

Exhibit No.:  
Issue: Rate Design  
Witness: Maurice Brubaker  
Type of Exhibit: Surrebuttal Testimony  
Sponsoring Parties: Industrials  
Case No.: ER-2011-0004  
Date Testimony Prepared: April 28, 2011

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

\_\_\_\_\_  
In the Matter of The Empire District )  
Electric Company of Joplin, Missouri )  
for Authority to File Tariffs Increasing )  
Rates for Electric Service Provided to )  
Customers in the Missouri Service )  
Area of the Company )  
\_\_\_\_\_ )

**File No. ER-2011-0004**  
Tariff No. YE-2011-0154

Surrebuttal Testimony and Schedule of

**Maurice Brubaker**

On behalf of

**Enbridge Energy, LP  
Explorer Pipeline Company  
Praxair, Inc.**

April 28, 2011



**BRUBAKER & ASSOCIATES, INC.**  
CHESTERFIELD, MO 63017

Project 9358

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

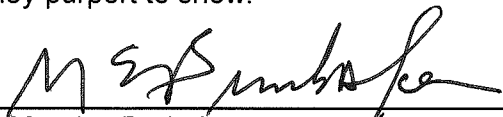
\_\_\_\_\_)  
In the Matter of The Empire District )  
Electric Company of Joplin, Missouri )  
for Authority to File Tariffs Increasing ) **File No. ER-2011-0004**  
Rates for Electric Service Provided to ) Tariff No. YE-2011-0154  
Customers in the Missouri Service )  
Area of the Company )  
\_\_\_\_\_)

STATE OF MISSOURI     )  
                                  )  
COUNTY OF ST. LOUIS    )     SS

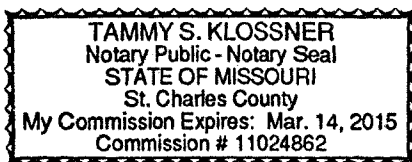
**Affidavit of Maurice Brubaker**

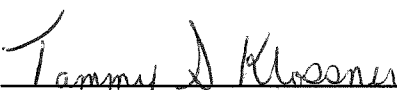
Maurice Brubaker, being first duly sworn, on his oath states:

1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by Enbridge Energy, LP, Explorer Pipeline Company and Praxair, Inc. in this proceeding on their behalf.
2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony and schedule which were prepared in written form for introduction into evidence in the Missouri Public Service Commission's Case No. ER-2011-0004.
3. I hereby swear and affirm that the testimony and schedule are true and correct and that they show the matters and things that they purport to show.

  
\_\_\_\_\_  
Maurice Brubaker

Subscribed and sworn to before me this 25<sup>th</sup> day of April, 2011.



  
\_\_\_\_\_  
Notary Public

**BEFORE THE PUBLIC SERVICE  
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In the Matter of The Empire District  
Electric Company of Joplin, Missouri  
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**File No. ER-2011-0004**  
Tariff No. YE-2011-0154

**Surrebuttal Testimony of Maurice Brubaker**

1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2 A Maurice Brubaker. My business address is 16690 Swingley Ridge Road, Suite 140,  
3 Chesterfield, MO 63017.

4 Q ARE YOU THE SAME MAURICE BRUBAKER WHO HAS PREVIOUSLY FILED  
5 TESTIMONY IN THIS PROCEEDING?

6 A Yes. I have previously filed direct and rebuttal testimonies on rate design issues.

7 Q IS YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE OUTLINED IN ANY  
8 PRIOR TESTIMONY?

9 A Yes. This information is included in Appendix A to my direct testimony on rate design  
10 issues filed March 16, 2011.

11 Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

12 A I am appearing on behalf of Enbridge Energy, LP, Explorer Pipeline Company and  
13 Praxair, Inc. (collectively "Industrials"). These companies purchase substantial

**Maurice Brubaker  
Page 1**

1 amounts of electricity from The Empire District Electric Company ("Empire") and the  
2 outcome of this proceeding will have an impact on their cost of electricity.

3 **Q WHAT IS THE SCOPE OF YOUR SURREBUTTAL TESTIMONY?**

4 A I will briefly respond to the rebuttal testimonies of Missouri Public Service  
5 Commission witness Michael Scheperle and Office of Public Counsel witness Barbara  
6 Meisenheimer with respect to cost of service.

7 **Q DID MR. SCHEPERLE COMMENT ON THE PEAKS THAT YOU USED FOR YOUR  
8 AVERAGE AND EXCESS (A&E) COST OF SERVICE STUDY?**

9 A Yes, he did. I performed class cost of service studies using the A&E method, both  
10 with 12 non-coincident peaks and with four non-coincident peaks. Mr. Scheperle  
11 seems to prefer (see page 3 of his rebuttal testimony) to use six monthly  
12 non-coincident peaks.

13 **Q HAVE YOU PREPARED AN A&E CLASS COST OF SERVICE STUDY USING THE  
14 NON-COINCIDENT PEAKS FROM THE SIX MONTHS THAT MR. SCHEPERLE  
15 HAS IDENTIFIED AS THE MOST IMPORTANT?**

16 A Yes. Please see Schedule MEB-COS-Surrebuttal. Page 1 of this schedule  
17 summarizes the class cost of service results. Page 2 shows the increases required to  
18 move to equal rates of return, and page 3 presents the development of the allocation  
19 factor.

**Maurice Brubaker  
Page 2**

1    **Q     HOW DO THE RESULTS OF THIS COST OF SERVICE STUDY COMPARE TO**  
2           **THE RESULTS OF THE 12NCP-A&E METHOD THAT YOU INCLUDED IN YOUR**  
3           **DIRECT TESTIMONY?**

4    A     As compared to the cost of service study included in Schedules MEB-COS-4 attached  
5           to my direct testimony, when I use the six non-coincident peaks the rates of return for  
6           Rates GP, Praxair, TEB, PFM, LP, SPL and PL increase slightly while the rates of  
7           return for Rates RG, CB, SH, MS and LS decrease slightly.

8                 As a result of these minor differences, I am not changing the  
9           recommendations contained in my direct testimony.

10   **Q     HAVE YOU REVIEWED THE REBUTTAL TESTIMONY OF OFFICE OF PUBLIC**  
11           **COUNSEL WITNESS BARBARA MEISENHEIMER?**

12   A     Yes. I responded to her arguments on the allocation of generation system costs in  
13           my rebuttal testimony, and she does not put forth any additional arguments in her  
14           rebuttal testimony. Accordingly, the comments which I made in my rebuttal testimony  
15           in reply to her proposals on allocation of generation system fixed costs apply equally  
16           to the comments she made in her rebuttal testimony.

17   **Q     IS THERE ANY OTHER ASPECT OF WITNESS MEISENHEIMER'S TESTIMONY**  
18           **THAT YOU WILL RESPOND TO?**

19   A     Yes. In her rebuttal testimony she continues to propose not recognizing the customer  
20           component in the distribution system. This is not consistent with general practices in  
21           the industry and results in under-allocating costs to residential and other small  
22           customers. A large part of the cost of the distribution system is incurred just to cover  
23           the service area geographically and maintain a hookup to individual premises so that

1 electricity can be consumed. I discuss this in more detail at pages 11 and 12 of my  
2 direct testimony, and will not repeat the discussion here.

3 **Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

4 **A** Yes, it does.

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**EMPIRE DISTRICT ELECTRIC COMPANY**

Cost of Service Based on  
Average and Excess Demand Allocator,  
6 Non-Coincident Peaks  
For the Test Year Ended June 2009  
(\$000)'s

Line	Description	Missouri Retail (1)	Residential Rate RG (2)	Commercial Service Rate CB (3)	Commercial Service-Heating Rate SH (4)	General Power Rate GP (5)	Praxair Rate SC-P (6)	Total Electric Building Rate TEB (7)	Feed Mill Rate PFM (8)	Large Power Rate LP (9)	Misc. Service Rate MS (10)	Street Lights Rate SPL (11)	Private Lights Rate PL (12)	Special Lights Rate LS (13)
1	Revenue from Sales	395,791	181,660	37,570	9,901	75,690	3,632	35,320	75	45,564	62	1,768	4,417	133
2	Other Revenues	8,823	3,362	604	162	1,405	64	668	1	1,688	1	818	44	7
3	Total Revenues	<u>404,615</u>	<u>185,022</u>	<u>38,174</u>	<u>10,063</u>	<u>77,095</u>	<u>3,696</u>	<u>35,987</u>	<u>76</u>	<u>47,252</u>	<u>62</u>	<u>2,586</u>	<u>4,461</u>	<u>139</u>
4	O&M Expense	239,559	114,925	20,993	5,700	41,810	2,631	19,900	33	30,805	36	1,224	1,348	153
5	Depreciation Expense	54,122	30,093	5,368	1,292	7,463	278	3,696	10	5,079	4	345	423	73
6	Other Taxes	15,637	8,649	1,598	381	2,129	85	1,064	3	1,467	1	107	133	20
7	Income Tax	23,276	4,668	2,586	710	8,035	198	3,429	9	2,563	7	259	870	(59)
8	Total Expenses	<u>332,594</u>	<u>158,335</u>	<u>30,545</u>	<u>8,083</u>	<u>59,437</u>	<u>3,193</u>	<u>28,090</u>	<u>55</u>	<u>39,913</u>	<u>49</u>	<u>1,935</u>	<u>2,774</u>	<u>188</u>
9	Operating Income	72,020	26,688	7,629	1,980	17,658	504	7,898	21	7,339	14	651	1,687	-48
10	Interest on Customer Deposits	(321)	(255)	(47)	(8)	(8)	0	(3)	(0)	0	0	0	0	(0)
11	Net Operating Income	71,700	26,433	7,582	1,972	17,651	504	7,894	21	7,339	14	651	1,687	-49
12	Plant in Service	1,713,153	948,732	171,905	41,548	235,359	9,170	118,324	301	159,427	105	11,666	14,354	2,264
13	Depreciation Reserve	(510,269)	(291,532)	(52,077)	(12,122)	(67,038)	(2,075)	(32,570)	(86)	(44,357)	(32)	(3,391)	(4,317)	(672)
14	Other Rate Base Items	(134,976)	(76,263)	(14,824)	(3,663)	(17,025)	(539)	(9,321)	(30)	(10,667)	(5)	(1,070)	(1,369)	(198)
15	Total Rate Base	<u>1,067,908</u>	<u>580,936</u>	<u>105,004</u>	<u>25,762</u>	<u>151,296</u>	<u>6,556</u>	<u>76,433</u>	<u>185</u>	<u>104,403</u>	<u>68</u>	<u>7,204</u>	<u>8,667</u>	<u>1,394</u>
16	Rate of Return	6.71%	4.55%	7.22%	7.65%	11.67%	7.68%	10.33%	11.42%	7.03%	20.14%	9.04%	19.47%	-3.50%
17	Relative Rate of Return	1.00	0.68	1.08	1.14	1.74	1.14	1.54	1.70	1.05	3.00	1.35	2.90	(0.52)

Note: Based on 6NCP A&E and 48% Load Factor.

**EMPIRE DISTRICT ELECTRIC COMPANY**

**Class Cost of Service Study Results  
and Revenue Adjustments to Move Each Class to Cost of Service  
Using Modified ECOS at Present Rates  
(\$ in Thousands)**

<u>Line</u>	<u>Rate Class</u>	<u>Current Revenues</u> (1)	<u>Current Rate Base</u> (2)	<u>Net Operating Income</u> (3)	<u>Earned ROR</u> (4)	<u>Indexed ROR</u> (5)	<u>Income @ Average Current ROR*</u> (6)	<u>Difference in Income</u> (7)	<u>Revenue Increase</u> (8)	<u>Percentage Increase</u> (9)
1	Residential - Rate RG	\$ 181,660	\$ 580,936	\$ 26,433	4.55%	68	\$ 39,004	\$ 12,571	\$ 20,403	11.23%
2	Commercial Service - Rate CB	37,570	105,004	7,582	7.22%	108	7,050	(532)	(864)	-2.30%
3	Commercial Service Heating - Rate SH	9,901	25,762	1,972	7.65%	114	1,730	(242)	(393)	-3.97%
4	General Power - Rate GP	75,690	151,296	17,651	11.67%	174	10,158	(7,493)	(12,161)	-16.07%
5	Praxair - Rate SC-P	3,632	6,556	504	7.68%	114	440	(63)	(103)	-2.83%
6	Total Electric Building - Rate TEB	35,320	76,433	7,894	10.33%	154	5,132	(2,763)	(4,484)	-12.70%
7	Feed Mill - Rate PFM	75	185	21	11.42%	170	12	(9)	(14)	-18.91%
8	Large Power - Rate LP	45,564	104,403	7,339	7.03%	105	7,010	(329)	(534)	-1.17%
9	Misc. Service - Rate MS	62	68	14	20.14%	300	5	(9)	(15)	-24.05%
10	Street Lights - Rate SPL	1,768	7,204	651	9.04%	135	484	(168)	(272)	-15.40%
11	Private Lights - Rate PL	4,417	8,667	1,687	19.47%	290	582	(1,106)	(1,794)	-40.62%
12	Special Lights- Rate LS	<u>133</u>	<u>1,394</u>	<u>(49)</u>	<u>-3.50%</u>	<u>-52</u>	<u>94</u>	<u>142</u>	<u>231</u>	<u>174.20%</u>
13	Total	\$ 395,791	\$ 1,067,908	\$ 71,700	6.71%	100	\$ 71,700	\$ 0	\$ 0	0.00%

Note: \* Column 2 x Column 4, Line 13 (6.71%)



## EMPIRE DISTRICT ELECTRIC COMPANY

### Calculation of 6NCP Average and Excess Demand Allocator

Line	Rate Classes	Rate	6 NCP Class Demands	Energy kWh @ Gen	Average Demand	Excess Demand	Percents		Used for COSS		
							Average Demand	Excess Demand			
							48.28%	51.72%			
1	Residential	RG	502,332	1,714,543,361	195,724	306,608	0.413593	0.583302	0.501362	500,796	0.501362
2	Comm Service	CB	86,630	317,310,039	36,223	50,407	0.076544	0.095896	0.086553	86,455	0.086553
3	Comm S Htg	SH	24,080	98,865,505	11,286	12,794	0.023849	0.024340	0.024103	24,076	0.024103
4	General Power	GP	162,192	862,757,122	98,488	63,704	0.208119	0.121193	0.163163	162,979	0.163163
5	Praxair	SC-P	8,698	65,655,786	7,495	1,203	0.015838	0.002289	0.008831	8,821	0.008831
6	Tot EI Building	TEB	85,320	403,215,447	46,029	39,291	0.097266	0.074749	0.085620	85,524	0.085620
7	Feed Mill	PFM	214	474,474	54	160	0.000114	0.000304	0.000213	212	0.000213
8	Large Power	LP	118,349	648,676,817	74,050	44,299	0.156478	0.084276	0.119137	119,002	0.119137
9	Misc Service	MS	68	675,570	77	(9)	0.000163	(0.000017)	0.000070	70	0.000070
10	Special Lts	SPL	4,802	16,601,310	1,895	2,907	0.004004	0.005530	0.004794	4,788	0.004794
11	Private Lts	PL	4,742	15,862,380	1,811	2,931	0.003827	0.005576	0.004732	4,726	0.004732
12	Sports Lts	LS	1,444	848,926	97	1,347	0.000205	0.002563	0.001424	1,423	0.001424
13	Total MO		<u>998,871</u>	<u>4,145,486,737</u>	<u>473,229</u>	<u>525,642</u>			<u>1.000000</u>	<u>998,871</u>	<u>1.000000</u>

Note: The Load Factor is based on the CP-T Demand of 980,129 kW.

The 6NCP months consists of 3 Winter months of December, January, and February and 3 Summer months of June, July, and August.

Source: H. Edwin Overcast's COSS Workpapers, File "Ddatasheet.xls", Tab "MOGen".