,530	117,220,797	30,093,526	67,805,979	3,118,946	35,497,175	4,992,107
34							
35 COS LESS OFFSETTING REVENUES	244,826,669	110,743,323	28,475,776	64,064,353	3,289,511	33,535,728	4,717,979
36							
37 COS INDICATED REVENUE NEUTRAL SHIFT	(0)	(1,549,337)	(2,840,934)	169,560	868,275	2,950,692	401,745
38							
39 % REVENUE NEUTRAL CLASS SHIFT	0.00%	-1.38%	-9.07%	0.27%	35.86%	9.65%	9.31%
40 CLASS % OF REVENUE AFTER REVENUE SHIFT	100.00%	45.23%	11.63%	26.17%	1.34%	13.70%	1.93%

***The results reflect a natural gas price of \$4.59 in the Staff EMS run.

OPC Rate Design Summary

10/4/2004	TOTAL	Residential	SGS (Commercial, Small Heating & FM)	LGS (Gen Power & TEB)	Special Contract (Praxair)	Large Power	Other (EF*, Misc. & Ltg)
1 Revenue Neutral Shifts (RNS) to Equalize Class ROR	(0)	(1,549,337)	(2,840,934)	169,560	868,275	2,950,692	401,745
2 Percentage Revenue Change to Equalize Class ROR	0.00%	-1.38%	-9.07%	0.27%	35.86%	9.65%	9.31%
3 COS Indicated Class Revenue Percentages	100.00%	45.23%	11.63%	26.17%	1.34%	13.70%	1.93%
5							
6 Current Class Revenue Percentages	100.00%	45.91%	12.73%	26.14%	0.87%	12.58%	1.77%
8							
9 OPC's Recommended Revenue Neutral Shifts	(0)	(774,669)	(1,420,467)	84,780	434,137	1,475,346	200,872
10 OPC's Recommended Revenue Neutral % Shifts	0.00%	-0.69%	-18.47%	0.35%	17.93%	4.82%	-0.21%
11 OPC's Recommended Total Revenue Percentages	100.00%	45.55%	12.21%	26.13%	1.17%	13.10%	1.85%
12							
13 Spread of Revenue Requirement Increases							
14 Approx. 5M Change In Revenue Requirement	4,921,125	2,241,561	600,928	1,286,018	57,394	644,428	90,796
15 Approx. 7M Change In Revenue Requirement	7,000,000	3,188,484	854,783	1,829,282	81,640	916,659	129,152
16 At Current Revenues	0	0	0	0	0	0	0
17							
18 Combined Impact of Revenue Increase and OPC's RNS							
19 Approx. 5M Change In Revenue Requirement	4,921,125	1,466,893	(819,539)	1,370,798	491,532	2,119,774	291,668
20 Approx. 7M Change In Revenue Requirement	7,000,000	2,413,815	(565,684)	1,914,062	515,777	2,392,006	330,024
21 At Current Revenues	0	(774,669)	(1,420,467)	84,780	434,137	1,475,346	200,872
22							
23							
24 COMBINED IMPACT ADJUSTED SO THAT NO CLASS RECEIVES NET DECREASE							
25							
26 Approx. 5M Change In Revenue Requirement	4,921,125	1,014,944	49,966	1,111,508	479,960	1,989,843	274,904
27 Percentage Change From Current Revenue	1.90%	0.39%	0.19%	28.49%	0.00%	1973.66%	583.95%
28 Class Percentage Of Total Revenue	100.00%	45.43%	12.51%	26.08%	1.04%	13.10%	1.85%
29							
30 Approx. 7M Change In Revenue Requirement	7,000,000	2,065,341	104,796	1,714,137	506,855	2,291,822	317,049
31 Percentage Change From Current Revenue	2.71%	0.80%	0.39%	43.48%	0.00%	2273.18%	673.48%
32 Class Percentage Of Total Revenue	100.00%	45.47%	12.43%	26.10%	1.04%	13.11%	1.85%

***The results reflect a natural gas price of \$4.59 in the Staff EMS run. The results also reflect OPC adjustments to depreciation and ROR.

OPC CCOS Study Summary

10/4/2004	TOTAL	Residential	SCS (Commercial, Small Heating, FM)	LGS (Gen Power & TEB)	Special Contract (Praxair)	Large Power	Other (El Furnace*, Misc. & Ltg)
1 O & M EXPENSES	165,457,088	73,406,716	18,330,773	44,046,548	2,331,923	25,003,239	2,337,890
2 DEPREC. & AMORT. EXPENSE	24,672,301	11,170,510	3,791,626	6,052,577	190,818	2,607,367	859,402
3 TAXES	25,063,382	11,923,391	2,959,670	6,398,745	216,883	2,866,221	698,472
4							
5 TOTAL EXPENSES AND TAXES	215,192,771	96,500,617	25,082,069	56,497,871	2,739,624	30,476,827	3,895,763
6							
7 CURRENT RATE REVENUE	244,826,669	112,292,660	31,316,710	63,894,793	2,421,236	30,585,036	4,316,234
8 OFFSETTING REVENUES:	14,244,773	6,474,277	1,616,723	3,740,291	172,055	1,959,256	282,171
9 **Adj to eliminate El Furnace	0	6,477,905	1,617,629	3,742,387	172,152	1,960,354	274,348
10 Revenue Credits	(342,912)	0	0	0	(342,912)	0	0
11 Total Offsetting Revenues	13,901,861	6,477,905	1,617,629	3,742,387	(170,760)	1,960,354	274,348
12							
13 TOTAL CURRENT REVENUE	258,728,530	118,770,565	32,934,339	67,637,180	2,250,476	32,545,390	4,590,582
14 CLASS % OF CURRENT REVENUE	100.00%	45.91%	12.73%	26.14%	0.87%	12.58%	1.77%
15							
16 OPERATING INCOME	43,535,759	22,269,948	7,852,270	11,139,309	(489,149)	2,068,563	694,818
17							
18 TOTAL RATE BASE	606,918,800	285,619,588	70,759,101	157,316,431	5,483,894	71,128,530	16,611,255
19							
20 IMPLICIT RATE OF RETURN	7.17%	7.80%	11.10%	7.08%	-8.92%	2.91%	4.18%
21							
22 OPC RECOMMENDED RATE OF RETURN	8.31%	8.31%	8.31%	8.31%	8.31%	8.31%	8.31%
23							
24 REQUIRED OPERATING INCOME							
25 Equalized (OPC) Rates of Return	50,434,952	23,734,988	5,880,081	13,072,995	455,712	5,910,781	1,380,395
26							
27 TOTAL COST OF SERVICE Adj to eliminate El Furnace	265,627,723	120,235,605	30,962,150	69,570,866	3,195,336	36,387,608	5,276,159
28 CLASS % of COS	100.00%	45.29%	11.66%	26.21%	1.20%	13.71%	1.93%
29							
30 Allocation of difference between							
31 current revenue and recommended revenue	6,899,193	3,124,642	804,634	1,807,984	83,039	945,629	133,265
32 MARGIN REVENUE REQUIRED	0	0	0	0	0	0	0
33 to Equalize Class ROR - Revenue Neutral	258,728,530	117,178,058	30,174,794	67,801,705	3,114,080	35,462,285	4,997,608
34							
35 COS LESS OFFSETTING REVENUES	244,826,669	110,700,154	28,557,166	64,059,318	3,284,840	33,501,931	4,723,260
36							
37 COS INDICATED REVENUE NEUTRAL SHIFT	0	(1,592,506)	(2,759,544)	164,525	863,604	2,916,895	407,026
38							
39 % REVENUE NEUTRAL CLASS SHIFT	0.00%	-1.42%	-8.81%	0.26%	35.67%	9.54%	9.43%
40 CLASS % OF REVENUE AFTER REVENUE SHIFT	100.00%	45.22%	11.66%	26.17%	1.34%	13.68%	1.93%

***The results reflect a natural gas price of \$4.59 in the Staff EMS run. The results also reflect OPC adjustments to depreciation and ROR.

OPC Rate Design Summary

10/4/2004	TOTAL	Residential	SGS (Commercial, Small Heating & FM)	LGS (Gen Power & TEB)	Special Contract (Praxair)	Large Power	Other (EF *, Misc, & Ltg)
1 Revenue Neutral Shifts (RNS) to Equalize Class ROR	0	(1,592,506)	(2,759,544)	164,525	863,604	2,916,895	407,026
2 Percentage Revenue Change to Equalize Class ROR	0.00%	-1.42%	-8.81%	0.26%	35.67%	9.54%	9.43%
3 COS Indicated Class Revenue Percentages	100.00%	45.22%	11.66%	26.17%	1.34%	13.68%	1.93%
5							
6 Current Class Revenue Percentages	100.00%	45.91%	12.73%	26.14%	0.87%	12.58%	1.77%
8							
9 OPC's Recommended Revenue Neutral Shifts	0	(796,253)	(1,379,772)	82,263	431,802	1,458,447	203,513
10 OPC's Recommended Revenue Neutral % Shifts	0.00%	-0.71%	-18.19%	0.34%	17.83%	4.77%	0.07%
11 OPC's Recommended Total Revenue Percentages	100.00%	45.54%	12.23%	26.13%	1.17%	13.09%	1.85%
12							
13 Spread of Revenue Requirement Increases							
14 Approx. 7M Change In Revenue Requirement	6,899,193	3,141,959	843,620	1,802,868	80,398	902,982	127,366
15 Approx. 10M Change In Revenue Requirement	10,000,000	4,554,096	1,222,781	2,613,157	116,533	1,308,823	184,610
16 At Current Revenues	0	0	0	0	0	0	0
17							
18 Combined Impact of Revenue Increase and OPC's RNS							
19 Approx. 7M Change In Revenue Requirement	6,899,193	2,345,705	(536,152)	1,885,130	512,200	2,361,430	330,879
20 Approx. 10M Change In Revenue Requirement	10,000,000	3,757,843	(156,991)	2,695,420	548,335	2,767,271	388,123
21 At Current Revenues	0	(796,253)	(1,379,772)	82,263	431,802	1,458,447	203,513
22							
23							
24 COMBINED IMPACT ADJUSTED SO THAT NO CLASS RECEIVES NET DECREASE							
25							
26 Approx. 7M Change In Revenue Requirement	6,899,193	2,010,818	108,233	1,692,971	503,631	2,265,185	318,355
27 Percentage Change From Current Revenue	2.67%	0.78%	0.41%	42.95%	0.00%	2246.65%	676.29%
28 Class Percentage Of Total Revenue	100.00%	45.47%	12.44%	26.10%	1.04%	13.11%	1.85%
29							
30 Approx. 10M Change In Revenue Requirement	10,000,000	3,577,519	190,100	2,591,949	543,721	2,715,447	381,264
31 Percentage Change From Current Revenue	3.87%	1.38%	0.71%	65.30%	0.00%	2693.23%	809.93%
32 Class Percentage Of Total Revenue	100.00%	45.53%	12.33%	26.13%	1.04%	13.12%	1.85%
33							