Exhibit No.:
Issues: Sales and Revenue

Witness: Janice Pyatte
Sponsoring Party: MO PSC Staff
Type of Exhibit: Direct Testimony
Case No.: ER-2005-0436
Date Testimony Prepared: October 14, 2005

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

DIRECT TESTIMONY

OF

JANICE PYATTE

AQUILA, INC.
D/B/A AQUILA NETWORKS-MPS
AND AQUILA NETWORKS-L&P

CASE NO. ER-2005-0436

Jefferson City, Missouri
October 2005

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Aquila, Inc. d/b/a Aquila Networks-MPS and Aquila Networks-L&P, for Authority to File Increasing Electric Rates For the Service Provided to Customers in the Aquila Networks-MPS and Aquila Networks-L&P Area.	))))))	Case No. ER-2005-0436

AFFIDAVIT OF JANICE PYATTE

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

Janice Pyatte, of lawful age, on her oath states: that she has participated in the preparation of the following Direct Testimony in question and answer form, consisting of 9 pages of Direct Testimony to be presented in the above case, that the answers in the following Direct 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.

Janice Pyatte

Subscribed and sworn to before me this 12th day of October, 2005.

ROSEMARIE RIEDL
MY COMMISSION EXPIRES
June 1, 2009
NOTARY SEAL
#05509538
COLE COUNTY
NOTARY PUBLIC, STATE OF MISSOURI

Notary Public

My commission expires June 1, 2009

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DIRECT TESTIMONY

OF

JANICE PYATTE

AQUILA, INC.
D/B/A AQUILA NETWORKS-MPS
AND AQUILA NETWORKS-L&P

CASE NO. ER-2005-0436

Q. Please state your name and business address.

A. My name is Janice Pyatte 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 in the Economic Analysis Section, Energy Department, Utility Operations Division.

Q. Please review your educational background and work experience.

A. I completed a Bachelor of Arts degree in Economics at Western Washington State College in Bellingham, Washington and a Masters of Arts (A.M.) degree in Economics at Washington University in St. Louis, Missouri. I have been employed by the Missouri Public Service Commission (Commission) since June 1977. My primary role with the Missouri Public Service Commission Staff (Staff) has been to perform analysis in the areas of rate design, class cost of service, rate revenue, and billing units for the regulated electric utilities in Missouri. A list of the cases in which I have filed testimony before the Commission is shown on Schedule 1.

EXECUTIVE SUMMARY

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

A. In this filing, I present four schedules that summarize annual sales of electricity (kWh sales) and the revenue from those sales (rate revenue) for the electric operations of Aquila, Inc. d/b/a Aquila Networks-MPS (MPS) and Aquila Networks-L&P (L&P Electric), based upon a test year of January 1, 2004 – December 31, 2004, updated for known and measurable changes through June 30, 2005.

My direct testimony also describes my role in the development of specific adjustments to Missouri test year rate revenues.

Q. Which specific adjustments to Staff Accounting Schedule 10-Adjustments to Income Statement are you sponsoring?

A. I am sponsoring MPS Adjustments S-1.2 (weather normalization), S-1.5 (billing corrections), S-1.7 (4/22/2004 rate change), and S-1.8 (days adjustment) in the Staff Accounting Schedule 10-Adjustments to Income Statement.

I am also sponsoring L&P Electric Adjustments S-1.2 (weather normalization), S-1.5 (billing corrections), S-1.6 (days adjustment), and S-1.7 (4/22/2004 rate change) in the Staff Accounting Schedule 10-Adjustments to Income Statement. With the exception of the annualization for the rate change, these adjustments include both a change in revenues and a change in kWh sales.

Q. Do you have a recommendation for the Commission regarding MPS and L&P Electric kWh sales and rate revenue?

A. I recommend that the Commission adopt the Staff's adjustments to test year sales and rate revenue for both MPS and L&P Electric that are shown on attached

Schedules 2, 3, 4, and 5. If adopted, Staff's kWh sales will be used as an input into the calculation of Missouri fuel and purchased power expense. Also, if adopted, Staff's Missouri rate revenue and kWh sales by rate code will be used to compute and implement any Commission-ordered revenue change in this case.

DESCRIPTION OF KWH SALES AND RATE REVENUE SCHEDULES

Q. Please describe Staff's ratemaking treatment of rate revenues and kWh sales.

A. Schedule 6 contains an explanation of the basic ratemaking concepts used in Staff's treatment of rate revenues and kWh sales.

Q. Please briefly describe the contents of Schedules 2 through 5.

A. Schedule 3 (MPS) and Schedule 5 (L&P Electric) have been compiled to serve a dual purpose. When examined vertically, each schedule presents the results of each of the multiple adjustments that were made (annualizations, normalizations, and growth-adjustments) to rate revenues, as required for input into the Accounting schedules. When examined horizontally, each schedule presents annualized, normalized, growth-adjusted rate revenues by rate code and by cost-of-service class, as required for input into the rate design analysis.

Schedule 2 (MPS) and Schedule 4 (L&P Electric) possess a similar layout but the values contained in the cells represent kWh sales.

Q. Please describe the characteristics of the kWh sales and the rate revenues presented on Schedules 2 through 5.

A. The Missouri kWh sales shown on Schedules 2 (MPS) and 4 (L&P Electric) have these characteristics: (i) they have been developed by rate code and by

cost-of-service class; (ii) they have been normalized to remove the effects of deviations from normal weather in the test year; (iii) they have been developed on both a billing month and a calendar year (i.e., 365-day) basis; and (iv) they have been adjusted to reflect load growth (or decline). Each adjustment to kWh sales is associated with a corresponding adjustment to Missouri rate revenues.

The Missouri rate revenues shown on Schedules 3 (MPS) and 5 (L&P Electric) have the same four characteristics as kWh sales but, in addition, rate revenue has been annualized to reflect the rate change that occurred on April 22, 2004, as the outcome of (consolidated) Case Nos. ER-2004-0034 and HR-2004-0024.

Q. What is the relationship between the Missouri rate revenues shown on your Schedules 3 (MPS) and 5 (L&P Electric) and the Missouri operating revenues shown on Accounting Schedule 9-Income Statement for each of the respective Aquila divisions?

A. The total operating revenues shown on Accounting Schedule 9-Income Statement, consists of two components: the revenue that the Company collects from the sales of electricity to Missouri retail customers (rate revenues), which is shown on my Schedules 3 (MPS) and 5 (L&P Electric); and the revenue the Company receives from other sources (other or non-rate revenues). Non-rate revenues are generated by charges such as reconnect fees, returned check fees, late payment fees, etc. Another source of non-rate revenue may be off-system sales of electricity.

Q. What is the relationship between the adjustments to Missouri rate revenues shown on your Schedules 3 (MPS) and 5 (L&P Electric) and the S-1 adjustments shown

on Accounting Schedule 10 - Adjustments to Income Statement for each of the respective Aquila divisions?

A. Each of the adjustments to Missouri rate revenue shown on my Schedules 3 (MPS) and 5 (L&P Electric) has a corresponding S-1 adjustment shown on Accounting Schedule 10 - Adjustments to Income Statement. The Accounting Schedule does not record adjustments to kWh sales.

The adjustments to test year kWh sales and rate revenues that were made in this case were: (i) annualization for 365 days (days adjustment); (ii) annualization for billing corrections; (iii) annualization for large customer load changes; (iv) annualization due to growth in the number of customers; (v) weather normalization; and (vi) adjustment for a rate change within the rate change within the test year.

Q. Are you responsible for the contents of Schedules 2 through 5?

A. While I am responsible for compiling these tables, the values contained within them represent the collective effort of three Staff witnesses: Shawn Lange, Amanda McMellen, and me.

Q. Please briefly describe the role played by Mr. Lange in developing Schedules 2 through 5.

A. Mr. Lange's testimony addresses the methods he used to calculate the effects of weather normalization on kWh sales and the adjustments that reflect a 365-day billing year. These adjustments to test year kWh sales are both an input into my determination of the effect of weather normalization on rate revenues and into Mr. Lange's determination of the normalized hourly system loads used in Staff's production

cost simulation (fuel) model. Mr. Lange's results are contained on my Schedules 2 (MPS) and 4 (L&P Electric).

Q. Please describe the role played by Ms. McMellen in developing Schedules 2 through 5.

A. Staff witness Amanda McMellen is responsible for all annualizations to kWh sales and rate revenues made to the large power service customers. She also determined the effect that growth (or decline) in the number of customers had on both kWh sales and rate revenues. Ms. McMellen's results are contained on my Schedules 2 and 3 (MPS) and Schedules 4 and 5 (L&P Electric).

Q. What was your role in developing the numbers contained in Schedules 2 through 5?

A. I am responsible for annualizing rate revenue to reflect the rate change that occurred on April 22, 2004, as one outcome of (consolidated) Case Nos. ER-2004-0034 and HR-2004-0024. I am also responsible for calculating the effect that Mr. Lange's weather normalization and days adjustment to kWh sales had on revenues.

EFFECT OF THE RATE CHANGE ON REVENUES

Q. Please describe the rationale for annualizing revenues to reflect a rate change that occurred within the test year.

A. One outcome of (consolidated) Case Nos. ER-2004-0034 and HR-2004-0024 was the implementation of new permanent rates effective April 22, 2004. These rates were designed to collect an additional $14.5 million in annual revenue for MPS and $1.25 million for L&P Electric.

I normalized the revenue for the test year to reflect the difference between the amount that was actually billed to customers and the revenue that the company would have collected if the rates had been in effect all year.

Q. Which months in the test year were adjusted to reflect the effect of the rate change on revenues?

A. All revenues in January-March 2004 were affected since all usage in those months had been billed on "old" rates". No revenues in June-December 2004 were affected since all usage in those months had been billed on "new" rates. Some usage in the billing months of April 2004 and May 2004 was billed on "old" rates and thus required annualizations; some usage in those months did not.

Q. Please describe the process Staff used to calculate the effect of the rate change on revenues.

A. The method I used relied on three facts:

(1) The permanent rate values, effective on and after April 22, 2005 ("new" rates), were designed to be a fixed percentage increase over the rate values effective prior to that date ("old" rates).

(2) The implementation of the rate change to permanent rates was accomplished by computing each customer's bill on both the "old" rates and on the "new" rates and then pro-rating the two results based upon the number of days of usage before April 22 and the number of days of usage on or after April 22.

(3) The Interim Energy Charge, which is billed as a fixed cents per kWh to all kWh, was implemented on April 22, 2005.

The monthly kWh sales associated with the Interim Energy Charge were used to determine how many kWh sales were billed on "old" (pre-April 22) rates and how many were billed on "new" rates. The proportion of monthly revenues associated with the "old" sales was then factored by the relevant percentage by which "new" rates were increased and total monthly revenues on "new" rates was calculated. The difference between this estimate of monthly revenues if totally billed on "new" rates and actual revenues billed on permanent rates is my estimate of the effect of the rate change.

WEATHER NORMALIZATION OF REVENUES

Q. Please describe the method Staff used to weather normalize rate revenue.

A. The weather adjustment to rate revenue was calculated by a method known as "average realization". This method applies the average energy charge per kWh for each specific month to the weather adjustment to that month's kWh sales. The average realization method estimates the additional revenue associated with additional kWh sales by assuming that these additional sales would be priced at the same average rate as all other sales in that month.

Q. What is the rationale for the average- realization method?

A. The assumption underlying the average realization method is that the weather normalization process has no effect on either the number of customers or on the fixed charges those customers currently pay. In other words, weather normalization only affects the energy usage of each existing customer and, thus, only affects those charges directly related to kWh usage.

Q. Which MPS and L&P rate codes were weather-normalized using the average realization method?

A. This method was applied to all of the rate codes for which Mr. Lange had computed a weather adjustment to kWh sales. For MPS, weather adjustments were computed for residential rate codes MO860 and MO870; for small general service rate codes MO710 & 711 (combined) and MO740; and for large general service rate codes MO720 and MO725. For L&P Electric, weather adjustments were computed for residential rate codes (MO910, MO911, MO913, MO914, MO915, MO920, MO921, MO922); small general service rate codes (MO930, MO931, MO932, MO933, MO934, MO941); and large general service rate code (MO940).

No changes were made to test year actual revenues for the remaining rate codes because they are not weather-sensitive and, therefore, required no adjustments due to the effects of weather.

Q. What was the source of the monthly average rate per kWh that was used to weather normalize rate revenue?

A. In situations where only one rate value applies to all monthly usage, the monthly average rate per kWh used was taken directly from the existing rate schedule. When multiple energy rates exist and/or demand charges exist, the monthly average rate per kWh was taken directly from Schedules ELW-1 and ELW-2 attached to the direct testimony of Aquila witness Eric L. Watkins.

DAYS ADJUSTMENTS TO RATE REVENUE

Q. Please describe the rationale for calculating a days adjustment to kWh sales and rate revenue.

A. Staff's days adjustment (also known as an "unbilled" adjustment) represents the change in kWh sales and rate revenues associated with adjusting the 12 test

year billing months to the equivalent of 365 days. This adjustment is necessary to ensure that kWh sales and revenues that are measured by billing year will "match" expenses that are measured by calendar year.

Q. Please describe the process Staff used to calculate the days adjustment to rate revenue.

A. Mr. Lange computed an annual days adjustment to kWh sales for each rate code that he weather normalized. I converted Mr. Lange's annual days adjustment to a series of twelve monthly adjustments by assuming that these annual kWhs are distributed throughout the months in the year in the same proportion as weather-normalized kWhs. I then calculated the monthly days adjustment to rate revenue by multiplying monthly days adjustments to kWh sales by the same associated monthly rate (cents per kWh) that was used to calculate the weather adjustment to rate revenue.

Q. Does this conclude your direct testimony on the issue of Revenues?

A. Yes, it does.

Participation in MOPSC Cases
Witness: Janice Pyatte

Company	Case Number
Aquila, Inc. d/b/a Aquila Networks-MPS and L&P	EO-2002-384
The Empire District Electric Company	ER-2004-0570
Aquila, Inc. d/b/a Aquila Networks-MPS and L&P	ER-2004-0034 & HR-2004-0024
The Empire District Electric Company	ER-2002-424
Union Electric Company	EC-2002-1
UtiliCorp United, Inc. d/b/a Missouri Public Service	ER-2001-672
The Empire District Electric Company	ER-2001-299
UtiliCorp United and The Empire District Electric Co.	EM-2000-369
UtiliCorp United and St. Joseph Light & Power Co.	EM-2000-292
St. Joseph Light & Power Company	ER-99-247 & EC-98-573
Union Electric Company	EO-96-15
St. Joseph Light & Power Company	EC-98-573
Missouri Public Service	ER-97-394 & ET-98-103
The Empire District Electric Company	ER-97-81
The Empire District Electric Company	ER-95-279
The Empire District Electric Company	ER-94-174 & EO-91-74
St. Joseph Light & Power Company	ER-93-41
Missouri Public Service	ER-93-37
Union Electric Company	EM-92-225 & EM-92-253
Union Electric Company	EO-87-175
Arkansas Power & Light Company	ER-85-265
Kansas City Power & Light Company	ER-85-128 & EO-85-185
Union Electric Company	EO-85-17 & ER-85-160
Union Electric Company	ER-84-168
Laclede Gas Company	GR-84-161
Union Electric Company	ER-84-168
Arkansas Power & Light Company	ER-83-206
Kansas City Power & Light Company	ER-83-49
The Empire District Electric Company	EO-82-40
The Empire District Electric Company	ER-81-209
Kansas City Power & Light Company	EO-78-161
Laclede Gas Company	GO-78-38
Union Electric Company	EO-78-163
St. Joseph Light & Power Company	EO-77-56

Schedule 1

AQUILA NETWORKS - MPS ELECTRIC
CASE NO. ER-2005-0436
ADJUSTED MISSOURI RETAIL KWH SALES BY RATE CODE
(CALENDAR YEAR 2004, UPDATED THROUGH JUNE 30, 2005)

		As Billed Sales (kWh) (1)	Annualizations to kWh Sales (2)	Normalizations to kWh Sales (2)	Customer Annualizations (3)	Total Sales (kWh)
	Residential					
MO860	Residential General Use	1,549,189,455	(8,011,590)	109,470,002	4,986,609	1,655,634,476
MO870	Residential w/ Space Heat	804,832,712	(22,138,484)	52,490,898	97,062,371	932,247,498
	Total Residential	**2,354,022,167**	**(30,150,074)**	**161,960,900**	**102,048,981**	**2,587,881,974**
	Small General Service					
MO710/711	Small GS	741,108,590	(2,684,191)	16,582,529	13,601,940	768,608,868
MO716	Small GS w/kW mtr, Pri	1,255,030	-	-	-	1,255,030
MO740	Schools & Churches	28,358,600	(216,909)	1,215,929	(917,031)	28,440,589
MO800	Muni Water Pumps	7,865,486	-	-	-	7,865,486
MO810	Muni Park & Rec	2,278,296	-	-	-	2,278,296
MO811	Muni Park & Rec, 3-phase	2,955,419	-	-	-	2,955,419
	Total Small GS	**783,821,421**	**(2,901,100)**	**17,798,458**	**12,684,909**	**811,403,688**
	Large General Service					
MO720	Large GS, Secondary	772,564,351	(1,737,156)	11,362,727	27,159,537	809,349,459
MO725	Large GS, Primary	35,674,584	-	-	-	35,674,584
MO721	RTP (721)	4,163,457	-	-	-	4,163,457
	Total Large GS	**812,402,392**	**(1,737,156)**	**11,362,727**	**27,159,537**	**849,187,500**
	Large Power					
MO730	Large PS, Secondary	602,728,460			(29,644,823)	573,083,637
MO735	Large PS, Primary	602,788,151			59,148,052	661,936,203
MO731	RTP (731)	22,958,448				22,958,448
MO737	RTP (737)	28,017,635			-	28,017,635
	Large Power	**1,256,492,694**			**29,503,229**	**1,285,995,923**
	Special					
MO919	Special Contract (Modine)	5,200,336				5,200,336
MO650	Thermal Energy Storage	6,576,544				6,576,544
	Total Special	**11,776,880**				**11,776,880**
MOlbx	**Lighting**	**43,914,391**				**43,914,391**
	Unaccounted for	(12,336,945)				(12,336,945)
	Unbilled	14,000,000				14,000,000
	Total MO kWh Sales	**5,264,093,000**	**(34,788,330)**	**191,122,085**	**171,396,656**	**5,591,823,410**

(1) Compiled by Staff witness Janice Pyatte
(2) Sponsored by Staff witness Shawn Lange
(3) Sponsored by Staff witness Amanda McMellen

AQUILA NETWORKS - MPS ELECTRIC
CASE NO. ER-2005-0436
DETAILS OF ADJUSTMENTS TO MISSOURI SALES BY RATE CODE
(CALENDAR YEAR 2004, UPDATED THROUGH JUNE 30, 2005)

		Annualization for Billing Corrections	Normalization for Weather	Annualization for 365 Days	Annualization for Load Growth	Total Adjustments
	Residential					
MO860	Residential General Use		109,470,002	(8,011,590)	4,986,609	106,445,021
MO870	Residential w/ Space Heat		52,490,898	(22,138,484)	97,062,371	127,414,786
	Total Residential		**161,960,900**	**(30,150,074)**	**102,048,981**	**233,859,807**
	Small General Service					
MO710/711	Small GS	1,738,119	16,582,529	(4,422,310)	13,601,940	27,500,278
MO716	Small GS w/kW mtr, Pri	-	-	-	-	-
MO740	Schools & Churches		1,215,929	(216,909)	(917,031)	81,989
MO800	Muni Water Pumps	-	-	-	-	-
MO810	Muni Park & Rec	-	-	-	-	-
MO811	Muni Park & Rec, 3-phase	-	-	-	-	-
	Total Small GS	**1,738,119**	**17,798,458**	**(4,639,219)**	**12,684,909**	**27,582,267**
	Large General Service					
MO720	Large GS, Secondary		11,362,727	(1,737,156)	27,159,537	36,785,108
MO725	Large GS, Primary		-	-	-	-
MO721	RTP (721)		-	-	-	-
	Total Large GS		**11,362,727**	**(1,737,156)**	**27,159,537**	**36,785,108**
	Large Power					
MO730	Large PS, Secondary				(29,644,823)	(29,644,823)
MO735	Large PS, Primary				59,148,052	59,148,052
MO731	RTP (731)				-	-
MO737	RTP (737)				-	-
	Large Power				**29,503,229**	**29,503,229**
	Special					
MO919	Special Contract (Modine)			-		
MO650	Thermal Energy Storage			-		
	Total Special			-		
MONbx	**Lighting**					
	Unaccounted for Unbilled					
	Total MO kWh Sales	**1,738,119**	**191,122,085**	**(36,526,449)**	**171,396,656**	**327,730,410**

(1) Compiled by Staff witness Janice Pyatte
(2) Sponsored by Staff witness Shawn Lange
(3) Sponsored by Staff witness Amanda McMellen

AQUILA NETWORKS - MPS ELECTRIC
CASE NO. ER-2005-0436
ADJUSTED MISSOURI RETAIL RATE REVENUE BY RATE CODE
(CALENDAR YEAR 2004, UPDATED THROUGH JUNE 30, 2005)

		Billed Revenue from Permanent Rates (1)	Annualizations to Revenue (1)	Normalizations to Revenue (1)	Customer Annualizations (2)	Total Rate Revenue
	Residential					
MO860	Residential General Use	$116,986,339	$9,828,736	($550,608)	$393,776	$126,658,244
MO870	Residential w/ Space Heat	$49,132,290	$4,058,623	($1,253,959)	$5,885,074	$57,822,028
	Total Residential	**$166,118,628**	**$13,887,360**	**($1,804,568)**	**$6,278,851**	**$184,480,271**
	Small General Service					
MO710/7	Small GS	$48,353,607	$1,853,871	($235,281)	$851,995	$50,824,193
MO716	Small GS w/kW mtr, Pri	$69,824	$931	$0	$0	$70,755
MO740	Schools & Churches	$1,881,688	$118,345	($13,751)	($61,777)	$1,924,504
MO800	Muni Water Pumps	$481,977	$8,962	$0	$0	$490,940
MO810	Muni Park & Rec	$180,445	$2,502	$0	$0	$182,947
MO811	Muni Park & Rec, 3-phase	$232,940	$3,781	$0	$0	$236,721
	Total Small GS	**$51,200,481**	**$1,988,392**	**($249,032)**	**$790,218**	**$53,730,059**
	Large General Service					
MO720	Large GS, Secondary	$40,197,249	$1,144,313	($77,413)	$1,435,583	$42,699,732
MO725	Large GS, Primary	$1,740,744	$21,074	$0	$0	$1,761,818
MO721	RTP (721)	$180,389	$2,570	$0	$0	$182,958
	Total Large GS	**$42,118,382**	**$1,167,957**	**($77,413)**	**$1,435,583**	**$44,644,508**
	Large Power					
MO730	Large PS, Secondary	$26,156,492	$332,384	$0	($653,873)	$25,835,003
MO735	Large PS, Primary	$24,292,220	$289,175	$0	$1,965,996	$26,547,391
MO731	RTP (731)	$1,050,156	$13,058	$0	$0	$1,063,214
MO737	RTP (737)	$1,208,253	$29,301	$0	$0	$1,237,555
	Large Power	**$52,707,121**	**$663,919**	**$0**	**$1,312,123**	**$54,683,163**
	Special					
MO919	Special Contract (Modine)	$215,428	$2,895	$0	$0	$218,323
MO650	Thermal Energy Storage	$297,464	$4,051	$0	$0	$301,515
	Total Special	**$512,892**	**$6,946**	**$0**	**$0**	**$519,838**
MONbx	**Lighting**	**$5,440,310**	**$86,585**	**$0**	**$0**	**$5,526,894**
	Unaccounted for	($677,226)	$0	$0	$0	($677,226)
	Total MO $ from Permanent Rates	**$317,420,588**	**$17,801,159**	**($2,131,013)**	**$9,816,775**	**$342,907,508**

(1) Sponsored by Staff witness Janice Pyatte
(2) Sponsored by Staff witness Amanda McMellen

AQUILA NETWORKS - MPS ELECTRIC
CASE NO. ER-2005-0436
DETAILS OF ADJUSTMENTS TO RATE REVENUE BY RATE CODE
(CALENDAR YEAR 2004, UPDATED THROUGH JUNE 30, 2005)

		Annualization for Billing Corrections	Annualization for Rate Change	Annualization for 365 Days	Normalization for Weather	Annualization for Load Growth	Total Adjustments
	Residential						
MO660	Residential General Use	$0	$1,600,160	$8,228,577	($550,608)	$393,776	$9,671,905
MO670	Residential w/ Space Heat	$0	$804,206	$3,254,418	($1,253,959)	$5,885,074	$8,689,738
	Total Residential	**$0**	**$2,404,365**	**$11,482,995**	**($1,804,568)**	**$6,278,851**	**$18,361,643**
	Small General Service						
MO710/7	Small GS	$118,203	$683,659	$1,052,009	($235,281)	$851,995	$2,470,586
MO716	Small GS w/kW mtr, Pri	$0	$931	$0	$0	$0	$931
MO740	Schools & Churches	$0	$26,160	$92,184	($13,751)	($61,777)	$42,816
MO800	Muni Water Pumps	$0	$8,962	$0	$0	$0	$8,962
MO810	Muni Park & Rec	$0	$2,502	$0	$0	$0	$2,502
MO811	Muni Park & Rec, 3-phase	$0	$3,781	$0	$0	$0	$3,781
	Total Small GS	**$118,203**	**$725,996**	**$1,144,194**	**($249,032)**	**$790,218**	**$2,529,578**
	Large General Service						
MO720	Large GS, Secondary	$0	$540,260	$604,053	($77,413)	$1,435,583	$2,502,483
MO725	Large GS, Primary	$0	$21,074	$0	$0	$0	$21,074
MO721	RTP (721)	$0	$2,570	$0	$0	$0	$2,570
	Total Large GS	**$0**	**$563,903**	**$604,053**	**($77,413)**	**$1,435,583**	**$2,526,127**
	Large Power						
MO730	Large PS, Secondary	$0	$332,384	$0	$0	($653,873)	($321,489)
MO735	Large PS, Primary	$0	$289,175	$0	$0	$1,965,996	$2,255,172
MO731	RTP (731)	$0	$13,058	$0	$0	$0	$13,058
MO737	RTP (737)	$0	$29,301	$0	$0	$0	$29,301
	Large Power	**$0**	**$663,919**	**$0**	**$0**	**$1,312,123**	**$1,976,042**
	Special						
MO919	Special Contract (Modine)	$0	$2,895	$0	$0	$0	$2,895
MO650	Thermal Energy Storage	$0	$4,051	$0	$0	$0	$4,051
	Total Special	**$0**	**$6,946**	**$0**	**$0**	**$0**	**$6,946**
MONbx	Lighting	$0	$86,585	$0	$0	$0	$86,585
	Unaccounted for						$0
Total MO $ from Permanent Rates		**$118,203**	**$4,451,714**	**$13,231,242**	**($2,131,013)**	**$9,816,775**	**$25,486,920**

(1) Sponsored by Staff witness Janice Pyatte
(2) Sponsored by Staff witness Amanda McM

AQUILA NETWORKS - L&P ELECTRIC
CASE NO. ER-2005-0436
ADJUSTED MISSOURI RETAIL KWH SALES BY RATE CODE
(CALENDAR YEAR 2004, UPDATED THROUGH JUNE 30, 2005)

		As Billed kWh Sales (kWh) (1)	Annualizations to kWh Sales (2)	Normalizations to kWh Sales (2)	Customer Annualizations (3)	Total Sales (kWh)
	Residential					
MO910	Residential - General Use	297,654,045	(1,436,590)	21,518,288	(5,873,882)	311,861,861
MO911	Multiple Occupancy	2,428,227	(26,196)	168,719	(30,528)	2,540,222
MO920	Residential - Space Heat	293,965,907	(1,316,729)	19,098,275	17,315,608	329,063,061
MO921	Multiple Occupancy	6,843,425	126,790	423,873	(162,566)	7,231,522
MO913	Residential - Water Heat	84,234,485	(446,575)	4,589,184	(1,787,906)	86,589,188
MO914	Multiple Occupancy	65,123	(369)	4,113	(9,505)	59,362
MO915	Residential - Other Use	5,189,044	63,960	273,145	227,252	5,753,401
MO916	Residential - Fixed Bill	-		-		-
MO922	Residential - Limited Demand	486,442	(7,859)	32,920	(16,044)	495,459
	Total Residential	**690,866,698**	**(3,043,568)**	**46,108,517**	**9,662,428**	**743,594,075**
	Small General Service					
MO930	General Service - Limited Demand	22,325,561	(132,285)	645,487	(41,482)	22,797,281
MO931	General Service - General Use	47,117,290	(495,206)	1,370,639	562,692	48,555,415
MO932	General Service - Limited w/ Space Heat	3,876,258	(16,676)	106,429	103,640	4,069,651
MO933	General Service - Electric Space Heat	21,860,706	(23,360)	589,814	33,137	22,460,297
MO934	General Service - Schools and Churches	4,422,710	(34,036)	143,840	(33,048)	4,499,466
MO941	Non-Res Space/Water Heat	2,725,194	(32,072)	67,828	(139,964)	2,620,985
	Total Small GS	**102,327,719**	**(733,635)**	**2,924,037**	**484,975**	**105,003,096**
MO940	**Large General Service**	**384,544,339**	**(4,907,624)**	**4,855,132**	**11,729,949**	**396,221,796**
MO944	**Large Power Service**	**629,019,283**				**629,019,283**
						-
	Lighting					
MOSJx	Street & Private Area Lighting	19,342,346				19,342,346
MO971	Outdoor Night Lighting	584,709				584,709
MO972	Street Lighting	909,898				909,898
MO973	Traffic Signals	510,636				510,636
	Total Lighting	**21,347,589**				**21,347,589**
	Unaccounted for	(628)				104,861,970
	Total MO kWh Sales	**1,830,830,194**	**(8,716,899)**	**53,955,514**	**21,737,387**	**2,002,668,794**

(1) Compiled by Staff witness Janice Pyatte
(2) Sponsored by Staff witness Shawn Lange
(3) Sponsored by Staff witness Amanda McMellen

AQUILA NETWORKS - L&P ELECTRIC
CASE NO. ER-2005-0436
DETAILS OF ADJUSTMENTS TO MISSOURI SALES BY RATE CODE
(CALENDAR YEAR 2004, UPDATED THROUGH JUNE 30, 2005)

		Annualization for Billing Corrections	Normalization for Weather	Annualization for 365 Days	Annualization for Growth/Load Changes	Total Adjustments
	Residential					
MO910	Residential - General Use		21,518,288	(1,436,590)	(5,873,882)	14,207,816
MO911	Multiple Occupancy		168,719	(26,196)	(30,528)	111,995
MO920	Residential - Space Heat		19,098,275	(1,316,729)	17,315,608	35,097,154
MO921	Multiple Occupancy		423,873	126,760	(162,566)	388,097
MO913	Residential - Water Heat		4,589,184	(446,575)	(1,787,906)	2,354,703
MO914	Multiple Occupancy		4,113	(369)	(9,505)	(5,761)
MO915	Residential - Other Use		273,145	63,960	227,252	564,357
MO916	Residential - Flood Bill		-	-	-	-
MO922	Residential - Limited Demand		32,920	(7,859)	(16,044)	9,017
	Total Residential		**46,108,517**	**(3,043,588)**	**9,662,428**	**52,727,377**
	Small General Service					
MO930	General Service - Limited Demand		645,487	(132,285)	(41,482)	471,720
MO931	General Service - General Use		1,370,639	(495,206)	562,692	1,438,125
MO932	General Service - Limited w/ Space Heat		106,429	(16,676)	103,640	193,393
MO933	General Service - Electric Space Heat		589,814	(23,360)	33,137	599,591
MO934	General Service - Schools and Churches		143,840	(34,036)	(33,048)	76,756
MO941	Non-Res Space/Water Heat		67,828	(32,072)	(139,964)	(104,209)
	Total Small GS		**2,924,037**	**(733,635)**	**484,975**	**2,675,377**
MO940	**Large General Service**	**(4,145,804)**	**4,855,132**	**(761,828)**	**11,729,949**	**11,677,457**
MO944	**Large Power Service**					
	Lighting					
MOSJx	Street & Private Area Lighting					
MO971	Outdoor Night Lighting					
MO972	Street Lighting					
MO973	Traffic Signals					
	Total Lighting					
	Unaccounted for					
	Total MO kWh Sales	**(4,145,804)**	**53,955,514**	**(4,571,096)**	**21,737,387**	**66,976,002**

(1) Compiled by Staff witness Janice Pyatte
(2) Sponsored by Staff witness Shawn Lange
(3) Sponsored by Staff witness Amanda McMellen

AQUILA NETWORKS - L&P ELECTRIC
CASE NO. ER-2005-0436
ADJUSTED MISSOURI RETAIL RATE REVENUE BY RATE CODE
(CALENDAR YEAR 2004, UPDATED THROUGH JUNE 30, 2005)

		Billed Revenue from Permanent Rates (1)	Annualizations to Revenue (1)	Normalizations to Revenue (1)	Customer Annualizations (2)	Total Rate Revenue
	Residential					
MO910	Residential - General Use	$19,720,508	$1,643,446	($85,804)	($392,969)	$20,885,181
MO911	Multiple Occupancy	$183,631	$13,206	($1,619)	($2,387)	$192,830
MO920	Residential - Space Heat	$13,866,407	$1,105,141	($58,481)	$791,261	$15,704,328
MO921	Multiple Occupancy	$368,406	$27,012	$5,997	($10,408)	$391,006
MO913	Residential - Water Heat	$4,939,245	$347,969	($24,070)	($105,499)	$5,157,644
MO914	Multiple Occupancy	$4,476	$318	($22)	($671)	$4,101
MO915	Residential - Other Use	$518,494	$31,983	$4,906	$22,601	$577,984
MO916	Residential - Fixed Bill	$0	$0	$0	$0	$0
MO922	Residential - Limited Demand	$24,512	$1,960	($348)	($741)	$25,384
	Total Residential	**$39,625,678**	**$3,171,034**	**($159,440)**	**$301,188**	**$42,938,459**
	Small General Service					
MO930	General Service - Limited Demand	$2,040,897	$78,859	($9,641)	($4,826)	$2,105,290
MO931	General Service - General Use	$3,274,877	$122,805	($27,068)	$37,800	$3,408,413
MO932	General Service - Limited w/ Space Heat	$309,918	$13,194	($1,190)	$8,616	$330,538
MO933	General Service - Electric Space Heat	$1,386,828	$53,228	($1,201)	$813	$1,439,668
MO934	General Service - Schools and Churches	$366,566	$16,295	($2,522)	($2,736)	$377,603
MO941	Non-Res Space/Water Heat	$137,632	$6,333	($1,559)	($6,833)	$135,574
	Total Small GS	**$7,516,719**	**$290,714**	**($43,182)**	**$32,835**	**$7,797,085**
MO940	**Large General Service**	**$18,399,895**	**$227,855**	**($28,380)**	**$566,458**	**$19,165,828**
MO944	**Large Power Service**	**$23,588,534**	**$252,829**	**$0**	**$3,532,915**	**$27,374,278**
	Lighting					
MOSJx	Street & Private Area Lighting	$2,161,792	$26,769	$0	$0	$2,188,562
MO971	Outdoor Night Lighting	$42,261	$335	$0	$0	$42,596
MO972	Street Lighting	$33,954	$498	$0	$0	$34,452
MO973	Traffic Signals	$22,712	$312	$0	$0	$23,024
	Total Lighting	**$2,260,719**	**$27,915**	**$0**	**$0**	**$2,288,634**
	Unaccounted for	($84,753)				($84,753)
	Total MO $ from Permanent Rates	**$91,306,792**	**$3,970,346**	**($231,002)**	**$4,433,395**	**$99,479,532**

(1) Sponsored by Staff witness Janice Pyatte
(2) Sponsored by Staff witness Amanda McMellen

AQUILA NETWORKS - L&P ELECTRIC
CASE NO. ER-2005-0436
DETAILS OF ADJUSTMENTS TO RATE REVENUE BY RATE CODE
(CALENDAR YEAR 2004, UPDATED THROUGH JUNE 30, 2005)

		Annualization for Billing Corrections	Annualization for Rate Change	Annualization for 365 Days	Normalization for Weather	Annualization for Load Growth	Total Adjustments
	Residential						
MO910	Residential - General Use	$0	$217,862	$1,425,584	($85,804)	($392,969)	$1,164,673
MO911	Multiple Occupancy	$0	$1,993	$11,213	($1,619)	($2,387)	$9,199
MO920	Residential - Space Heat	$0	$198,613	$906,528	($58,481)	$791,261	$1,837,921
MO921	Multiple Occupancy	$0	$5,821	$21,191	$5,997	($10,408)	$22,601
MO913	Residential - Water Heat	$0	$58,403	$289,565	($24,070)	($105,499)	$218,399
MO914	Multiple Occupancy	$0	$50	$268	($22)	($671)	($375)
MO915	Residential - Other Use	$0	$6,219	$25,764	$4,906	$22,601	$59,490
MO916	Residential - Fixed Bill	$0	$0	$0	$0	$0	$0
MO922	Residential - Limited Demand	$0	$368	$1,592	($348)	($741)	$872
	Total Residential	**$0**	**$489,330**	**$2,681,704**	**($159,440)**	**$301,188**	**$3,312,781**
	Small General Service						
MO930	General Service - Limited Demand	$0	$25,258	$53,601	($9,641)	($4,826)	$64,392
MO931	General Service - General Use	$0	$35,608	$87,197	($27,068)	$37,800	$133,536
MO932	General Service - Limited w/ Space Heat	$0	$4,628	$8,566	($1,190)	$8,616	$20,620
MO933	General Service - Electric Space Heat	$0	$17,833	$35,395	($1,201)	$813	$52,840
MO934	General Service - Schools and Churches	$0	$4,185	$12,109	($2,522)	($2,736)	$11,037
MO941	Non-Res Space/Water Heat	$0	$1,903	$4,431	($1,559)	($6,833)	($2,059)
	Total Small GS	**$0**	**$89,416**	**$201,298**	**($43,182)**	**$32,835**	**$280,367**
MO940	**Large General Service**	**($192,627)**	**$203,430**	**$217,052**	**($28,380)**	**$566,458**	**$765,933**
MO944	**Large Power Service**	**$0**	**$252,829**	**$0**	**$0**	**$3,532,915**	**$3,785,744**
	Lighting						
MOSJx	Street & Private Area Lighting	$0	$26,769	$0	$0	$0	$26,769
MO971	Outdoor Night Lighting	$0	$335	$0	$0	$0	$335
MO972	Street Lighting	$0	$498	$0	$0	$0	$498
MO973	Traffic Signals	$0	$312	$0	$0	$0	$312
	Total Lighting	**$0**	**$27,915**	**$0**	**$0**	**$0**	**$27,915**
	Unaccounted for						
Total MO $ from Permanent Rates		**($192,627)**	**$1,062,919**	**$3,100,054**	**($231,002)**	**$4,433,395**	**$8,172,739**

(1) Sponsored by Staff witness Janice Pyatte
(2) Sponsored by Staff witness Amanda McMellen

STAFF'S RATEMAKING TREATMENT OF RATE REVENUES AND KWH SALES

Rationale for Making Adjustments

The historical 12-month time period (test year) and update period (if any) that the Commission determines should be used for analyzing the costs of providing service to retail customers is also used for analyzing kWh(kilowatt-hour) sales and revenue, based on the "matching principle" of ratemaking. The intent of adjustments to test year rate revenues is to estimate the revenue that the company would have collected on an annual, normal-weather basis, based on information "known and measurable" at the end of the update period.

Most adjustments to test year revenues correspond to adjustments to kWh sales that, in turn, affect the Company's fuel and purchased power costs. Net system loads, updated for these known and measurable changes in kWh sales, are reflected in the production cost simulation model (fuel run) to ensure that sufficient generation and purchases exist to meet total net system requirements. Any change to rate revenue from historical levels that results from changes in underlying sales of electricity will result in corresponding changes to fuel and purchased power costs that reflect that same adjustment to sales.

Categories of Adjustments

The two major categories of adjustments are known as normalizations and annualizations.

Normalizations deal with test year events that are unusual and unlikely to be repeated in the years when the new rates from this case are in effect. Test year weather is an example. It is unlikely that the weather that occurred in the test year will, on average, be repeated in the future, but what weather will actually occur is not predictable. The objective of the weather normalization process is to re-state test year kWh sales and rate revenues on a "normal-weather" basis.

Annualizations are adjustments that re-state test year results as if conditions known at the end of the update period had existed throughout the entire test year. Annualizations may be

further sub-classified as being "test-year-related" or "update-period-related", depending on when a known and measurable change occurs (i.e., during the test year or during the update period).

Examples of Annualizations

A common example of a revenue annualization is a rate change that occurs during the test year. In this situation, actual test year rate revenues will be understated or overstated by the difference between the amount that was actually billed to customers and the revenue that would have been realized by the company if the rates in effect at the end of the update period had been in effect throughout the entire test year.

An example of an annualization that affects both kWh sales and rate revenues is a large customer that either begins or ceases taking service during the analysis period. In the situation where a large customer ceases business, in order to accurately reflect revenues going forward, test year revenues should be decreased by the amount of revenue the customer provided the Company. A corresponding reduction to kWh sales and to fuel and purchased power expense should be made to reflect the costs the company will no longer incur. Conversely, when a large customer begins service, test year revenue, kWh sales, and fuel expense should be increased to reflect both the costs and the revenues associated with serving the new customer on an annual basis.

Customer growth adjustments are annualizations that reflect any additional sales and revenues that would have occurred if the total number of customers on the system at the end of the update period had been customers during all 12 months of the test year.