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Exhibit No.:
Issues: Revenue Normalization And System Hourly Loads
Witness: Robert D. Adkins
Sponsoring Party: Aquila Networks-MPS & L&P
Case No.: ER-

Before the Public Service Commission
of the State of Missouri

Direct Testimony

of

Robert D. Adkins

TABLE OF CONTENTS
DIRECT TESTIMONY OF ROBERT D. ADKINS
ON BEHALF OF AQUILA, INC.
D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P
CASE NO. ER-_____

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI
DIRECT TESTIMONY OF ROBERT D. ADKINS
ON BEHALF OF AQUILA, INC.
D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P
CASE NO. ER-_____

Q. Please state your name and business address.

A. My name is Robert D. Adkins and my business address is 20 West 9th Street, Kansas City, MO, 64105 USA.

Q. By whom are you employed and in what capacity?

A. I am employed by Aquila Inc. ("Aquila" or "Company") as the Director-Energy Forecasting & Research in the Resource Planning & Commodity Analysis group of the Power Generation & Energy Resources business unit.

Q. Please describe your responsibilities in that position.

A. I am responsible for (1) directing the development and application of econometric and end-use energy forecasting models and databases to weather normalize historical electric and gas utility sales, revenue, load research hourly loads, and system hourly loads for regulatory cases; (2) forecasts of electric and natural gas utility sales, revenues, customers, and system hourly loads; (3) economic forecasts; energy research, market forecasts and risk analysis; and (5) supporting resource plans.

Q. Please describe your educational background.

A. I hold a Bachelor of Science degree in Electrical Engineering from the University of Missouri-Rolla (1974), and a Master of Business Administration degree in Finance from the University of Missouri-Kansas City (1979).

Q. Please describe your professional work experience.

A. I have 15 years of experience in energy forecasting with Aquila Inc. I was employed with Aquila Inc as Manager-DSM & Load Forecasting from 1991 to1995, responsible for demand-side management, load forecasting, and load research for the Missouri Public Service division. I was Director-Corporate Forecasting with Aquila Inc from 1995 to 2000, responsible for energy forecasting for Aquila's electric and gas utilities in the United States. In late-2000, my title was changed to Director-Energy Forecasting & Research, responsible for energy forecasts for Aquila's electric and gas utilities and load research for electric utilities. Prior to my experience with Aquila Inc I was employed as Director of Planning from 1986 to1991 with Overland Consulting (LMSL Inc) in Overland Park, Kansas, where I worked for 5 years on management audits, civil litigation cases, and served as an expert witness on finance, economics, resource planning, and regulatory issues for electric and natural gas utilities. Prior to that I worked for 7 years with Kansas City Power & Light as a Corporate Planning Engineer from 1979 to1982, and Supervisor-Corporate Modeling from 1983-1985 in the Corporate Planning & Finance Division, responsible for corporate financial forecasts, and supporting financial plans and resource plans. Prior to that I worked with Burns & McDonnell Engineers-Architects from 1975 to 1979 as a Power System Planning Engineer in the Planning & Economics Division, where I was responsible for electric utility load forecasts, power supply plans, and financial forecasts.

Q. Please describe your experience as an expert witness in regulatory proceedings before the Missouri Public Service Commission ("Commission"), and other state and federal regulatory commissions.

A. My experience as an expert witness in energy utility regulatory cases includes the following regarding rates, forecasting, economics, and finance issues:

1. Kansas City Power & Light: Missouri Public Service Commission, Cases ER-85-128, EO-85-185 (1985)
2. Centerior Energy: Ohio Public Utilities Commission, Cases 88-170-EL-AIR, 88-171-EL-AIR (1988)
3. Potomac Electric Power Company: District of Columbia Public Service Commission, Cases 869,766 (1989)
4. Tucson Electric Power: Arizona Corporation Commission, Cases U-1933-88-090, U-1933-88-280 (1988)
5. Century Power Corp: Federal Energy Regulatory Commission, Cases EL89-17-000, EL89-18-000 (1990)
6. CMS Energy (Consumers Energy): Michigan Public Service Commission, Case U-9507 (1990)
7. UtiliCorp United (Missouri Public Service): Missouri Public Service Commission, Case ER-93-37 (1993)
8. UtiliCorp United (Peoples Natural Gas and Northern Minnesota Utilities): Minnesota Public Utilities Commission, G007,011/GR-00-951 (2000)
9. UtiliCorp United (Missouri Public Service): Missouri Public Service Commission, Case ER-01-672 (2001)
10. Aquila Inc (WestPlains Energy-Kansas): Kansas Corporation Commission, Case No. 04-AQLE-1065-RTS (2004)

EXECUTIVE SUMMARY

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

A. The purpose of my direct testimony in this proceeding is to sponsor and recommend that the Commission adopt the weather normalization adjustment to class sales and revenue for Aquila Networks divisions Missouri Public Service ("MPS") and St. Joseph Light & Power ("L&P") as shown on schedules RDA-1 and RDA-2, the customer annualization adjustment shown on schedules RDA-3 and RDA-4, and the weather normalized system hourly loads shown on schedules RDA-5, RDA-6 and RDA-7, for the test year ending December 31, 2005.

Company witness Susan Braun uses MPS and L&P weather normalized revenues and customer annualization adjustments in calculating revenue requirements for the test year.

Company witness Davis Rooney uses MPS and L&P weather normalized system hourly loads in calculating fuel and purchase power costs for the test year.

WEATHER NORMALIZATION OF SALES AND REVENUE

Q. Please provide a description of the methods and models used to calculate the weather-related adjustments to kWh sales for MPS and L&P.

A. These methods and models adjust actual test year kWh sales and revenue for the impacts caused by the variability of weather. Normal weather is based on average daily temperatures over a 30-year historical period (1971-2000), as currently used by the National Oceanic and Atmospheric Administration ("NOAA"). The Electric Power Research Institute ("EPRI") Hourly Electric Load Model ("HELM") was used to calculate the adjustments to weather-sensitive rate class kWh sales for the test year ending December 31, 2005, as follows:

MPS:
Residential (860-General Service, 870-Space Heat)
Small General Service (710-No Demand Meter, 711-Secondary, 716-Primary)
Schools & Churches (740-Secondary)
Large General Service (720-Secondary, 725-Primary)
Large Power Service (730-Secondary, 735-Primary)

L&P:
Residential (910,911,913,914,915,920,921,922)
Small General Service (930,931,932,933,941)
Schools & Churches (934)
Large General Service (940)
Large Power Service (944)

HELM estimates the impacts of daily weather for each rate class from daily load profile weather response functions, and billing cycle sales. Weather normalized sales are calculated on a billing month and calendar month (billed and unbilled) basis for each rate class by billing cycle, based on actual and normal weather variables and the weather response functions. Rate class load research profiles for test year ending December 31,

2005, were analyzed in HELM's load shape representation tool to optimize the daily weather response functions for MPS and L&P. Although the Staff's method generally does not weather normalize Large Power Service rate classes, I found these Large Power Service rate classes for MPS (730 and 735) and L&P (944) to have a significant weather response, based on the daily weather response factors calculated in HELM using 2005 load research data. Actual and normal weather variables were simulated in HELM's billing cycle analysis tool to estimate daily sales by rate class, which are used to allocate billing cycle sales over the period over which sales were recorded. The weather normalization adjustment to kWh sales is calculated as the difference between weather normalized sales and actual sales. Actual and normal daily weather data for Kansas City International airport ("MCI") was used in HELM to calculate weather variables. Normal average daily temperatures over the 1971-2000 period were used in HELM, based on Staff's method in prior electric rate cases for MPS and L&P.

Q. Please describe the results of the weather normalization adjustment to kWh sales for the test year ending December 31, 2005.

A. Schedules RDA-1 and RDA-2 provide the weather normalization adjustment (normal minus actual) to kWh sales for each weather sensitive rate class for MPS and L&P. The total weather normalization adjustment for weather sensitive retail rate classes is a reduction of (98,061,000) kWh for MPS (RDA-1, page 1, line 27, column O) and reduction of (18,716,000) kWh for L&P (RDA-2, page 1, line 27, column O) for the test year ending December 31, 2005. These weather adjustments include unbilled kWh sales adjustments (calendar month sales minus billing month sales) of (26,432,000) kWh for MPS (RDA-1, page 1, line 26, column O) and (10,095,000) kWh for L&P (RDA-2, page

1, line 26, column O) for the test year ending December 31, 2005. For the 2005 test year, weather adjustments (normal minus actual) to billed sales were (71,629,000) kWh for MPS (RDA-1, page 1, line 20, column O) and (8,621,000) kWh for L&P (RDA-2, page 1, line 20, column O).

Q. Please describe the method for calculating the weather normalization adjustment to revenue for weather sensitive rate classes.

A. The method used for calculating the weather normalization adjustment for revenue for the test year ending December 31, 2005 for each weather sensitive rate class assumes that weather normalization affects only the weather-sensitive rate class sales, with no effect from customer charges or other fixed charges. The monthly weather adjustment to revenues that corresponds to the monthly weather adjustment to kWh sales was calculated based on the appropriate monthly average rate per kWh, excluding interim energy charges, customer charges and other fixed charges, for the test year ending December 31, 2005.

Q. Please describe the results of the weather normalization adjustment to revenue for the test year ending December 31, 2005.

A. Schedules RDA-1 and RDA-2 provide the weather normalization adjustments (normal minus actual) to revenue for each weather sensitive rate class for MPS and L&P. The total weather normalization adjustment to revenue for weather sensitive retail rate classes is a reduction of ($6,261,454) for MPS (RDA-1, page 2, line 27, column O) and reduction of ($1,182,745) for L&P (RDA-2, page 2, line 27, column O) for the test year ending December 31, 2005. These weather adjustments include unbilled revenue adjustments (calendar month revenue minus billing month revenue) of ($1,044,152) for

MPS (RDA-1, page 2, line 26, column O) and ($398,536) for L&P (RDA-2, page 2, line 26, column O) for the test year ending December 31, 2005. For the 2005 test year, weather adjustments (normal minus actual) to billed revenue were ($5,217,301) for MPS (RDA-1, page 2, line 20, column O) and ($784,209) for L&P (RDA-2, page 2, line 20, column O).

CUSTOMER ANNUALIZATION ADJUSTMENT

Q. Please describe the method for calculating the customer normalization adjustment to revenue for weather sensitive rate classes.

A. The method used for calculating the customer annualization adjustment for revenue for the test year ending December 31, 2005 for each weather sensitive rate class, is based on the same method used by the Staff in the prior MPS and L&P rate cases. Customer annualization adjustment to the test year revenue is made to reflect additional sales and revenue that will occur in the future because of projected growth in the number of customers at year-end December 2005, and annualizing specific large customers. This method is based on dividing the weather normalized monthly rate class revenues by customers, and then multiplying the result by the customer counts at December 2005 to obtain customer annualized revenues. The customer annualization adjustment is the difference between the test year weather normalized revenues and the customer annualized revenues at year-end December 2005 customer levels. Large power service rate classes for MPS (MO730 and MO735), and L&P (MO944) were separately annualized for specific large customers that had partial sales during the 2005 test year. Additional large load adjustments were also made for specific customers as shown at the bottom of schedules RDA-3 and RDA-4 for MPS and L&P, respectively.

Q. Please describe the results of the customer annualization to revenue at December 31, 2005.

A. Schedules RDA-3 and RDA-4 provide the customer annualization and large load adjustments to revenue for each weather sensitive rate class. The total customer annualization adjustment to revenue for weather sensitive retail rate classes at December 2005 is estimated at $5,945,990 for MPS (RDA-3, line 20, column K) and $1,621,206 for L&P (RDA-4, line 20, column K). Additional large load adjustments estimated for 2006 are $156,000 for MPS (RDA-3, line 26, column G) on MO735, and $716,583 for L&P (RDA-4, line 27, column G) on MO944.

WEATHER NORMALIZATION OF NET SYSTEM HOURLY LOADS

Q. Please describe the method and data sources used for weather normalizing system hourly loads for MPS and L&P.

A. System hourly loads in MW represent the hourly electric supply requirements for the energy demands of MPS and L&P electric customers and internal needs. Actual system hourly loads for 2005 were weather normalized using HELM, based on system weather response, and adjusted for Customer Annualization and Large Load Adjustments.

Q. Please describe the results of the MPS and L&P weather normalized system hourly loads.

A. Schedule RDA-5 and RDA-6 provide the MPS and L&P weather normalized system hourly loads for 2005, respectively, as adjusted for Customer Annualization and Large Load Adjustments. The 2005 weather normalized net energy for load is estimated at 6,129,102 MWH for MPS (RDA-5, line 35, column K) and 2,123,724 MWH for L&P (RDA-6, line 35, column K). The 2005 weather normalized system peak load in July is 1445 MW for MPS (RDA-5, line 29, column L) and 415 MW for L&P (RDA-6, line 29,

column L). Schedule RDA-7 provides the monthly net energy for load and coincident peak loads for MPS and L&P combined, based on 2005 weather normalized hourly loads, as adjusted for Customer Annualization and Large Load Adjustments. The 2005 weather normalized net energy for load for MPS and L&P combined is 8,252,789 MWH (RDA-7, line 17, column D) and coincident system peak load in July is 1837 MW (RDA-7, line 11, column E).

RECOMMENDATION

Q. What is your recommendation to the Commission?

A. My recommendation to the Commission is that it should adopt the weather normalization adjustment, customer annualization adjustment and large load adjustment to rate class sales and revenue, and adopt the weather normalized system hourly loads, for MPS and L&P, which I am sponsoring in my testimony.

Q. Does this conclude your direct testimony?

A. Yes, it does.

Aquila Networks, Missouri Public Service Division
Weather Normalization Adjustment
Test Year Ending 12/31/05

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		MWh Sales Adjustment (Normal - Actual)												
2	Billed WN Adj.													
3	Rate Class	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Annual
4	MO860	2,997	2,670	2,420	(266)	459	(9,122)	(6,914)	(4,567)	(21,246)	(20,521)	330	1,569	(52,190)
5	MO870	5,293	5,888	5,464	356	939	(2,991)	(2,239)	(1,616)	(7,628)	(6,353)	3,434	4,510	5,056
6	MO711	1,159	1,811	1,715	(237)	(588)	(2,311)	(1,210)	(1,034)	(4,295)	(4,361)	(292)	334	(9,309)
7	MO716	2	3	1	(2)	(1)	(5)	(1)	(0)	(1)	(1)	0	0	(6)
8	MO720	647	1,590	1,495	(182)	(283)	(1,515)	(575)	(656)	(2,699)	(2,791)	(407)	94	(5,283)
9	MO725	(4)	(7)	(5)	(29)	(33)	(86)	(33)	(28)	(141)	(190)	(37)	(7)	(602)
10	MO730	(43)	624	493	(191)	(20)	(782)	(147)	(449)	(1,465)	(1,284)	(396)	(65)	(3,725)
11	MO735	(64)	260	200	(354)	(247)	(842)	(148)	(526)	(1,479)	(1,561)	(309)	(53)	(5,123)
12	MO740	99	168	181	7	0	(113)	(92)	(70)	(322)	(329)	(9)	31	(448)
13														
14														
15														
16														
17														
18														
19														
20	Billed WN Adj.	10,086	13,008	11,963	(898)	226	(17,769)	(11,359)	(8,946)	(39,276)	(37,390)	2,313	6,413	(71,629)
21	Unbilled Adj:													
22	Residential	9,952	(31,141)	(16,945)	(18,141)	11,276	58,664	32,354	(29,088)	(53,233)	(10,177)	23,642	9,193	(13,643)
23	Commercial	2,447	(11,354)	5,460	(3,814)	4,888	11,101	3,941	(95)	(12,283)	(2,603)	(2,196)	(2,777)	(7,283)
24	Industrial	939	(5,244)	2,256	(1,737)	2,386	4,175	1,612	(36)	(4,807)	(1,144)	(1,024)	(1,165)	(3,790)
25	Other	561	(2,757)	1,348	(925)	1,245	2,796	920	(23)	(3,000)	(673)	(540)	(669)	(1,716)
26	Unbilled Adj.	13,900	(50,496)	(7,881)	(24,617)	19,795	76,737	38,827	(29,243)	(73,322)	(14,596)	19,882	4,582	(26,432)
27	Total WN Adj.	23,985	(37,488)	4,082	(25,515)	20,021	58,968	27,468	(38,188)	(112,598)	(51,987)	22,195	10,995	(98,061)

Aquila Networks, Missouri Public Service Division
Weather Normalization Adjustment
Test Year Ending 12/31/05

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		$ Revenue Adjustment (Normal - Actual)												
2	Billed WN Adj.													
3	Rate Class	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Annual
4	MO860	186,064	170,404	156,559	(17,448)	30,269	(678,778)	(520,906)	(344,631)	(1,596,320)	(1,281,292)	21,645	99,186	(3,775,247)
5	MO870	233,586	270,413	263,749	18,434	52,357	(223,754)	(169,115)	(122,069)	(574,578)	(342,586)	189,357	211,196	(193,011)
6	MO711	52,318	84,417	81,631	(11,404)	(28,153)	(145,064)	(75,223)	(64,204)	(266,672)	(205,340)	(14,333)	15,804	(576,223)
7	MO716	77	141	71	(114)	(69)	(312)	(52)	(13)	(64)	(30)	8	1	(357)
8	MO720	25,072	62,392	58,138	(7,188)	(11,043)	(81,825)	(30,620)	(35,008)	(144,414)	(107,225)	(15,983)	3,666	(284,036)
9	MO725	(159)	(256)	(186)	(1,102)	(1,266)	(4,571)	(1,728)	(1,465)	(7,606)	(6,932)	(1,411)	(276)	(26,958)
10	MO730	(1,353)	19,526	15,624	(5,981)	(626)	(31,954)	(5,954)	(18,149)	(58,859)	(40,252)	(12,468)	(2,041)	(142,488)
11	MO735	(1,966)	7,898	6,136	(11,274)	(7,494)	(32,527)	(5,741)	(20,119)	(56,869)	(47,981)	(9,361)	(1,609)	(180,906)
12	MO740	4,945	8,790	9,681	424	20	(8,666)	(7,076)	(5,349)	(24,740)	(17,300)	(517)	1,712	(38,075)
13														
14														
15														
16														
17														
18														
19														
20	Billed WN Adj.	498,582	623,726	591,403	(35,653)	33,996	(1,207,450)	(816,415)	(611,008)	(2,730,122)	(2,048,937)	156,937	327,639	(5,217,301)
21	Unbilled Adj:													
22	Residential	496,311	(1,671,176)	(916,852)	(1,035,599)	753,497	4,370,716	2,439,227	(2,195,661)	(4,002,448)	(662,016)	1,382,404	456,530	(585,067)
23	Commercial	90,300	(422,791)	156,036	(153,978)	221,127	572,918	241,481	(6,563)	(699,521)	(102,433)	(66,511)	(92,543)	(262,478)
24	Industrial	34,664	(195,268)	64,468	(70,141)	107,928	215,468	98,749	(2,511)	(273,783)	(45,017)	(31,009)	(38,830)	(135,283)
25	Other	20,690	(102,659)	38,513	(37,353)	56,306	144,327	56,393	(1,599)	(170,840)	(26,467)	(16,351)	(22,286)	(61,325)
26	Unbilled Adj.	641,965	(2,391,894)	(657,835)	(1,297,071)	1,138,857	5,303,428	2,835,851	(2,206,334)	(5,146,591)	(835,932)	1,268,533	302,871	(1,044,152)
27	Total WN Adj.	1,140,547	(1,768,168)	(66,432)	(1,332,724)	1,172,853	4,095,978	2,019,436	(2,817,342)	(7,876,713)	(2,884,870)	1,425,471	630,511	(6,261,454)

Note: Revenue excludes IEC, demand and customer charges

Aquila Networks, St. Joseph Light & Power Division
Weather Normalization Adjustment
Test Year Ending 12/31/05

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		MWh Sales Adjustment (Normal - Actual)												
2	Billed WN Adj.													
3	Rate Class	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Annual
4	MO910	770	897	876	(23)	(216)	(1,585)	(1,534)	(959)	(4,357)	(4,180)	(94)	437	(9,968)
5	MO911	5	7	5	(0)	(1)	(21)	(7)	(9)	(34)	(31)	3	2	(81)
6	MO913	244	311	301	13	(48)	(359)	(285)	(190)	(835)	(758)	132	189	(1,286)
7	MO914	0	0	0	0	(0)	(0)	(0)	(0)	(1)	(1)	0	0	(1)
8	MO915	24	20	17	0	(1)	(14)	(16)	(8)	(41)	(76)	2	21	(73)
9	MO920	2,603	3,382	3,119	206	143	(556)	(523)	(401)	(1,596)	(1,152)	1,363	1,450	8,038
10	MO921	65	69	86	4	7	(12)	(13)	(6)	(29)	(29)	20	37	199
11	MO922	4	6	5	0	0	(1)	(1)	(1)	(3)	(1)	2	2	12
12	MO930	80	104	83	(7)	(15)	(70)	(39)	(34)	(132)	(139)	11	33	(126)
13	MO931	127	166	157	(14)	(34)	(168)	(95)	(79)	(319)	(315)	23	64	(486)
14	MO932	19	25	18	(1)	(3)	(12)	(7)	(5)	(19)	(17)	2	6	6
15	MO933	87	118	100	(7)	(15)	(65)	(36)	(29)	(118)	(123)	10	36	(43)
16	MO934	12	17	18	(1)	(3)	(13)	(11)	(7)	(32)	(33)	1	7	(45)
17	MO940	651	877	969	75	(65)	(746)	(409)	(304)	(1,253)	(1,503)	(112)	131	(1,689)
18	MO941	6	10	10	1	(0)	(3)	(2)	(1)	(6)	(8)	(1)	1	7
19	MO944	99	439	422	(183)	(138)	(539)	(174)	(300)	(1,155)	(879)	(518)	(158)	(3,084)
20	Billed WN Adj.	4,795	6,447	6,188	62	(389)	(4,164)	(3,153)	(2,335)	(9,931)	(9,245)	846	2,257	(8,621)
21	Unbilled Adj.													
22	Residential	1,174	(8,310)	(7,924)	(6,858)	551	12,643	7,285	(6,457)	(12,655)	1,635	9,384	2,032	(7,501)
23	Commercial	194	(3,659)	(1,243)	(987)	1,995	3,184	2,469	(543)	(4,344)	(839)	624	(792)	(3,943)
24	Industrial	2,796	(666)	706	(657)	2,268	861	639	1,631	(3,955)	737	(1,965)	(1,049)	1,349
25	Other	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Unbilled Adj.	4,164	(12,635)	(8,461)	(8,502)	4,814	16,688	10,392	(5,369)	(20,954)	1,533	8,044	191	(10,095)
27	Total WN Adj.	8,959	(6,187)	(2,273)	(8,440)	4,424	12,524	7,239	(7,705)	(30,884)	(7,711)	8,890	2,448	(18,716)

Aquila Networks, St. Joseph Light & Power Division
Weather Normalization Adjustment
Test Year Ending 12/31/05

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		$ Revenue Adjustment (Normal - Actual)												
2	Billed WN Adj.													
3	Rate Class	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Annual
4	MO910	40,595	48,516	47,838	(1,286)	(12,066)	(105,267)	(101,889)	(63,655)	(289,268)	(224,615)	(5,225)	23,368	(642,954)
5	MO911	297	420	304	(29)	(80)	(1,356)	(444)	(621)	(2,337)	(1,815)	199	89	(5,371)
6	MO913	10,808	14,199	13,939	619	(2,336)	(23,819)	(18,942)	(12,622)	(55,418)	(35,746)	6,308	8,597	(94,412)
7	MO914	9	9	14	0	(1)	(12)	(14)	(8)	(60)	(45)	4	11	(94)
8	MO915	1,705	1,379	1,181	32	(91)	(1,375)	(1,583)	(786)	(3,941)	(5,390)	142	1,480	(7,245)
9	MO920	91,117	120,656	113,863	7,849	5,687	(36,909)	(34,744)	(26,603)	(105,981)	(46,073)	53,559	52,105	194,524
10	MO921	2,568	2,812	3,578	173	289	(776)	(861)	(431)	(1,935)	(1,238)	863	1,573	6,615
11	MO922	145	211	164	14	5	(66)	(56)	(65)	(199)	(53)	74	72	246
12	MO930	5,144	6,656	5,320	(475)	(946)	(6,280)	(3,469)	(3,035)	(11,819)	(8,995)	717	2,110	(15,072)
13	MO931	5,845	7,753	7,350	(678)	(1,601)	(11,321)	(6,275)	(5,217)	(21,157)	(14,820)	1,084	2,956	(36,078)
14	MO932	1,191	1,599	1,125	(69)	(177)	(1,034)	(602)	(458)	(1,697)	(1,087)	157	371	(681)
15	MO933	3,611	4,993	4,336	(324)	(676)	(4,421)	(2,356)	(1,933)	(7,852)	(5,450)	446	1,550	(8,076)
16	MO934	770	1,077	1,167	(64)	(172)	(1,174)	(1,023)	(648)	(2,867)	(2,096)	89	433	(4,508)
17	MO940	21,440	29,147	32,137	2,510	(2,152)	(32,530)	(17,788)	(13,114)	(54,367)	(50,747)	(3,736)	4,350	(84,850)
18	MO941	202	373	373	28	(10)	(280)	(216)	(124)	(507)	(284)	(20)	48	(416)
19	MO944	2,524	11,127	10,706	(4,640)	(3,512)	(15,851)	(5,032)	(8,681)	(33,445)	(21,932)	(13,108)	(3,993)	(85,837)
20	Billed WN Adj.	187,970	250,929	243,394	3,659	(17,836)	(242,471)	(195,296)	(138,000)	(592,850)	(420,385)	41,555	95,121	(784,209)
21	Unbilled Adj.													
22	Residential	22,385	(348,690)	(332,841)	(301,898)	52,657	847,059	490,755	(433,473)	(842,641)	59,020	405,475	85,304	(296,889)
23	Commercial	9,921	(140,765)	(47,934)	(46,008)	73,146	179,253	125,441	(36,793)	(227,095)	(31,588)	33,974	(24,748)	(133,195)
24	Industrial	70,973	(16,866)	17,925	(16,699)	57,557	25,318	18,499	47,197	(114,471)	18,396	(49,743)	(26,539)	31,548
25	Other	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Unbilled Adj.	103,280	(506,321)	(362,850)	(364,605)	183,360	1,051,630	634,695	(423,069)	(1,184,208)	45,828	389,706	34,017	(398,536)
27	Total WN Adj.	291,249	(255,391)	(119,455)	(360,946)	165,524	809,159	439,400	(561,069)	(1,777,057)	(374,557)	431,260	129,138	(1,182,745)

Note: Revenue excludes IEC, demand and customer charges

Aquila Networks, Missouri Public Service Division
Customer Annualization Adjustment
Test Year Ending 12/31/05

Rate Class	Test Year 2005 Avg. Customers	Year-End Dec-05 Customers		Revenue Per Customer	Year-End Dec-05 Revenue		Test Year 12/31/05 WN Revenue		Year-End Dec-05 Cust Adj.Rev.	Year-End Dec-05 CustAdj.MWh
MO860	146,586	146,460		$ 855	$ 125,282,979		$ 125,449,838		(166,859)	(1,650)
MO870	54,854	58,046		$ 1,077	$ 62,536,194		$ 58,948,709		3,587,485	62,095
MO711	26,993	27,178		$ 1,844	$ 50,124,916		$ 49,868,209		256,707	4,927
MO716	6	4		$ 7,146	$ 28,585		$ 45,284		(16,699)	(299)
MO720	1,156	1,175		$ 36,888	$ 43,343,489		$ 42,655,665		687,823	13,465
MO725	24	24		$ 67,825	$ 1,627,810		$ 1,643,744		(15,934)	(250)
MO730	**116**	**116**		**$ 242,653**	***$ 28,208,355***	*	**$ 26,508,933**		***1,699,422***	***39,554***
MO735	**36**	**36**		**$ 750,358**	***$ 26,887,834***	*	**$ 26,955,059**		***(67,226)***	***(1,014)***
MO740	782	774		$ 2,558	$ 1,979,558		$ 1,998,288		(18,730)	(288)
Total	230,553	233,813		$ 1,454	$ 340,019,719		$ 334,073,730		$ 5,945,990	116,541

** Note: Rates MO730 and MO735 reflect Customer Annualization adjustments for specific customers ending/beginning service during test year 2005.*

Large Load Adjustments (2006):

Rate Class	Customer Name	Opr. Date	Revenue		Avg RevKwh$	LF%	Peak MW	Annual MWh
MO735	Banta	Oct-06	$ 75,000		$ 0.0417	50%	0.411	1,800
MO735	KCI Parking Improvements	Oct-06	$ 81,000		$ 0.0450	50%	0.411	1,800
Total			$ 156,000				0.822	3,600

Aquila Networks, St. Joseph Light & Power Division
Customer Annualization Adjustment
Test Year Ending 12/31/05

A	B	C	D	E	F	G	H	I	J	K	L
1		Test Year	Year-End		Revenue	Year-End		Test Year		Year-End	Year-End
2		2005 Avg.	Dec-05		Per	Dec-05		12/31/2005		Dec-05	Dec-05
3	Rate Class	Customers	Customers		Customer	Revenue		WN Revenue		Cust Adj.Rev.	CustAdj.MWh
4	MO910	32,043	31,604		$ 648	$ 20,469,236		$ 20,730,498		(261,262)	(4,009)
5	MO911	76	74		$ 2,388	$ 176,685		$ 181,197		(4,512)	(59)
6	MO913	6,780	6,652		$ 762	$ 5,070,720		$ 5,164,846		(94,125)	(1,650)
7	MO914	4	4		$ 1,151	$ 4,604		$ 4,604		0	0
8	MO915	1,715	1,756		$ 346	$ 607,342		$ 594,009		13,334	131
9	MO920	16,011	16,371		$ 978	$ 16,009,911		$ 15,632,781		377,130	8,116
10	MO921	58	58		$ 6,744	$ 391,181		$ 389,995		1,186	22
11	MO922	90	89		$ 308	$ 27,381		$ 27,734		(352)	(8)
12	MO930	3,193	3,218		$ 665	$ 2,140,039		$ 2,124,479		15,560	175
13	MO931	1,507	1,525		$ 2,190	$ 3,339,952		$ 3,303,087		36,865	549
14	MO932	288	289		$ 1,190	$ 343,994		$ 342,701		1,293	21
15	MO933	627	627		$ 2,307	$ 1,446,257		$ 1,445,048		1,209	(5)
16	MO934	313	309		$ 1,250	$ 386,123		$ 391,072		(4,949)	(60)
17	MO940	1,130	1,143		$ 16,323	$ 18,656,719		$ 18,457,802		198,917	4,269
18	MO941	103	100		$ 1,379	$ 137,890		$ 141,197		(3,307)	(62)
19	**MO944**	**60**	**59**		**$ 451,378**	**$ 26,631,308**	*	**$ 25,287,089**		**1,344,219**	**46,575**
20	Total	63,996	63,878		$ 1,500	$ 95,839,344		$ 94,218,138		1,621,206	54,006

21 ** Note: Rate MO944 reflects Customer Annualization adjustments for specific customers ending/beginning service during test year 2005.*

22 **Large Load Adjustments (2006):**

23	Rate Class	Customer Name		Opr. Date	Revenue		Avg RevKwh$	LF%	Peak MW	Annual MWh
24	MO944	Triumph Foods		Oct-06	$ 614,583		$ 0.0417	50%	3.368	14,750
25	MO944	Lifeline		Oct-06	$ 72,000		$ 0.0400	50%	0.411	1,800
26	MO944	Kawasaki		Oct-06	$ 30,000		$ 0.0429	50%	0.160	700
27	Total				$ 716,583		$ 0.0415	50%	3.9	17,250

Aquila Networks-Missouri, Missouri Public ServiceDivision
2005 Actual and Weather Normalized System Hourly Loads

MPS-System Net Load (Actual)

Coincident with System Actual Peak					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/06/05	1	529,928	937	6	19
02/08/05	2	431,280	875	8	19
03/22/05	3	448,654	791	22	19
04/21/05	4	397,431	749	21	17
05/23/05	5	452,943	1,019	23	18
06/27/05	6	578,209	1,317	27	17
07/22/05	**7**	**663,340**	**1,422**	**22**	**17**
08/10/05	8	642,730	1,403	10	18
09/09/05	9	542,469	1,199	9	17
10/04/05	10	442,250	1,073	4	16
11/28/05	11	438,138	906	28	19
12/07/05	12	539,057	1,048	7	19
Year	**2005**	**6,106,429**	**1,422**		
Load Factor			**48.89%**		

MPS-System Net Load (Weather Normal)

Coincident with System Normal Peak					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/15/05	1	542,601	992	15	19
02/10/05	2	455,139	969	10	19
03/01/05	3	450,550	878	1	19
04/20/05	4	394,502	815	20	18
05/23/05	5	438,878	1,032	23	18
06/28/05	6	550,991	1,232	28	17
07/22/05	**7**	**661,074**	**1,417**	**22**	**17**
08/03/05	8	620,834	1,389	3	17
09/12/05	9	487,436	1,200	12	17
10/04/05	10	421,542	960	4	18
11/17/05	11	450,688	857	17	19
12/09/05	12	534,383	1,018	9	19
Year	**2005**	**6,008,618**	**1,417**		
Load Factor			**48.27%**		

MPS-Weather Normal Adjustment (WNA)

(Normal-Actual)		WNA % Actual	
NEL_Mwh	PeakMW	NEL_Mwh	PeakMW
12,673	55	2.4%	5.9%
23,859	94	5.5%	10.7%
1,896	87	0.4%	11.0%
(2,929)	66	-0.7%	8.8%
(14,065)	13	-3.1%	1.3%
(27,218)	(85)	-4.7%	-6.5%
(2,266)	**(5)**	**-0.3%**	**-0.4%**
(21,896)	(14)	-3.4%	-1.0%
(55,033)	1	-10.1%	0.1%
(20,708)	(113)	-4.7%	-10.5%
12,550	(49)	2.9%	-5.4%
(4,674)	(30)	-0.9%	-2.9%
(97,811)	**(5)**	**-1.6%**	**-0.4%**

2005 Scaled WN System Hourly Loads with Customer Annualization and Large Load Adjustments

MPS-System Net Load (Actual)

Coincident with System Actual Peak					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/06/05	1	529,928	937	6	19
02/08/05	2	431,280	875	8	19
03/22/05	3	448,654	791	22	19
04/21/05	4	397,431	749	21	17
05/23/05	5	452,943	1,019	23	18
06/27/05	6	578,209	1,317	27	17
07/22/05	**7**	**663,340**	**1,422**	**22**	**17**
08/10/05	8	642,730	1,403	10	18
09/09/05	9	542,469	1,199	9	17
10/04/05	10	442,250	1,073	4	16
11/28/05	11	438,138	906	28	19
12/07/05	12	539,057	1,048	7	19
Year	**2005**	**6,106,429**	**1,422**		
Load Factor			**48.89%**		

MPS-System Net Load (CustAnn/Large Load Adj.)

Coincident with System Normal Peak					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/15/05	1	553,768	1,012	15	19
02/10/05	2	465,161	990	10	19
03/01/05	3	459,630	896	1	19
04/20/05	4	402,972	832	20	18
05/23/05	5	447,242	1,052	23	18
06/28/05	6	560,323	1,246	28	17
07/22/05	**7**	**673,430**	**1,445**	**22**	**17**
08/03/05	8	633,845	1,418	3	17
09/12/05	9	498,671	1,228	12	17
10/04/05	10	430,546	981	4	18
11/17/05	11	459,035	873	17	19
12/09/05	12	544,480	1,037	9	19
Year	**2005**	**6,129,102**	**1,445**		
Load Factor			**48.29%**		

MPS-WN Adj, Cust.Ann., Large Load Adj.

(Normal-Actual)		% Actual	
NEL_Mwh	PeakMW	NEL_Mwh	PeakMW
23,840	75	4.5%	8.0%
33,881	115	7.9%	13.2%
10,976	105	2.4%	13.2%
5,541	83	1.4%	11.1%
(5,701)	33	-1.3%	3.2%
(17,886)	(71)	-3.1%	-5.4%
10,090	**23**	**1.5%**	**1.6%**
(8,885)	15	-1.4%	1.1%
(43,798)	29	-8.1%	2.4%
(11,704)	(92)	-2.6%	-8.6%
20,897	(33)	4.8%	-3.7%
5,423	(11)	1.0%	-1.0%
22,673	**23**	**0.4%**	**1.6%**

Aquila Networks-Missouri, St. Joseph Light & Power Division
2005 Actual and Weather Normalized System Hourly Loads

SJD-System Net Load (Actual)

Coincident with System Actual Peak					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/14/05	1	197,011	357	14	8
02/08/05	2	155,928	323	8	8
03/01/05	3	159,874	299	1	8
04/28/05	4	138,324	242	28	11
05/23/05	5	147,759	287	23	17
06/27/05	6	181,534	392	27	16
07/20/05	**7**	**204,534**	**409**	**20**	**17**
08/03/05	8	198,457	403	3	18
09/09/05	9	172,600	350	9	17
10/04/05	10	155,942	336	4	15
11/29/05	11	157,148	308	29	19
12/07/05	12	197,922	374	7	19
Year	**2005**	**2,067,033**	**409**		
Load Factor			**57.53%**		

SJD-System Net Load (Weather Normal)

Coincident with System Normal Peak					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/07/05	1	202,006	377	7	8
02/10/05	2	165,715	362	10	8
03/01/05	3	160,800	322	1	8
04/27/05	4	138,834	251	27	8
05/23/05	5	144,545	298	23	17
06/28/05	6	174,898	364	28	17
07/20/05	**7**	**203,923**	**407**	**20**	**17**
08/03/05	8	192,641	402	3	16
09/12/05	9	158,819	356	12	17
10/04/05	10	150,291	277	4	14
11/17/05	11	163,035	316	17	8
12/09/05	12	195,996	383	9	8
Year	**2005**	**2,051,503**	**407**		
Load Factor			**57.38%**		

SJD-Weather Normal Adjustment (WNA)

(Normal-Actual)		WNA % Actual	
NEL_Mwh	PeakMW	NEL_Mwh	PeakMW
4,995	20	2.5%	5.5%
9,787	39	6.3%	12.1%
926	23	0.6%	7.7%
510	9	0.4%	3.6%
(3,214)	11	-2.2%	3.8%
(6,636)	(28)	-3.7%	-7.1%
(611)	**(2)**	**-0.3%**	**-0.5%**
(5,816)	(1)	-2.9%	-0.4%
(13,781)	6	-8.0%	1.6%
(5,651)	(59)	-3.6%	-17.5%
5,887	8	3.7%	2.7%
(1,926)	9	-1.0%	2.4%
(15,530)	**(2)**	**-0.8%**	**-0.5%**

2005 Scaled WN System Hourly Loads with Customer Annualization and Large Load Adjustments

SJD-System Net Load (Actual)

Coincident with System Actual Peak					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/14/05	1	197,011	357	14	8
02/08/05	2	155,928	323	8	8
03/01/05	3	159,874	299	1	8
04/28/05	4	138,324	242	28	11
05/23/05	5	147,759	287	23	17
06/27/05	6	181,534	392	27	16
07/20/05	**7**	**204,534**	**409**	**20**	**17**
08/03/05	8	198,457	403	3	18
09/09/05	9	172,600	350	9	17
10/04/05	10	155,942	336	4	15
11/29/05	11	157,148	308	29	19
12/07/05	12	197,922	374	7	19
Year	**12**	**2,067,033**	**409**		
Load Factor			**57.53%**		

SJD-System Net Load (w/CustAnn/Large Load Adj.)

Coincident with System Normal Peak					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/07/05	1	208,850	389	7	8
02/10/05	2	171,973	376	10	8
03/01/05	3	166,868	334	1	8
04/27/05	4	144,278	261	27	8
05/23/05	5	149,819	309	23	17
06/27/05	6	180,507	374	27	17
07/20/05	**7**	**210,280**	**415**	**20**	**17**
08/03/05	8	199,480	413	3	16
09/12/05	9	165,071	370	12	17
10/04/05	10	155,788	287	4	14
11/17/05	11	168,465	327	17	8
12/09/05	12	202,343	395	9	8
Year	**12**	**2,123,724**	**415**		
Load Factor			**58.26%**		

SJD-WN Adj, Cust.Ann., Large Load Adj.

(Normal-Actual)		% Actual	
NEL_Mwh	PeakMW	NEL_Mwh	PeakMW
11,839	32	6.0%	9.1%
16,045	53	10.3%	16.3%
6,994	35	4.4%	11.8%
5,954	19	4.3%	7.7%
2,060	22	1.4%	7.6%
(1,027)	(18)	-0.6%	-4.5%
5,746	**6**	**2.8%**	**1.5%**
1,023	10	0.5%	2.5%
(7,529)	20	-4.4%	5.6%
(154)	(49)	-0.1%	-14.5%
11,317	19	7.2%	6.1%
4,421	21	2.2%	5.7%
56,691	**6**	**2.7%**	**1.5%**

Aquila Networks-Missouri
2005 Weather Normalized System Hourly Loads

2005 Scaled WN System Hourly Loads with Customer Annualization and Large Load Adjustments

MO Joint-System Net Load (Cust.Ann. Dec-2005)

Coincident System Normal Peak (MPS+SJD)					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/07/05	1	762,605	1,380	7	19
02/10/05	2	637,164	1,347	10	19
03/01/05	3	626,441	1,214	1	19
04/20/05	4	547,244	1,082	20	18
05/23/05	5	597,054	1,358	23	18
06/28/05	6	740,726	1,620	28	17
07/22/05	**7**	**883,822**	**1,837**	**22**	**17**
08/03/05	8	833,298	1,826	3	17
09/12/05	9	663,740	1,598	12	17
10/04/05	10	586,362	1,263	4	18
11/17/05	11	627,521	1,184	17	19
12/09/05	12	746,812	1,413	9	19
2005	**Year**	**8,252,789**	**1,837**	**22**	**17**
Load Factor			**51.28%**		

MPS-System Net Load (Cust.Ann. Dec-2005)

Noncoincident System Normal Peak (MPS)					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/15/05	1	553,759	1,012	15	19
02/10/05	2	465,181	990	10	19
03/01/05	3	459,596	896	1	19
04/20/05	4	402,968	832	20	18
05/23/05	5	447,245	1,052	23	18
06/28/05	6	560,236	1,246	28	17
07/22/05	**7**	**673,515**	**1,445**	**22**	**17**
08/03/05	8	633,814	1,418	3	17
09/12/05	9	498,673	1,228	12	17
10/04/05	10	430,576	981	4	18
11/17/05	11	459,039	873	17	19
12/09/05	12	544,484	1,037	9	19
2005	**Year**	**6,129,086**	**1,445**	**22**	**17**
Load Factor			**48.42%**		

SJD-System Net Load (Cust.Ann. Dec-2005)

Noncoincident System Normal Peak (SJD)					
DatePeak	Month	NEL_MWh	PeakMW	Day	Hour
01/07/05	1	208,846	389	7	8
02/10/05	2	171,983	376	10	8
03/01/05	3	166,845	334	1	8
04/27/05	4	144,276	261	27	8
05/23/05	5	149,809	309	23	17
06/28/05	6	180,490	374	28	17
07/20/05	**7**	**210,307**	**415**	**20**	**17**
08/03/05	8	199,484	413	3	16
09/12/05	9	165,067	370	12	17
10/04/05	10	155,786	287	4	14
11/17/05	11	168,482	327	17	8
12/09/05	12	202,328	395	9	8
2005	**Year**	**2,123,703**	**415**	**20**	**17**
Load Factor			**58.42%**		

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 tariffs increasing electric rates for the service provided to customers in the Aquila Networks-MPS and Aquila Networks-L&P area	))))))	Case No. ER-_____

County of Jackson)
) ss
State of Missouri)

AFFIDAVIT OF ROBERT D. ADKINS

Robert D. Adkins, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Direct Testimony of Robert D. Adkins;" that said testimony was prepared by him and under his direction and supervision; that if inquiries were made as to the facts in said testimony and schedules, he would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of his knowledge, information, and belief.

Robert D. Adkins

Subscribed and sworn to before me this 3rd day of July, 2006.

Notary Public
Terry D. Lutes

My Commission expires:

8-20-2008

Notary Public Notary Seal State of Missouri

TERRY D. LUTES
Jackson County
My Commission Expires
August 20, 2008