EXHIBIT

Exhibit No.:	
Issue(s):	Class Cost of Service
Witness/Type of Exhibit:	Meisenheimer/Surrebuttal
Sponsoring Party:	Public Counsel
Case No.:	ER-2004-0570

FILED
DEC 2 8 2004
Missouri Public Service Commission

SURREBUTTAL TESTIMONY

OF

BARBARA A. MEISENHEIMER

Submitted on Behalf of the Office of the Public Counsel

THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2004-0570

November 24, 2004

Exhibit No. 95
Case No(s). ER-2004-0570
Date 12-08-04 Rptr KF

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 surrebuttal testimony consisting of pages 1 through_7__.

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 24th day of November 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.

SURREBUTTAL TESTIMONY
OF
BARBARA MEISENHEIMER

EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2004-0570

Q. **PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.**

A. Barbara A. Meisenheimer, Chief Utility Economist, Office of the Public Counsel, P. O. 2230, Jefferson City, Missouri 65102.

Q. **HAVE YOU TESTIFIED PREVIOUSLY IN THIS CASE?**

A. Yes, I submitted direct testimony on the issue of revenue requirement on September 20, 2004 and initial direct testimony on cost of service and rate design issues on September 27, 2004. On October 4, 2004, I submitted updated cost of service studies. On November 4, 2004, I filed rebuttal testimony.

Q. **WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?**

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimony of Explorer Pipeline Company and Praxair, Inc. (Explorer and Praxair).

I. RESPONSE TO EXPLORER AND PRAXAIR

Q. IN REBUTTAL TESTIMONY, MR. BRUBAKER RAISED A NUMBER OF CONCERNS WITH YOUR CLASS COST OF STUDY. UPON REVIEW OF HIS CRITICISMS, DO YOU ACKNOWLEDGE THAT SOME OF HIS CONCERNS ARE VALID?

A. Yes, I believe that two of Mr. Brubaker's concerns are valid and I have made adjustments to the class cost of service studies I submitted on October 4, 2004, in consideration of his concerns. The adjusted CCOS study results are provided as Schedule 1 and Schedule 2 to this testimony.

Q. PLEASE DISCUSS THE FIRST ADJUSTMENT YOU MADE TO YOUR CCOS STUDY IN RESPONSE TO MR. BRUBAKER'S CONCERNS.

A. The first issue is related to allocating costs to Praxair as if it were a firm customer, but using Praxair's discounted payments to Empire for interruptible power. Mr. Brubaker suggested that it would be a more consistent approach to treat Praxair's load as firm using the revenues collected from Praxair before subtracting the interruptible credit. I revised my CCOS to reallocate the vast majority of the reduction in revenues associated with Praxair's interruptible credits to all classes in recognition that actual interruptions to customers such as Praxair can help to reduce costs during system peaks. Specifically, I distributed the revenues associated with the Praxair credits to all classes based on each class' share of the sum of non-coincident peaks for the month of August, 2003. August, 2003 was the month with the highest sum of non-coincident peaks as well as the month in which Praxair experienced the most curtailments of service.

The redistributed revenue associated with the interruptible credit and the impact on individual class revenues appear on line 9, Schedule 1 and line 9, Schedule 2 of this testimony. The derivation of the allocation factors associated with the interruptible credit is shown in Schedule 3.

Q. **PLEASE DISCUSS THE SECOND ADJUSTMENT YOU MADE TO YOUR CCOS STUDY IN RESPONSE TO MR. BRUBAKER'S CONCERNS.**

A. The second concern raised by Mr. Brubaker that I believe warrants adjustment relates to the treatment of differences in demand and energy losses among customer classes in constructing my original allocation factors. While the development of my factors for the Peak portion of my Average and Peak allocator did reflect differences in losses at different voltage levels, Mr. Brubaker is correct that my Energy allocator as well as the Average portion of my Average and Peak allocator did not. The Energy allocator directly impacts the assignment of cost associated with Fuel Inventory and Variable Fuel expenses. The Average portion of the Peak and Average allocator directly impacts the assignment of Production Plant, Transmission Plant and the associated expenses. These allocation factors also indirectly impact the assignment of other costs and expenses. To address Mr. Brubaker's concerns, I have adjusted both the Energy allocator and the Average portion of my Average and Peak allocator to reflect losses at different voltage levels based on loss factors developed by the Staff. The development of the adjusted Energy factors is shown in Schedule 4. The development of the adjusted Average portion of the Average and Peak allocation factors is shown in Schedule 5.

Q. **DID THE ADJUSTMENTS YOU MADE TO YOUR CCOS STUDY ALTER THE GENERAL CONCLUSIONS FROM YOUR PREVIOUS CCOS STUDY?**

A. While the magnitude of each class's revenue deficiency/surplus has changed, the general observations have not. The small general service class including commercial, small heating and feed mill are contributing significantly more revenues than the class cost of service on a revenue neutral basis. The residential class is approximately 1 % above cost of service. The special contract class and the large power class are significantly below cost of service.

Q. WHAT ADDITIONAL CRITISISMS DID MR. BRUBAKER HAVE REGARDING YOUR CCOS STUDIES?

Mr. Brubaker claims that the methodology I used for allocating generation and transmission fixed costs is not supported and is materially different from the traditional methodologies that are described in the National Association of Regulatory Utility Commissioners (NARUC) Cost Allocation Manual.

Q. DO YOU AGREE WITH HIS ASSESSMENT?

A. No, I do not. The use of Average and Peak allocation methodologies are an accepted method for allocating generation and transmission fixed costs and associated expenses. Some variations of an Average and Peak method are described beginning on page 57 of the 1992 NARUC Electric Cost Of Service Manual. I disagree with Mr. Brubaker's implication that, since the Average and Peak allocation methodology I used differs in some respects from the examples of Average and Peak allocation methodologies included in the NARUC manual, it should be rejected. I would point out that the NARUC manual does not intend or claim to provide an exhaustive discussion of all possible variations of a particular methodology:

> This manual only discusses the major costing methodologies. It recognizes that no single costing methodology will be superior to any other, and the choice of methodology will depend on the unique circumstances of each utility. Individual costing methodologies are complex and have inspired numerous debates on application, assumptions and data. (NARUC Electric Utility Cost Allocation Manual, January 1992, page 22)

Q. WHAT ARE THE SIGNIFICANT ATTRIBUTES OF AVERAGE AND PEAK ALLOCATION METHODOLOGIES?

A. The significance of using an Average and Peak method is that it produces allocation factors that apportion functionalized costs based on a weighting of energy related as well as demand-related cost classifications.

Q. HOW DO YOUR ALLOCATION FACTORS REFLECT A WEIGHTING OF ENERGY RELATED AND DEMAND-RELATED COSTS CONSISTENT WITH AN AVERAGE AND PEAK ALLOCATION METHODOLOGY?

A. Energy-related costs are costs which vary primarily with the total energy provided by the company. In the development of my allocation factors, each class's proportion of total annual use represents the energy-related apportionment of costs the class is assigned. The load factor (56%) represents the proportion of system capacity that is used on average throughout the year. If customer demands were uniform throughout the year, the load factor would represent a uniform level of capacity the company would need to supply. From a mathematical perspective, the product of the load factor and each class's energy-related apportionment of costs acts as a surrogate for the class's share of total capacity costs that the company would provide throughout the year absent any fluctuations in the class's usage levels.

Demand-related costs are costs which vary primarily with variation in demand by customers. In the development of my allocation factors, each class's proportion of the sum of monthly non-coincident peaks represents the demand-related apportionment of costs the class is assigned for the month. The capacity in excess of the average load factor (100% - 56%) represents the proportion of total system costs that are caused by additional demand on the system throughout the year. From a mathematical perspective, the product of (100% - 56%) and demand related costs for each class acts as a surrogate for the share of total annual cost that would be incurred due to fluctuations in customer usage levels throughout the year.

Q. WHY DO YOU BELIEVE IT IS APPROPRIATE TO USE NONCOINCIDENT PEAKS AS OPPOSED TO COINCIDENT PEAKS IN APPORTIONING DEMAND RELATED COSTS?

A. The primary reason I believe the use of non-coincident peaks is appropriate is that facilities are designed to accomidate capacity utilization *above* the uniform average load associated with energy related costs. It is reasonable that all classes contribute to the recovery of the additional cost in proportion to the class's above uniform use throughout the year. Using coincident peaks would create a "free rider" problem in that classes that minimize use specifically during coincident peaks could avoid a reasonable apportionment of costs associated with system use during other times.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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

OPC CCOS Study Summary

	11/24/2004	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	73,625,257	18,385,309	44,201,726	2,234,855	24,658,652	2,351,289
2	DEPREC. & AMORT. EXPENSE	24,914,170	11,375,503	3,739,166	6,123,261	186,243	2,610,924	879,072
3	TAXES	24,165,445	11,513,847	2,857,454	6,175,258	202,497	2,738,428	677,960
4								
5	TOTAL EXPENSES AND TAXES	214,536,703	96,514,608	24,981,929	56,500,245	2,623,594	30,008,004	3,908,322
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	6,488,527	1,620,321	3,749,978	165,625	1,936,748	283,574
0	**Adj to eliminate El Furnace	0	6,492,755	1,621,377	3,752,421	165,733	1,938,010	274,476
9	Reveue Credits	(342,912)	(165,532)	(42,281)	(89,159)	(2,789)	(38,773)	(4,378)
10								
11	Total Offsetting Revenues	13,901,861	6,327,223	1,579,096	3,663,263	162,944	1,899,237	270,098
12								
11	TOTAL CURRENT REVENUE	258,728,530	118,619,883	32,895,806	67,558,056	2,584,180	32,484,273	4,586,332
12	CLASS % OF CURRENT REVENUE	100.00%	45.85%	12.71%	26.11%	1.00%	12.56%	1.77%
13								
14	OPERATING INCOME	44,191,827	22,105,275	7,913,877	11,057,810	(39,414)	2,476,269	678,010
15								
16	TOTAL RATE BASE	607,082,229	286,030,247	70,840,503	157,596,033	5,324,268	70,568,017	16,723,162
17								
18	IMPLICIT RATE OF RETURN	7.28%	7.73%	11.17%	7.02%	-0.74%	3.51%	4.05%
19								
20	OPC RECOMMENDED RATE OF RETURN	8.09%	8.09%	8.09%	8.09%	8.09%	8.09%	8.09%
21								
22	REQUIRED OPERATING INCOME							
23	Equalized (OPC) Rates of Return	49,112,952	23,139,847	5,730,997	12,749,519	430,733	5,708,953	1,352,904
24		263,649,655	119,654,455	30,712,926	69,249,764	3,054,328	35,716,956	5,261,226
25	TOTAL COST OF SERVICE Adj to eliminate El Furnace	263,649,655	119,732,138	30,732,866	69,294,723	3,056,311	35,740,144	5,093,474
26	CLASS % of COS	100.00%	45.41%	11.66%	26.28%	1.16%	13.56%	1.93%
27								
28	Allocation of difference between							
29	current revenue and recommended revenue	4,921,125	2,234,848	573,641	1,293,413	57,047	667,104	95,072
30	MARGIN REVENUE REQUIRED	0	0	0	0	0	0	0
31	to Equalize Class ROR - Revenue Neutral	258,728,530	117,497,290	30,159,225	68,001,310	2,999,263	35,073,041	4,998,402
32								
33	COS LESS OFFSETTING REVENUES	244,826,669	111,170,067	28,580,129	64,338,047	2,836,319	33,173,804	4,728,304
34								
35	COS INDICATED REVENUE NEUTRAL SHIFT	(0)	(1,122,593)	(2,736,581)	443,254	415,083	2,588,768	412,070
0								
36	% REVENUE NEUTRAL CLASS SHIFT	0.00%	-1.00%	-8.74%	0.69%	17.14%	8.46%	9.55%
37	CLASS % OF REVENUE AFTER REVENUE SHIFT	100.00%	45.41%	11.67%	26.28%	1.16%	13.55%	1.93%

OPC Rate Design Summary

11/24/2004	TOTAL	Residential	SGS	LGS	Special Contract	Large Power	Other

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

				(Commercial,Small Heating & FM)	(Gen Power & TEB)	(Praxair)		(EF*, Misc, & Ltg)
1	Revenue Neutral Shifts (RNS) to Equalize Class ROR	(0)	(1,122,593)	(2,736,581)	443,254	415,083	2,588,768	412,070
2	Percentage Revenue Change to Equalize Class ROR	0.00%	-1.00%	-8.74%	0.69%	17.14%	8.46%	9.55%
3	COS Indicated Class Revenue Percentages	100.00%	45.41%	11.67%	26.28%	1.16%	13.55%	1.93%
5								
6	Current Class Revenue Percentages	100.00%	45.85%	12.71%	26.11%	1.00%	12.56%	1.77%
8								
9	**OPC's Recommended Revenue Neutral Shifts**	(0)	(561,296)	(1,368,291)	221,627	207,542	1,294,384	206,035
10	OPC's Recommended Revenue Neutral % Shifts	0.00%	-0.50%	-20.70%	0.78%	8.57%	4.23%	0.08%
11	OPC's Recommended Total Revenue Percentages	100.00%	45.64%	12.23%	26.19%	1.07%	13.02%	1.85%
12								
13	**Spread of Revenue Requirement Increases**							
14	Approx. 5M Change In Revenue Requirement	4,921,125	2,245,850	601,977	1,288,769	52,840	640,791	90,900
15	Approx. 7M Change In Revenue Requirement	7,000,000	3,194,585	856,275	1,833,195	75,161	911,485	129,299
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	1,684,554	(766,314)	1,510,396	260,381	1,935,174	296,935
20	Approx. 7M Change In Revenue Requirement	7,000,000	2,633,288	(512,016)	2,054,822	282,703	2,205,869	335,334
21	At Current Revenues	0	(561,296)	(1,368,291)	221,627	207,542	1,294,384	206,035
22								
23								
24	**COMBINED IMPACT ADJUSTED SO THAT NO CLASS RECEIVES NET DECREASE**							
25								
26	**Approx. 5M Change In Revenue Requirement**	4,921,125	1,252,560	63,024	1,262,498	250,217	1,811,917	280,908
27	**Percentage Change From Current Revenue**	1.90%	1.06%	0.19%	1.87%	9.68%	5.58%	6.12%
28	**Class Percentage Of Total Revenue**	100.00%	45.47%	12.50%	26.10%	1.08%	13.01%	1.85%
29								
30	**Approx.7M Change In Revenue Requirement**	7,000,000	2,305,159	117,975	1,866,527	274,983	2,112,247	323,110
31	**Percentage Change From Current Revenue**	2.71%	1.94%	0.36%	2.76%	10.64%	6.50%	7.05%
32	**Class Percentage Of Total Revenue**	100.00%	45.51%	12.42%	26.13%	1.08%	13.02%	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

11/24/2004	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	73,625,553	18,385,203	44,202,289	2,234,716	24,657,845	2,351,482
2 DEPREC. & AMORT. EXPENSE	24,672,301	11,182,120	3,793,753	6,060,838	185,190	2,587,097	863,301
3 TAXES	25,063,382	11,936,929	2,962,230	6,408,384	210,366	2,842,769	702,704
4							
5 TOTAL EXPENSES AND TAXES	215,192,771	96,744,602	25,141,186	56,671,512	2,630,272	30,087,711	3,917,488
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	6,488,909	1,620,184	3,750,704	165,446	1,935,708	283,822
0 **Adj to eliminate El Furnace	0	6,493,151	1,621,244	3,753,156	165,554	1,936,974	274,695
9 Reveue Credits	(342,912)	(165,532)	(42,281)	(89,159)	(2,789)	(38,773)	(4,378)
10							
11 Total Offsetting Revenues	13,901,861	6,327,618	1,578,963	3,663,997	162,765	1,898,200	270,317
12							
11 TOTAL CURRENT REVENUE	258,728,530	118,620,278	32,895,673	67,558,790	2,584,001	32,483,236	4,586,551
12 CLASS % OF CURRENT REVENUE	100.00%	45.85%	12.71%	26.11%	1.00%	12.55%	1.77%
13							
14 OPERATING INCOME	43,535,759	21,875,676	7,754,487	10,887,279	(46,271)	2,395,525	669,063
15							
16 TOTAL RATE BASE	606,918,800	285,953,437	70,821,364	157,553,972	5,322,744	70,548,498	16,718,785
17							
18 IMPLICIT RATE OF RETURN	7.17%	7.65%	10.95%	6.91%	-0.87%	3.40%	4.00%
19							
20 OPC RECOMMENDED RATE OF RETURN	8.31%	8.31%	8.31%	8.31%	8.31%	8.31%	8.31%
21							
22 REQUIRED OPERATING INCOME							
23 Equalized (OPC) Rates of Return	50,434,952	23,762,731	5,885,255	13,092,735	442,320	5,862,580	1,389,331
24	265,627,723	120,507,333	31,026,441	69,764,247	3,072,592	35,950,292	5,306,819
25 TOTAL COST OF SERVICE Adj to eliminate El Furnace	265,627,723	120,585,796	31,046,643	69,809,671	3,074,593	35,973,699	5,137,321
26 CLASS % of COS	100.00%	45.40%	11.69%	26.28%	1.16%	13.54%	1.93%
27							
28 Allocation of difference between							
29 current revenue and recommended revenue	6,899,193	3,131,995	806,380	1,813,178	79,857	934,351	133,432
30 MARGIN REVENUE REQUIRED	0	0	0	0	0	0	0
31 to Equalize Class ROR - Revenue Neutral	258,728,530	117,453,801	30,240,264	67,996,493	2,994,736	35,039,348	5,003,888
32							
33 COS LESS OFFSETTING REVENUES	244,826,669	111,126,183	28,661,300	64,332,495	2,831,970	33,141,148	4,733,572
34							
35 COS INDICATED REVENUE NEUTRAL SHIFT	0	(1,166,477)	(2,655,410)	437,702	410,734	2,556,112	417,338
0							
36 % REVENUE NEUTRAL CLASS SHIFT	0.00%	-1.04%	-8.48%	0.69%	16.96%	8.36%	9.67%
37 CLASS % OF REVENUE AFTER REVENUE SHIFT	100.00%	45.39%	11.71%	26.28%	1.16%	13.54%	1.93%

OPC Rate Design Summary

11/24/2004	TOTAL	Residential	SGS (Commercial,Small Heating & FM)	LGS (Gen Power & TEB)	Special Contract (Praxair)	Large Power	Other (EF*, Misc, & Ltg)

***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.

1 Revenue Neutral Shifts (RNS) to Equalize Class ROR	0	(1,166,477)	(2,655,410)	437,702	410,734	2,556,112	417,338
2 Percentage Revenue Change to Equalize Class ROR	0.00%	-1.04%	-8.48%	0.69%	16.96%	8.36%	9.67%
3 COS Indicated Class Revenue Percentages	100.00%	45.39%	11.71%	26.28%	1.16%	13.54%	1.93%
5							
6 Current Class Revenue Percentages	100.00%	45.85%	12.71%	26.11%	1.00%	12.55%	1.77%
8							
9 **OPC's Recommended Revenue Neutral Shifts**	0	(583,238)	(1,327,705)	218,851	205,367	1,278,056	208,669
10 OPC's Recommended Revenue Neutral % Shifts	0.00%	-0.52%	-20.44%	0.77%	8.48%	4.18%	0.36%
11 OPC's Recommended Total Revenue Percentages	100.00%	45.63%	12.25%	26.19%	1.07%	13.01%	1.85%
12							
13 **Spread of Revenue Requirement Increases**							
14 Approx. 7M Change In Revenue Requirement	6,899,193	3,147,961	845,087	1,806,717	74,017	897,899	127,511
15 Approx.10M Change In Revenue Requirement	10,000,000	4,562,796	1,224,908	2,618,736	107,284	1,301,455	184,821
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	2,564,723	(482,617)	2,025,568	279,385	2,175,955	336,180
20 Approx. 10M Change In Revenue Requirement	10,000,000	3,979,558	(102,797)	2,837,587	312,651	2,579,511	393,490
21 At Current Revenues	0	(583,238)	(1,327,705)	218,851	205,367	1,278,056	208,669
22							
23							
24 **COMBINED IMPACT ADJUSTED SO THAT NO CLASS RECEIVES NET DECREASE**							
25							
26 **Approx. 7M Change In Revenue Requirement**	6,899,193	2,250,155	121,387	1,845,027	271,988	2,086,230	324,405
27 **Percentage Change From Current Revenue**	2.67%	1.90%	0.37%	2.73%	10.53%	6.42%	7.07%
28 **Class Percentage Of Total Revenue**	100.00%	45.50%	12.43%	26.13%	1.08%	13.01%	1.85%
29							
30 **Approx. 10M Change In Revenue Requirement**	10,000,000	3,820,136	203,434	2,746,090	308,903	2,534,039	387,398
31 **Percentage Change From Current Revenue**	3.87%	3.22%	0.62%	4.06%	11.95%	7.80%	8.45%
32 **Class Percentage Of Total Revenue**	100.00%	45.56%	12.32%	26.16%	1.08%	13.03%	1.85%

Praxair Credit Factor Development

Line			RG	CB	SH	GP	PF	Prax	TEB	PFM	LP	MS	SPL,PL,LS	Total
1	Aug NCP*		479,206	96,177	25,898	185,221	2,290	8,074	72,888	325	112,246	78	12,596	994,998
2	*From Schedule 5													
3														
4	Total Less PF	992,708												
5														
6	**Factor**													
7	Class Share Of Total Less PF		0.4827	0.0969	0.0261	0.1866	0.0000	0.0081	0.0734	0.0003	0.1131	0.0001	0.0127	1.0000

Loss Adjustment Impact On Fuel Inventory Power Expense

Fuel Inventory	$6,088,656
b. Variable - Fuel & Purchased Power	$103,141,883
	$109,230,539

	Original Allocator			Adjusted Allocator			
	Sales	Factor	Cost Allocation	Adjusted Sales	Adj Factor	Cost Allocation	Net Impact
TOTAL	3881530714						
Residential	1570087841	0.404502	$44,183,997	1,688,440,994	0.40626	$44,375,716	$191,719
Commercial	315869544.6	0.081378	$8,888,916	339,679,777	0.08173	$8,927,486	$38,570
Small Heating	88077701.56	0.022691	$2,478,603	94,716,995	0.02279	$2,489,358	$10,755
Gen Power	775768649.1	0.199862	$21,830,982	834,246,056	0.20073	$21,925,709	$94,727
El Furnace	1941915.953	0.000500	$54,648	2,088,297	0.00050	$54,885	$237
Praxair	67387099.76	0.017361	$1,896,347	68,955,563	0.01659	$1,812,295	-$84,052
Total El Build	341356254.2	0.087944	$9,606,140	367,087,674	0.08833	$9,647,822	$41,682
Feed Mill	919621.9247	0.000237	$25,879	988,943	0.00024	$25,991	$112
Large Power	685544496.3	0.176617	$19,291,975	722,698,298	0.17389	$18,994,004	-$297,972
Misc Lts	738546.7426	0.000190	$20,784	794,218	0.00019	$20,874	$90
Total Other Lightg	33839043.03	0.008718	$952,268	36,389,829	0.00876	$956,400	$4,132
		1.000000	$109,230,539	4,156,086,645	1.00000	$109,230,539	(0)

Loss Factor Development

Energy Use			
Rate Schedule	Normalized kWh	Generator	Loss Factor
RG-Residential	1570086262	1688439297	0.075379957
CB-Commercial	315869227	339679436	0.075379957
SH-Small Heating	88077613	94716900	0.075379957
GP-General Power	775767869	834245217	0.075379957
TEB-Total Electric Bldg	341355911	367087304	0.075379957
LP-Large Power	685543807	722697572	0.054196047
SC-P PRAXAIR Transmission	67387032	68955494	0.023275423
* The loss factor for El Furnace, Feed Mill and Lighting classes are set at .075379957			

Adjusted 12-Month NCP A1 Allocator

		From Staff
		From Company Adj By Staff Factor

		MO Annual Energy	January	February	March	April	May	June	July	August	September	October	November	December	
			Weather Normalized Monthly NCP Demands												
40.63%	RG	1,688,440,994	470,913	469,478	486,934	354,141	357,316	383,890	424,803	479,206	468,846	276,859	312,278	432,881	4,917,543
8.17%	CB	339,679,777	74,919	81,666	74,199	60,782	81,587	95,352	87,960	96,177	92,854	79,397	59,148	71,436	955,477
2.28%	SH	94,716,995	23,164	26,092	21,359	15,528	16,307	17,930	18,125	25,898	20,405	15,710	15,260	20,677	236,453
20.07%	GP	834,246,056	141,723	142,654	139,363	130,329	158,960	170,558	180,381	185,221	175,704	163,451	156,300	153,759	1,898,403
0.05%	PF	2,088,297	1,961	1,904	2,040	2,033	1,863	2,256	2,415	2,290	2,352	2,277	2,115	1,732	25,237
1.66%	Prax	68,955,563	8,084	8,084	8,138	8,084	8,098	8,093	8,098	8,074	8,044	8,044	8,039	8,074	96,953
8.83%	TEB	367,087,674	82,523	76,192	71,851	59,748	63,630	68,058	66,180	72,888	72,446	63,637	67,374	77,500	842,025
0.02%	PFM	988,943	331	305	269	250	220	209	258	325	295	243	340	301	3,347
17.39%	LP	722,698,298	97,140	94,293	95,616	98,200	100,868	109,879	114,090	112,246	114,898	100,463	94,488	95,162	1,227,343
0.02%	MS	794,218	81	79	78	79	78	79	78	78	79	78	79	80	947
0.88%	SPL,PL,LS	36,389,829	10,746	9,549	9,316	10,777	12,354	15,604	15,369	12,596	10,932	9,711	9,361	8,841	135,157
100.00%	Sum	4,156,086,645	911,584	910,298	909,162	739,949	801,280	871,908	917,757	994,998	966,856	719,872	724,780	870,442	10,338,885
			1	2	3	4	5	6	7	8	9	10	11	12	
From Staff	MO System "Load Factor"	56.00%													

Monthly Percentage of Monthly Sum of NCP Demands

		51.66%	51.57%	53.56%	47.86%	44.59%	44.03%	46.29%	48.16%	48.49%	38.46%	43.09%	49.73%
8760		8.22%	8.97%	8.16%	8.21%	10.18%	10.94%	9.58%	9.67%	9.60%	11.03%	8.16%	8.21%
hrs/yr	cp	2.54%	2.87%	2.35%	2.10%	2.04%	2.06%	1.97%	2.60%	2.11%	2.18%	2.11%	2.38%
		15.55%	15.67%	15.33%	17.61%	19.84%	19.56%	19.65%	18.62%	18.17%	22.71%	21.57%	17.66%
		0.22%	0.21%	0.22%	0.27%	0.23%	0.26%	0.26%	0.23%	0.24%	0.32%	0.29%	0.20%
		0.89%	0.89%	0.90%	1.09%	1.01%	0.93%	0.88%	0.81%	0.83%	1.12%	1.11%	0.93%
		9.05%	8.37%	7.90%	8.07%	7.94%	7.81%	7.21%	7.33%	7.49%	8.84%	9.30%	8.90%
		0.04%	0.03%	0.03%	0.03%	0.03%	0.02%	0.03%	0.03%	0.03%	0.03%	0.05%	0.03%
		10.66%	10.36%	10.52%	13.27%	12.59%	12.60%	12.43%	11.28%	11.88%	13.96%	13.04%	10.93%
		0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
		1.18%	1.05%	1.02%	1.46%	1.54%	1.79%	1.67%	1.27%	1.13%	1.35%	1.29%	1.02%

Monthly NCP Demands Reordered Descending Order

	8	9	7	1	2	3	6	12	5	4	11	10
	994,998	966,856	917,757	911,584	910,298	909,162	871,908	870,442	801,280	739,949	724,780	719,872
	28142	49099	6172	1287	1135	37255	1466	69162	61331	15169	4908	719872
	1	2	3	4	5	6	7	8	9	10	11	12
	28142	24549	2057	322	227	6209	209	8645	6815	1517	446	59989
	2.83%	2.47%	0.21%	0.03%	0.02%	0.62%	0.02%	0.87%	0.68%	0.15%	0.04%	6.03%
	13.98%	11.15%	8.69%	8.48%	8.45%	8.43%	7.80%	7.78%	6.91%	6.23%	6.07%	6.03%
Sort Back to Original Order	1	2	3	4	5	6	7	8	9	10	11	12
(1) Monthly Shares of Incremental Demands	8.48%	8.45%	8.43%	6.23%	6.91%	7.80%	8.69%	13.98%	11.15%	6.03%	6.07%	7.78%

(2) NCP Allocator	(3) NCP A&P Allocator
47.72%	43.75%
9.27%	8.65%
2.30%	2.29%
18.32%	19.30%
0.24%	0.13%
0.93%	1.34%
8.08%	8.50%
0.03%	0.03%
11.81%	14.93%
0.01%	0.01%
1.30%	1.06%

1 The calculation involves ordering the monthly NCP Demands above, forming differences or increments of demand, then dividing those increments by the number of months in which they occur.
Then calculating the percentages that the increments represent of the largest sum of NCP demands. The portions (percentages) occuring in each month are added together for each month to obtain the monthly shares of incremental demands.

2 Each class's NCP allocator is the sum of the products of the monthly shares of the incremental demands and the class's monthly percentages of the total CP demands for that month.

3 The NCP peak & average allocator is a weighted average of the annual energy usage fraction and the NCP allocator. It is equal to "Load Factor" * Energy Share + (1 - "Load Factor") * NCP Allocator

Total Revenue Neutral Impact Based On CCOS Shown In Schedule 2

Line		TOTAL	Residential	Commercial	Small Heating	Gen Power	El Furnace	Praxair	Total El Build	Feed Mill	Large Power	Misc Lighting	Other Lighting
1	Oct. 4th Class Cost Of Service %	1.0000	0.4522	0.0927	0.0236	0.1808	0.0000	0.0134	0.0808	0.0003	0.1368	0.0002	0.0191
2													
3	Adjusted Class Cost Of Service % From Schedule 2	1.0000	0.4539	0.0931	0.0237	0.1816	0.0000	0.0116	0.0811	0.0003	0.1354	0.0002	0.0192
4													
5	Current Revenue	$ 258,728,530											
6	Current Revenue %	1.0000	0.4585	0.1028	0.0239	0.1807	0.0000	0.0100	0.0804	0.0004	0.1255	0.0002	0.0175
7													
8													
9	Revenue Neutral Impact												
10	Oct. 4th Study		$ 116,985,981	$ 23,985,348	$ 6,116,386	$ 46,790,376	$ -	$ 3,471,361	$ 20,906,388	$ 76,978	$ 35,404,253	$ 42,894	$ 4,948,565
11	Adjusted Study		$ 117,436,201	$ 24,075,886	$ 6,141,247	$ 46,993,076	$ -	$ 2,992,777	$ 20,992,377	$ 71,627	$ 35,022,984	$ 43,051	$ 4,959,305
12	Net Impact		$ 450,220	$ 90,537	$ 24,861	$ 202,700	$ -	$ (478,585)	$ 85,989	$ (5,350)	$ (381,269)	$ 157	$ 10,740