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Witness: David Roos
Sponsoring Party: MO PSC Staff
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Case No.: ER-2006-0315
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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

DIRECT TESTIMONY

OF

DAVID C. ROOS

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2006-0315

**Jefferson City, Missouri
June 2006**

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the matter of The Empire District Company of)
Joplin, Missouri for authority to file tariffs)
increasing rates for electric service provided to)
customers in Missouri service area of the Company.)

Case No. ER-2006-0315

AFFIDAVIT OF DAVID ROOS

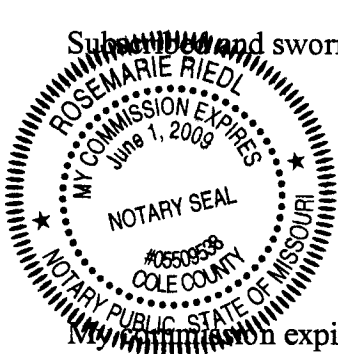
STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

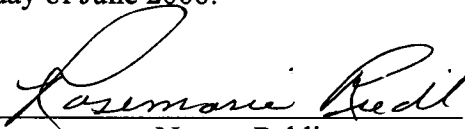
David Roos, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 8 pages to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.



David Roos

Subscribed and sworn to before me this 29th day of June 2006.





Notary Public

My commission expires June 1, 2009

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OF
DAVID ROOS
THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2006-0315

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DIRECT TESTIMONY
OF
DAVID ROOS
THE EMPIRE DISTRICT ELECTRIC COMPANY
CASE NO. ER-2006-0315

Q. Please state your name and business address.

A. My name is David C. Roos and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

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

A. I am a Regulatory Economist III in the Economic Analysis Section, Energy Department, Operations Division of the Missouri Public Service Commission.

Q. Would you please review your educational background and work experience?

A. I graduated from the University of Notre Dame, Notre Dame, Indiana, with a Bachelor of Science Degree in Chemical Engineering in May 1983, and I graduated from the University of Missouri, Columbia, Missouri in December 2005, with a Master of Arts in Economics. I have been employed at the Missouri Public Service Commission as a Regulatory Economist III since March 2006. Prior to joining the Public Service Commission I taught introductory economics and conducted economic research as a graduate teaching assistant and graduate research assistant at the University of Missouri. Prior to the University of Missouri, I was employed by several private firms

1 where I provided consulting, design and construction oversight of environmental projects
2 for private and public sector clients.

3 **EXECUTIVE SUMMARY**

4 Q. What is the purpose of your direct testimony in this filing?

5 A. The purpose of my direct testimony and schedules is to illustrate how to
6 apply each of the rate design recommendations described in the direct testimony of Staff
7 witness James A. Busch to Empire District Electric Company's (Empire) Missouri rate
8 schedules. Mr. Busch's recommendations describe how to determine class revenues and
9 the associated rate values under two basic scenarios:

10 1. The current Commission-approved Interim Energy Charge (IEC) remains in
11 place (IEC Continuation Scenario); and,

12 2. The Commission determines that the IEC should be terminated (IEC
13 Termination Scenario).

14 Schedules DCR-1 (class revenues) and DCR-2 (rate values) illustrate the
15 application of Staff's recommendations for the IEC Continuation Scenario to the rate
16 revenues and revenue requirement change presented in the June 23, 2006 direct testimony
17 of Staff Witnesses Curt Wells and Mark L. Oligschlaeger, respectively.

18 Similarly, Schedules DCR-3 (class revenues) and DCR-4 (rate values) illustrate
19 the application of Staff's recommendations for the IEC Termination Scenario to the
20 Staff's revenue and accounting data, presented in the direct testimony of Staff witnesses
21 Curt Wells and Mark L. Oligschlaeger, respectively.

22 Schedule DCR-5 presents how the monthly electric bill for a typical residential
23 customer would appear, if the rate values associated with each scenario were

1 implemented. This schedule also compares that monthly electric bill to the bills that this
2 “typical” residential customer would pay under the tariffs in effect for the other regulated
3 investor-owned electric utilities in Missouri.

4 **BACKGROUND**

5 Q. Where did you get the data you used to illustrate how Staff’s rate design
6 recommendations would be applied?

7 A. The \$4,049,869 change in revenue requirement for the IEC Termination
8 scenario was taken from the first page of Accounting Schedule 1, filed in this case on
9 June 23, 2006. The IEC Continuation Scenario revenue requirement change of
10 (\$22,939,520) is shown on Schedule 2, attached to the direct testimony of Staff witness
11 Mark L. Oligschlaeger. Missouri rate revenues by class were taken from Staff witness
12 Curt Wells’ Schedule CW-1. Mr. Wells also provided me with IEC revenues and billing
13 units by rate.

14 Q. Are Staff’s rate design recommendations applicable to all existing Empire
15 Missouri rate classes?

16 A. Yes. However Schedules DCR-2 and DCR-3 only present the results for
17 the six largest rate classes; namely, (1) Residential (RG); (2) Commercial (CB); (3) Small
18 Heating (SH); (4) Total Electric Building (TEB); (5) General Power (GP); and (6) Large
19 Power (LP).

20 Q. What is the relationship between the rate classes used by Staff and
21 Empire’s existing rate schedules?

22 A. Each rate class used by Staff corresponds to one of Empire’s existing rate
23 schedules.

1 **CLASS REVENUES: IEC CONTINUATION SCENARIO**

2 Q. What are the proposed changes to the IEC in the IEC Continuation
3 Scenario?

4 A. The IEC remains in place and is applied to all customers at the current rate
5 of \$0.00213 per kilowatt hour (kWh).

6 Q. What method does Staff recommend be used to determine class revenues
7 in the IEC Continuation Scenario?

8 A. As explained in Staff witness Busch's rate design testimony, if the
9 Commission decides to keep the existing IEC in place, then any change in overall
10 revenues should be assigned to each customer class in proportion to that class' current
11 share of permanent revenues.

12 Q. Please describe Schedule DCR-1.

13 A. Schedule DCR-1 displays the calculation of the "target" revenues to be
14 collected by new permanent rates for each customer class in the IEC Continuation
15 Scenario. In this illustration, existing permanent rates collect \$284,423,930 and the
16 existing IEC collects \$8,766,358 (see column 2). Under this scenario, the IEC continues
17 to collect \$8,766,358, but the revenues collected through permanent rates should be
18 \$216,484,410 (column 4), or \$22,939,520 (column 5) less than current permanent
19 revenues. The revenues to be collected by each class will decrease by 8.07% (column 6),
20 which is the result of applying Staff's method of determining each class' share of any
21 overall increase or decrease in permanent revenues.

1 **CLASS REVENUES: IEC TERMINATION SCENARIO**

2 Q. How does the Staff propose to collect the revenues that were being
3 collected through the IEC in the IEC Termination Scenario?

4 A. Since the IEC ceases to exist, all prudently incurred costs should be
5 recovered through permanent rates.

6 Q. What method does Staff recommend be used to determine class revenues
7 in the IEC Termination Scenario?

8 A. As further described in Mr. Busch's rate design testimony, if the
9 Commission decides to terminate the IEC, then any change in overall revenues should be
10 assigned to customer classes in proportion to each class' current share of total rate
11 revenues. The amount of total revenues includes both the revenues collected through
12 permanent rates and the revenues collected through the IEC.

13 Q. Please describe Schedule DCR-3.

14 A. Schedule DCR-3 displays the calculation of the "target" revenues to be
15 collected by new permanent rates for each customer class in the IEC Termination
16 Scenario. In this illustration, existing permanent rates collect \$284,423,930 and the
17 existing IEC collects \$8,766,358 (see column 2). According to Staff Accounting
18 Schedule 1, overall revenues should increase by \$4,049,869 at the same time that the IEC
19 is terminated. The net effect on overall revenues is a decrease of \$4,716,489 (\$4,049,869
20 increase in permanent rates less \$8,776,358 through termination of the IEC) in permanent
21 revenues (column 7). The revenues to be collected by each class will decrease by 1.61%
22 (column 8), which is the result of applying Staff's method of determining each class'
23 share of any overall increase or decrease in total (permanent plus IEC) revenues.

CLASS RATE VALUES

1
2 Q. How were the rate values shown on Schedules DCR-2 (IEC Continuation
3 Scenario) and DCR-4 (IEC Termination Scenario) calculated?

4 A. I followed the Staff's recommendation to determine the specific rate
5 values for each class by adjusting all existing demand and energy charges, but not
6 customer charges, by whatever uniform percentage results in collecting the class "target"
7 revenues shown on Schedules DCR-1 (IEC Continuation Scenario) and DCR-3 (IEC
8 Termination Scenario), respectively.

9 Q. Why does this methodology result in a uniform (same) percentage change
10 to demand and energy charges within a class but not necessarily between classes?

11 A. Because the proportion of total revenues being collected by the customer
12 charge differs from class to class.

CLASS REVENUES AND RATE VALUES: ADOPTION OF STAFF'S METHODS

13
14 Q. Is Staff recommending that the Commission adopt the results shown in
15 Schedules DCR-1 through DCR-4?

16 A. Not necessarily. Whether or not the Commission accepts Staff's
17 quantification of rate revenues and revenue requirement change, Staff recommends that
18 the methods for determining class revenues and rate values illustrated in Schedules DCR-
19 1 and DCR-2 be adopted in the event that the Commission determines that the IEC
20 should be continued. Similarly, in the event that the Commission determines that the IEC
21 should be terminated; Staff recommends adoption of the methods for determining class
22 revenues and rate values illustrated in Schedules DCR-3 and DCR-4.

1 **IMPACT OF SCENARIOS ON THE TYPICAL RESIDENTIAL CUSTOMER**

2 Q. How does each Scenario affect the electric bills incurred by residential
3 customers served by Empire?

4 A. Schedule DCR-5 compares the monthly electrical bill that a typical
5 residential customer would incur under current Empire rates (permanent plus IEC) with
6 the monthly bills generated by the IEC Continuation Scenario residential rates shown on
7 Schedule DCR-2-1 and the IEC Termination Scenario residential rates shown on
8 Schedule DCR-4-1. The typical residential customer defined for these computations uses
9 1,000 kWh each summer (June-September) month and 750 kWh per month during the
10 remaining eight months.

11 The typical residential customer's average electricity bill is \$74.33 per month
12 when billed on current Empire rates. Under the IEC Continuation Scenario, the average
13 monthly electricity bill for this typical residential customer would be \$68.65. The
14 average monthly electricity bill would be \$73.16 under the IEC Termination Scenario.

15 Q. How do the electric bills incurred by residential customers served by
16 Empire compare to the electric bills paid by residential customers served by the other
17 regulated Missouri electric utilities?

18 A. Schedule DCR-5 also presents the average monthly electric bills that the
19 typical residential customer would incur if served by each of the other Missouri regulated
20 investor-owned electric utilities (Aquila Networks - L&P Division, Aquila Networks –
21 MPS Division, Kansas City Power and Light Company, and Union Electric Company
22 d/b/a AmerenUE). These bills, in addition to the three Empire bills described above, are
23 displayed in order from the highest (rank=1) to the lowest (rank=7). The schedule shows

Direct Testimony of
David Roos

1 that current Empire rates produce the highest average monthly bill and that current
2 Aquila-MPS rates produce the second highest average monthly bill. For this illustration,
3 both Empire scenarios produce average monthly bills that are lower (ranked 4 and 3
4 respectively) than Aquila-MPS (ranked 2).

5 Q. Does this conclude your direct testimony on the issue of Rate Design in
6 this case?

7 A. Yes, it does.

THE EMPIRE DISTRICT ELECTRIC COMPANY -- CASE NO. ER-2006-0315
"TARGET" REVENUE TO BE COLLECTED BY NEW RATES

IEC CONTINUATION SCENARIO

Change in Revenue Requirement: (\$22,939,520)

Sources of Rate Revenue MO Rate Schedule	Current Revenue	Class Share of \$ from Permanent Rates	"Target" Revenue	Revenue Difference	Percent Difference
RG- Residential	\$129,598,362	45.57%	\$119,145,921	(\$10,452,441)	-8.07%
CB-Commercial	\$28,159,955	9.90%	\$25,888,782	(\$2,271,173)	-8.07%
SH-Small Heating	\$6,928,204	2.44%	\$6,369,427	(\$558,777)	-8.07%
PFM- Feed Mill/ Grain Elev	\$56,694	0.02%	\$52,122	(\$4,573)	-8.07%
MS- Traffic Signals	\$57,566	0.02%	\$52,923	(\$4,643)	-8.07%
GP-General Power	\$53,633,607	18.86%	\$49,307,919	(\$4,325,688)	-8.07%
TEB- Total Electric Building	\$22,573,232	7.94%	\$20,752,642	(\$1,820,589)	-8.07%
LP- Large Power	\$36,211,703	12.73%	\$33,291,136	(\$2,920,567)	-8.07%
SC-P PRAXAIR	\$2,435,500	0.86%	\$2,239,071	(\$196,429)	-8.07%
SPL- Municipal St. Lighting	\$1,242,402	0.44%	\$1,142,199	(\$100,203)	-8.07%
PL- Private Lighting	\$3,365,197	1.18%	\$3,093,786	(\$271,412)	-8.07%
LS- Special Lighting	\$161,508	0.06%	\$148,482	(\$13,026)	-8.07%
Billed \$ from Permanent Rates	\$284,423,930	100.00%	\$261,484,410	(\$22,939,520)	
\$ from IEC Charge	\$8,766,358		\$8,766,358	\$0	0.00%
Other Rate Revenue					
CP-Cogeneration Purchase	(\$165)		(\$165)	\$0	0.00%
Excess Facilities Charges	\$1,741,643		\$1,741,643	\$0	0.00%
Interruptible Credits	(\$342,912)		(\$342,912)	\$0	0.00%
MO Other Rate Revenue	\$1,398,566		\$1,398,566	\$0	
Total Missouri Rate Revenue	\$294,588,854		\$271,649,334	(\$22,939,520)	

**THE EMPIRE DISTRICT ELECTRIC COMPANY - CASE NO. ER-2006-0315
ILLUSTRATIVE RATES FOR IEC CONTINUATION SCENARIO**

CLASS: RG - RESIDENTIAL

	Current Rates	Percent Change to Current Rates	Final Rates[1]
Customer Charge	\$10.35	0.00%	\$10.35
Permanent Energy Charges:			
Summer	\$0.07770	-9.13%	\$0.07061
Winter			
First 600 kWh	\$0.07770	-9.13%	\$0.07061
Over 600 kWh	\$0.05220	-9.13%	\$0.04743
Interim Energy Charge	\$0.00213	0.00%	\$0.00213

[1] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-1.

CLASS: CB - COMMERCIAL SERVICE

	Current Rates	Percent Change to Current Rates	Final Rates[1]
Customer Charge	\$14.60	0.00%	\$14.60
Permanent Energy Charges:			
Summer	\$0.08670	-9.04%	\$0.07886
Winter			
First 700 kWh	\$0.08670	-9.04%	\$0.07886
Over 700 kWh	\$0.06530	-9.04%	\$0.05940
Interim Energy Charge	\$0.00213	0.00%	\$0.00213

[1] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-1.

CLASS: SH - SMALL HEATING

	Current Rates	Percent Change to Current Rates	Final Rates[1]
Customer Charge	\$14.60	0.00%	\$14.60
Permanent Energy Charges:			
Summer	\$0.08670	-8.68%	\$0.07917
Winter			
First 700 kWh	\$0.08670	-8.68%	\$0.07917
Over 700 kWh	\$0.05040	-8.68%	\$0.04602
Interim Energy Charge	\$0.00213	0.00%	\$0.00213

[1] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-1.

**THE EMPIRE DISTRICT ELECTRIC COMPANY - CASE NO. ER-2006-0315
ILLUSTRATIVE RATES FOR IEC CONTINUATION SCENARIO**

CLASS: TEB - TOTAL ELECTRIC BUILDING

	Current Rates	Percent Change to Current Rates	Final Rates[1]
Customer Charge	\$49.61		\$49.61
Demand Charge			
Summer	\$4.22	-8.25%	\$3.87
Winter	\$3.47	-8.25%	\$3.18
Permanent Energy Charges:			
Summer			
First 150HU	\$0.08140	-8.25%	\$0.07469
Next 200HU	\$0.05140	-8.25%	\$0.04716
All Add'l kWh	\$0.04630	-8.25%	\$0.04248
Winter			
First 150HU	\$0.04260	-8.25%	\$0.03909
Next 200HU	\$0.04010	-8.25%	\$0.03679
All Add'l kWh	\$0.03880	-8.25%	\$0.03560
Interim Energy Charge	\$0.00213	0.00%	\$0.00213

[1] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-1.

CLASS: GP - GENERAL POWER

	Current Rates	Percent Change to Current Rates	Final Rates[1]
Customer Charge	\$49.61		\$49.61
Demand Charge			
Summer	\$6.76	-8.21%	\$6.20
Winter	\$5.28	-8.21%	\$4.85
Primary Discount	(\$0.234)	-8.21%	(\$0.215)
Permanent Energy Charges:			
Summer			
First 150HU	\$0.06950	-8.21%	\$0.06379
Next 200HU	\$0.04380	-8.21%	\$0.04020
All Add'l kWh	\$0.03940	-8.21%	\$0.03616
Winter			
First 150HU	\$0.04080	-8.21%	\$0.03745
Next 200HU	\$0.03940	-8.21%	\$0.03616
All Add'l kWh	\$0.03840	-8.21%	\$0.03525
Interim Energy Charge	\$0.00213	0.00%	\$0.00213

[1] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-1.

**THE EMPIRE DISTRICT ELECTRIC COMPANY - CASE NO. ER-2006-0315
ILLUSTRATIVE RATES FOR IEC CONTINUATION SCENARIO**

CLASS: LP - LARGE POWER

	Current Rates	Percent Change to Current Rates	Final Rates[1]
Customer Charge	\$183.44		\$183.44
Demand Charge			
Summer	\$10.85	-8.21%	\$9.95
Winter	\$5.98	-8.21%	\$5.48
Secondary Adder	\$0.23	-8.21%	\$0.21
Substation Facilities Credit	(\$1.11)	-8.21%	\$1.02
Permanent Energy Charges:			
Summer			
First 350HU	\$0.04310	-8.21%	\$0.03951
All Add'l kWh	\$0.02230	-8.21%	\$0.02044
Winter			
First 350HU	\$0.03800	-8.21%	\$0.03483
All Add'l kWh	\$0.02150	-8.21%	\$0.01971
Interim Energy Charge	\$0.00213	0.00%	\$0.00213

[1] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-1.

**THE EMPIRE DISTRICT ELECTRIC COMPANY - CASE NO. ER-2006-0315
ILLUSTRATIVE RATES FOR IEC TERMINATION SCENARIO**

CLASS: RG - RESIDENTIAL

	Current Rates	Effect to Rates of IEC Termination	Rates Equivalent to Current Rates [1]	Percent Change to Equivalent Rates	Final Rates [2]
Customer Charge	\$10.35		\$10.35	0.00%	\$10.35
Permanent Energy Charges:					
Summer	\$0.07770	\$0.00213	\$0.07983	-1.82%	\$0.07838
Winter					
First 600 kWh	\$0.07770	\$0.00213	\$0.07983	-1.82%	\$0.07838
Over 600 kWh	\$0.05220	\$0.00213	\$0.05433	-1.82%	\$0.05334
Interim Energy Charge	\$0.00213	(\$0.00213)	\$0.00000		

[1] These rates collect the same revenues from the same customers as current rates.

[2] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-3.

CLASS: CB - COMMERCIAL SERVICE

	Current Rates	Effect to Rates of IEC Termination	Rates Equivalent to Current Rates [1]	Percent Change to Equivalent Rates	Final Rates [2]
Customer Charge	\$14.60		\$14.60	0.00%	\$14.60
Permanent Energy Charges:					
Summer	\$0.08670	\$0.00213	\$0.08883	-0.05%	\$0.08878
Winter					
First 700 kWh	\$0.08670	\$0.00213	\$0.08883	-0.05%	\$0.08878
Over 700 kWh	\$0.06530	\$0.00213	\$0.06743	-0.05%	\$0.06739
Interim Energy Charge	\$0.00213	(\$0.00213)	\$0.00000		

[1] These rates collect the same revenues from the same customers as current rates.

[2] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-3.

CLASS: SH - SMALL HEATING

	Current Rates	Effect to Rates of IEC Termination	Rates Equivalent to Current Rates [1]	Percent Change to Equivalent Rates	Final Rates [2]
Customer Charge	\$14.60		\$14.60	0.00%	\$14.60
Permanent Energy Charges:					
Summer	\$0.08670	\$0.00213	\$0.08883	-1.72%	\$0.08730
Winter					
First 700 kWh	\$0.08670	\$0.00213	\$0.08883	-1.72%	\$0.08730
Over 700 kWh	\$0.05040	\$0.00213	\$0.05253	-1.72%	\$0.05163
Interim Energy Charge	\$0.00213	(\$0.00213)	\$0.00000		

[1] These rates collect the same revenues from the same customers as current rates.

[2] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-3.

**THE EMPIRE DISTRICT ELECTRIC COMPANY - CASE NO. ER-2006-0315
ILLUSTRATIVE RATES FOR IEC TERMINATION SCENARIO**

CLASS: TEB - TOTAL ELECTRIC BUILDING

	Current Rates	Effect to Rates of IEC Termination	Rates Equivalent to Current Rates [1]	Percent Change to Equivalent Rates	Final Rates [2]
Customer Charge	\$49.61		\$49.61	0.00%	\$49.61
Demand Charge					
Summer	\$4.22	\$0.00	\$4.22	-1.64%	\$4.15
Winter	\$3.47	\$0.00	\$3.47	-1.64%	\$3.41
Permanent Energy Charges:					
Summer					
First 150HU	\$0.08140	\$0.00213	\$0.08353	-1.64%	\$0.08216
Next 200HU	\$0.05140	\$0.00213	\$0.05353	-1.64%	\$0.05265
All Add'l kWh	\$0.04630	\$0.00213	\$0.04843	-1.64%	\$0.04764
Winter					
First 150HU	\$0.04260	\$0.00213	\$0.04473	-1.64%	\$0.04400
Next 200HU	\$0.04010	\$0.00213	\$0.04223	-1.64%	\$0.04154
All Add'l kWh	\$0.03880	\$0.00213	\$0.04093	-1.64%	\$0.04026
Interim Energy Charge	\$0.00213	(\$0.00213)	\$0.00000		

[1] These rates collect the same revenues from the same customers as current rates.

[2] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-3.

CLASS: GP - GENERAL POWER

	Current Rates	Effect to Rates of IEC Termination	Rates Equivalent to Current Rates [1]	Percent Change to Equivalent Rates	Final Rates [2]
Customer Charge	\$49.61		\$49.61	0.00%	\$49.61
Demand Charge					
Summer	\$6.76	\$0.00	\$6.76	-1.64%	\$6.65
Winter	\$5.28	\$0.00	\$5.28	-1.64%	\$5.19
Primary Discount	(\$0.234)	\$0.00	(\$0.234)	-1.64%	(\$0.23017)
Permanent Energy Charges:					
Summer					
First 150HU	\$0.06950	\$0.00213	\$0.07163	-1.64%	\$0.07046
Next 200HU	\$0.04380	\$0.00213	\$0.04593	-1.64%	\$0.04518
All Add'l kWh	\$0.03940	\$0.00213	\$0.04153	-1.64%	\$0.04085
Winter					
First 150HU	\$0.04080	\$0.00213	\$0.04293	-1.64%	\$0.04223
Next 200HU	\$0.03940	\$0.00213	\$0.04153	-1.64%	\$0.04085
All Add'l kWh	\$0.03840	\$0.00213	\$0.04053	-1.64%	\$0.03987
Interim Energy Charge	\$0.00213	(\$0.00213)	\$0.00000		

[1] These rates collect the same revenues from the same customers as current rates.

[2] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-3.

**THE EMPIRE DISTRICT ELECTRIC COMPANY - CASE NO. ER-2006-0315
ILLUSTRATIVE RATES FOR IEC TERMINATION SCENARIO**

CLASS: LP - LARGE POWER

	Current Rates	Effect to Rates of IEC Termination	Rates Equivalent to Current Rates [1]	Percent Change to Equivalent Rates	Final Rates [2]
Customer Charge	\$183.44	0	\$183.44	0.00%	\$183.44
Demand Charge					
Summer	\$10.85	\$0.00	\$10.85	-1.62%	\$10.67
Winter	\$5.98	\$0.00	\$5.98	-1.62%	\$5.88
Secondary Adder	\$0.23	\$0.00	\$0.23	-1.62%	\$0.23
Substation Facilities Credit	(\$1.11)	\$0.00	(\$1.11)	-1.62%	(\$1.09)
Permanent Energy Charges:					
Summer					
First 350HU	\$0.04310	\$0.00213	\$0.04523	-1.62%	\$0.04450
All Add'l kWh	\$0.02230	\$0.00213	\$0.02443	-1.62%	\$0.02404
Winter					
First 350HU	\$0.03800	\$0.00213	\$0.04013	-1.62%	\$0.03948
All Add'l kWh	\$0.02150	\$0.00213	\$0.02363	-1.62%	\$0.02325
Interim Energy Charge	\$0.00213	(\$0.00213)	\$0.00000		

[1] These rates collect the same revenues from the same customers as current rates.

[2] These rates, when applied to test year billing units, result in the "target" revenues shown on Schedule DCR-3.

**THE EMPIRE DISTRICT ELECTRIC COMPANY -- CASE NO. ER-2006-0315
AVERAGE MONTHLY BILLS FOR A TYPICAL¹ RESIDENTIAL CUSTOMER**

Ranked by Average Monthly Bill for 12 Consecutive Months of Service

Utility/ Scenario	Average Summer	Average Winter	12-Month Average	Rank
Empire/ Current	\$90.18	\$66.40	\$74.33	1
Aquila MPS	\$91.15	\$65.72	\$74.19	2
Empire/ Terminated IEC	\$88.73	\$65.38	\$73.16	3
Empire/ Continued IEC	\$83.09	\$61.43	\$68.65	4
KCPL	\$80.11	\$52.04	\$61.40	5
Aquila L&P	\$77.96	\$52.42	\$60.93	6
UE	\$79.75	\$47.90	\$58.52	7

Ranked by Average Summer Monthly Bill

Utility/ Scenario	Average Summer	Average Winter	12-Month Average	Rank
Aquila MPS	\$91.15	\$65.72	\$74.19	1
Empire/ Current	\$90.18	\$66.40	\$74.33	2
Empire/ Terminated IEC	\$88.73	\$65.38	\$73.16	3
Empire/ Continued IEC	\$83.09	\$61.43	\$68.65	4
KCPL	\$80.11	\$52.04	\$61.40	5
UE	\$79.75	\$47.90	\$58.52	6
Aquila L&P	\$77.96	\$52.42	\$60.93	7

Ranked by Average Winter Monthly Bill

Utility/ Scenario	Average Summer	Average Winter	12-Month Average	Rank
Empire/ Current	\$90.18	\$66.40	\$74.33	1
Aquila MPS	\$91.15	\$65.72	\$74.19	2
Empire/ Terminated IEC	\$88.73	\$65.38	\$73.16	3
Empire/ Continued IEC	\$83.09	\$61.43	\$68.65	4
Aquila L&P	\$77.96	\$52.42	\$60.93	5
KCPL	\$80.11	\$52.04	\$61.40	6
UE	\$79.75	\$47.90	\$58.52	7

1. A "typical" residential customer is defined as a customer in the residential general class that uses 1000 kWh per month during four Summer months and 750kWh during eight Winter months.