Exhibit No.:
Issues: Resource Planning, Annualized Fuel & PP and Fuel Prices for Generation
Witness: Jerry G. Boehm
Sponsoring Party: Aquila Networks-MPS & L&P
Case No.: ER-

Before the Public Service Commission
of the State of Missouri

Direct Testimony

of

Jerry G. Boehm

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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI
DIRECT TESTIMONY OF JERRY G. BOEHM
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 Jerry G. Boehm. My business address is 10750 East 350 Highway, Kansas City, Missouri, 64138.

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

A. I am employed by Aquila Inc. ("Aquila" or "Company") in the position of Manager, Resource Planning.

Q. What are your responsibilities as Manager – Resource Planning?

A. I am responsible for analyzing long-term generation and purchase power resources to meet the requirements of Aquila's domestic regulated electric utility operations. I am also responsible for fuel and purchase power budgeting, electric power market analysis and short-term resource analysis.

Q. Please briefly describe your education, work experience, and participation in professional associations.

A. In 1977 I received a Bachelor of Science degree in Electrical Engineering from the University of Missouri - Columbia. I am a registered Professional Engineer in the State of Missouri.

Since graduation the majority of my work has been in the field of electric utility power

supply and delivery. In 1977 I joined the Missouri Public Service Company as Staff Engineer. In that position I was responsible for load flow transmission analysis, power system relay and control design and maintenance, generation planning, fuel and interchange budgeting, and FERC/NERC reporting. Subsequently, I have received a number of position advancements prior to my moving to my current role in resource analysis.

Q. Please describe your experience as an expert witness in energy utility regulatory proceedings before state and federal regulatory commissions.

A. My experience as an expert witness in an energy utility regulatory case regarding resource planning, fuel and purchase power modeling:

- Aquila (MPS electric): Missouri PSC, ER-2004-34
- Aquila (WPEK electric): Kansas Corporate Commission, 04-AQLE-1065-RTS
- Aquila (MPS electric): Missouri PSC, EA-2005-0248

Q. What is the purpose of your direct testimony?

A. The purpose of this testimony is to present and support Aquila's position in this case regarding fuel and purchased power expense for the Aquila Networks-MPS ("MPS") and Aquila Networks-L&P ("L&P") operating divisions of Aquila.

Q. How is your direct testimony organized?

A. My direct testimony is organized as follows:

I. MPS and L&P Electric Operations and Resources During 2004

II. Annualized Fuel & Purchased Power Expense

III. Fuel Prices for Power Generation

IV. The Need for Additional Capacity

Q. Are you sponsoring any schedules?

A. Yes. I am sponsoring 2 schedules –

- **Schedule JGB-1** Comparison of Capacity Mix
- **Schedule JGB–2** 3-Month Average 2006 NYMEX Strip, Oct 1 to Dec 31, 2004, and
- **Schedule JGB-3** Coal Shortfall Supplements

I. MPS AND L&P 2004 OPERATIONS AND RESOURCES

Q. Please describe MPS electric utility operations.

A. MPS provides electric service in Western and North Central Missouri. In 2004 it had a non-coincident summer peak load of 1344 MW compared to a coincident MPS/L&P peak load of 1751. MPS provided capacity and energy with energy generated by its fourteen generating units and purchases under its three power purchase contracts as well as purchases under short term and spot market sources.

Q. Please describe the MPS generating resources.

A. MPS generation resources consist of three coal fired steam units at the Sibley Generation Station ("Sibley"), an eight percent share in each of the three coal fired steam units at the Jeffrey Energy Center ("JEC"), four gas/#2 fuel oil fired turbines at the Greenwood Energy Center ("Greenwood"), two gas fired combustion turbines at the TWA Overhaul Base ("KCI"), one gas fired combustion turbine at the Ralph Green Station, and one oil

fired combustion turbine at the Nevada substation. MPS also receives energy from an ownership share (0.12 MW) of Jeffrey Energy Center wind generation.

Q. Please describe the MPS purchased power contracts.

A. MPS has long-term purchases sourced from Sunflower Electric Cooperative, Eastern Kansas's Gray County Wind Farm, and commencing Januray1, 2005 Nebraska Public Power District's Cooper Nuclear Station (75 MW). MPS also has a purchase tolling agreement with Merchant Energy Partners ("MEP") of Pleasant Hill.

Q. Please describe the L&P electric utility operations.

A. L&P provides electric service in North Central and North West Missouri. In 2004 it had a summer peak load of 399 MW. L&P provided capacity and energy with energy generated by its eight generating units and purchases under two power contracts as well as purchases under short term and spot market sources.

Q. Please describe the L&P generating resources

A. L&P generation resources consist of a 18% share of the Iatan coal fired steam unit and various units at its Lake Road Generation Plant comprising one coal fired steam unit, three coal/natural gas fired steam units, one natural gas fired CT, and two oil fired jet engines.

Q. Please Describe the L&P purchase power contracts.

A. L&P has long-term purchases sourced from Nebraska Public Power District and Eastern Kansas's Gray County Wind Farm.

Q. Were all of these resources used during the test period?

A. No. There were changes to the resource mix that were made in consideration of an expiring purchased power contract and generation under construction. **Schedule JGB-1** lists the resources used to model production and purchased power expenses in the test year.

Q. Please compare the test year resources to the 2004 resources.

A. Listed in **Schedule JGB-1** is a capacity comparison of three resource mixes. The first column shows the resources modeled in the test year and is labeled as "Test Case". The second column is the resource capacity mix for 2004 and the third column is the forecasted capacity for 2005.

Q. Please explain the difference between 2004 and the forecast 2005 resources.

A. The resource changes are driven by the need to replace 500 MW of the expiring Aries purchased power contract and to add capacity for load growth. In January of 2003 Aquila issued a Request for Proposals ("RFP") to meet the gap of capacity and energy needs at the expiration of the Aries contract. The 2005 resources reflect the resource plan created from the RFP responses.

In **Schedule JGB-1** it is shown that the gap is satisfied via the addition of the South Harper Plant (315MW), the NPPD Cooper purchase agreement (75MW) and Project X (200MW).

Q. What is project X?

A. Project X is a placeholder for an agreement that is still under negotiation. More detail about project X is discussed in the testimony of Aquila witness Mike Apprill.

Q. Please explain the difference between forecast 2005 resources and the test case.

A. Additional capacity has been secured for 2005 as a contingency for possible construction delays to the South Harper facility and possible delays in securing the Project X agreement. A one-year purchase power agreement (100MW) with the Sunflower Electric Cooperative provides a hedge against the Project X agreement. A purchase of 225MW of the Crossroads peaking facility provides capacity against construction delays for South Harper.

II ANNUALIZED MPS & L&P FUEL & PURCHASED POWER EXPENSE

Q. For MPS and L&P what are the amounts and expenses for total fuel and purchases in the test case?

A. The costs of total fuel and purchases are explained in testimony of Aquila witness Susan Braun.

Q. How do those costs relate to the proper amount of fuel and purchased energy expense to be used in setting rates for MPS and L&P?

A. The costs are based upon actual expenses that were dependent upon actual operating conditions during this period. During the twelve-month period ending December 31, 2004, however, operating conditions occurred which resulted in several cost items being either too high or too low to properly represent normal expenses for a rate case test period. For example, the resources mix adjustments shown in **Schedule JGB–1** and adjustments in fuel and purchase power prices to reflect current markets. Because of abnormal conditions, it is necessary to adjust high and low expenses to develop an appropriate annualized fuel and purchased energy expense for the test period.

Q. What method for annualizing the test year fuel and purchased power expense do you recommend for purposes of this case?

A. The proper method for annualizing the test year fuel and purchased power expense is to normalize and annualize unit sales, system requirements, system peak demand, generating unit maintenance and forced outages, the availability and price of purchased power and energy, and the price paid for fuel. After doing this, the fuel and purchased energy should be dispatched by a reliable and accurate production cost computer model to develop the appropriate generation and purchased energy levels and the resulting amount of fuel burned. Aquila uses the RealTime computer software for its production cost model.

Q. Are MPS and L&P systems dispatched from the same model?

A. Yes. The two systems are modeled in a joint dispatch. Two additional stand-alone production simulations are performed to demonstrate the cost of separate dispatch for each system.

Q. Why did you prepare both stand-alone and joint dispatch models?

A. The joint dispatch model reflects the expected cost of our present day operating mode. It is performed to support the dollar amounts we are submitting to be included in the cost of service. Stand-alone modeling is performed to calculate the allocation of joint dispatch cost between L&P and MPS, as more fully described in the testimony of Aquila witness, Susan Braun.

Q. Did Aquila develop its recommended annualized test period fuel and purchased energy expenses for this case using the method you just described?

A. Yes.

Q. During the test period, what expense items, if any, were adjusted as a result of annualizing fuel and purchased energy expense?

A. Adjustments were made to:

System requirements. Adjustments were made to peak load and energy to reflect normalized weather. System requirements are developed from load profiles and excess energy calculations. The weather normalized load adjustments are sponsored by Aquila witness Eric Watkins and are found in his direct testimony.

Fuel Costs. Adjustments were made to reflect a normalized fuel market. Fuel cost adjustments are discussed in the next section of my testimony.

III. Fuel Prices for Power Generation

Natural Gas Pricing for Generation

Q. Did you review any materials in connection with the preparation of your direct testimony?

A. I reviewed the testimony of a number of witnesses who filed testimony in Commission Consolidated Case Nos. ER-2004-0034 and HR-2004-0024, Aquila's most recent electric rate case. I specifically reviewed the direct testimony of Graham A. Vesely, a regulatory auditor with the Missouri Public Service Commission Staff ("Staff"); James A. Busch, the Public Utility Economist for the Office of Public Counsel ("OPC"); and Maurice Brubaker and Robert R. Stephens, consultants with Brubaker and Associates testifying on behalf of the Sedalia Industrial Energy Users' Association, Federal Executive Agencies and St. Joseph, Missouri Industrial Energy Users.

Q. As you discuss gas prices, what will be the basis for discussion?

A. All pricing will refer to the New York Mercantile Exchange ("NYMEX") commodity prices at the Henry Hub. This is the most widely used index in the gas industry. The NYMEX price does not include basis or transportation cost which must be added to the commodity to determine the actual cost at the plant.

Q. Would you please provide a brief summary of your understanding of the positions taken by these witnesses on gas prices in the testimony that you reviewed?

A. Yes. Witness Vesely attempted to calculate a market price model input for natural gas based upon 21 months of actual Aquila's natural gas expenses. Witness Busch proposed a gas market price based upon four years of monthly NYMEX settlement prices weighted by Aquila's monthly usage. Witness Busch further testified that natural gas fuel prices should be adjusted for any basis differential. Witness Brubaker states that a "forecast" of gas prices needed to be used for natural gas prices. Witness Brubaker further testified that, in his view, the level of gas prices that were prevalent at the time of his testimony were high and would more likely decrease than increase in the future. Witness Stephens proposed a natural gas market price based upon an average of NYMEX futures prices for natural gas delivered to Henry Hub and compared them to EIA forecasted wellhead prices.

Q. What conclusions have you drawn from the review of this testimony?

A. There's clearly no consensus among these witnesses as to what the proper technique should be to determine future gas prices. In fact, the various methods recommended are at extreme odds with one another.

Q. Do the witnesses agree on anything with respect to natural gas pricing?

A. Yes. They all agree that prices are highly volatile.

Q. Did any of the methods recommended by the witnesses accurately predict the actual gas prices that have occurred since the testimony was filed?

A. No. On September 22, 2003, Henry Hub NYMEX natural gas prices dropped to $4.39/Mcf. At no time since has the market price of gas gone any lower. A common point used by all these different testimonies was the fact that EIA predicted $3.99/Mcf well head prices which appears to have set many of the targets for gas prices in all these other proposed market prices. The gas prices that were referred to as "aberrations" and "anomalies" occurred again during this past winter, with spot prices reaching as high as $20.00/Mcf.

Q. What method of Market price determination does Aquila propose for this case?

A. In the previous case, Aquila proposed burner-tip prices that are derived from a natural gas price curved based upon an average of NYMEX futures prices. Aquila again proposes this method. The company has averaged the NYMEX futures market price for the 2006 calendar year that occurred in the last three months of 2004. These prices are known and represent actual market transactions for natural gas in that time period.

Q. How accurate is this method at determining the actual prices Aquila will face in the market?

A. Very accurate. For example, in case ER-2004-0034 the natural gas curve proposed by the company averaged $5.64/Mcf over the 12-month test period. On Friday March 5, 2004, the day the case settled, the 12-month strip price for natural gas was $5.64/Mcf.

Q. What does Aquila propose as the price of natural gas?

A. Attached is **Schedule JGB-2**. This is the average of NYMEX futures prices for the 2006 time frame. Aquila proposes to use this average of actual market transactions as the estimate for market prices.

Q. Does this estimate include basis or transportation charges to bring the gas to the generating plant?

A. No. This estimate only includes the market price for the energy delivered to Henry Hub. The basis price, the price differential between Henry Hub and the pipeline that serves a particular plant, and any other burner-tip charges are included as part of the production cost model.

Q. Are there any independent studies, publicly available, that confirm Aquila's use of $6.71/Mcf average natural gas prices?

A. Yes. As reported in the Friday April 8, 2005 edition of Gas Daily™, EIA hiked its own forecast of Henry Hub prices by 20% in its monthly update. The 2005 average gas price now predicted by EIA is $6.95/ Mcf.

Q. What average Henry Hub price is Aquila using for the test year.

A. $6.571/Mcf

Coal Supply

Q. Describe the Aquila owned and operated coal-fired generation plants and types of coal being burned.

A. Aquila operates two coal-fired generating plants in Missouri. These are the Sibley Generating Station just northeast of Kansas City and the Lake Road Plant located in St.

Joseph. Both of these plants receive western coal by rail and they both use blends of low Btu sub-bituminous coal from the Powder River Basin and higher Btu bituminous coals.

Q. Why are blends of coal used in these plants?

A. Both of these plants utilize boilers that require coals with certain chemical properties to operate properly. The lower Btu coals do not burn well in the boilers, so a second coal of higher heat content is blended with the low Btu coal to improve combustion. By blending coals, Aquila can lower the fuel cost by burning as much of the inexpensive low Btu coal as possible while maintaining proper combustion with the help of the higher Btu coal.

Q. What are specific contract terms and prices for the low Btu coal?

A. In 2002, Aquila entered into a six-year coal supply agreement with Kennecott Coal Sales Company for low Btu coal from their Antelope Mine in Wyoming. This contract specifies that Kennecott will supply Aquila with 685,000 tons/yr in 2003 and 2004 and; by Aquila annual nomination, between 1.1 – 1.3 million tons per year. For calendar year 2005 the nominated volume was 1.1 million tons. Kennecott coal is shipped to either the Aquila Sibley or Lake Road Plants to meet a large portion of the annual need for low Btu coal at those plants in years 2005 through 2008. The Kennecott coal price escalated on an annual basis for the first two years, 2003 and 2004. For 2005 through 2008, the contractual prices is $7.71/ton, fob the mine. In 2004, Aquila entered into a three -year coal supply Letter Agreement resulting in a contract with Arch Coal Sales Company for annual fixed volumes of coal from their Black Thunder mine in Wyoming. The price of coal under the Arch agreement is levelized at $7.35 /ton, fob the mine. The volumes to be supplied to either the Aquila Sibley or Lake Road Plants are 500,000 tons/yr. in 2005

through 2007. Aquila allocates the Kennecott and Arch supplied volumes so that these agreements supply all of the low Btu coal for Sibley and Lake Road for the 2005 - 2007 period.

Q. What are specific contract terms and prices for the higher Btu coal?

A. In 2003, Aquila entered into a contract with C.W. Mining Co. to provide high Btu coal for the Sibley and Lake Road Plants from their Co-Op operation at Bear Canyon mine in Utah. The contract was for deliveries beginning in 2004 through 2006 with an option for Aquila to extend for two years, 2007 and 2008. Prior to commencing shipments CW Mining notified Aquila that a labor dispute would affect their performance under the contract and that reduced shipments could be expected. Since that time the labor dispute has continued resulting in similar mining impairment notices and Aquila has received less than 30% of the contracted volumes of coal. Reduced coal shipments from C.W. Mining were delivered in 2004 at a price of $19.40/ton fob the mine and in 2005 at $19.99 / ton fob mine. In 2003, Aquila extended volumes on a contract for short-term volumes with Andalex Resources of Utah, and received shipments to supplement the C.W. Mining shortfall in early 2004. In mid year – Sept. 2004 Aquila also received additional Andalex coal under separate short term Purchase Orders and associated options. Late in 2004 Andalex coal supplies were unavailable and Aquila began to purchase and receive spot shipments of high Btu coal to cover all C.W. Mining shortfalls including: (1) Illinois coal from Knighthawk; (2) Colorado coal from Arch Coal's, West Elk mine, and; (3) Utah coal from Consol Energy's Emery mine. All of these coals have been delivered via rail services originating on Union Pacific Railroad. The various tonnages, associated coal and

rail prices and dates of receipt of these shortfall supplements are listed in **Schedule JGB-3** below.

Q. What has been done to address the C.W. Mining contract shortfalls?

A. Aquila has monitored the operations and labor settlement progress of C. W. Mining. Aquila has been provided certain written updates on their Force Majeure claims and projections of future deliveries. In April, 2005 C.W. Mining notified Aquila of it's termination of the contract due to the labor dispute claiming rights under the contract to do so. Aquila has taken exception to this claim and is working to assert its rights under this agreement.

Q. What are the plans for replacement of supplies of the distressed CW Mining supply of high Btu coal for mid 2005 and beyond.

A. Aquila began planning for the augmentation and/or replacement of the C.W. Mining agreement in early 2005. In discussions with the suppliers, we learned that during the timeframe 2005- 2010 that the western US high Btu mines are projected to go through dramatic production transitions as coal reserves at current operations are depleted. Specifically, Utah coal mines with acceptable ash chemistry (lower sodium content and low ash fusion temperatures that are compatible with cyclone boilers) have reduced output due to various mining problems and, with other sales commitments they have already made, have little or none of that coal to offer to the market. Seminoe II and Medicine Bow in the Wyoming Hanna basin, traditional and historic hi Btu coal sources for Lake Road and Sibley source coal, had little coal reserve in 2004 and none to market. Because of these depletion factors, Aquila is hoping to work with alternate supplies from

producers who are opening new mines, re-opening idled mines or expanding their operations and would be able to supply contract coal beginning third quarter of 2005 and contract forward as far as through 2010. Aquila issued a request for proposal to three target candidate suppliers on April 26, 2005 that are most likely to fully perform these requirements.

Q. What other processes are used to select a new coal supplier?

A. The process is very critical in that an improper selection of a coal with certain quality characteristics can have severe adverse impacts on plant operations. The process has been further complicated by the desire to have one supplier for two plants with different types and sizes of boilers. While the most critical boilers are of the same "cyclone fired" design, each boiler has unique needs. Experience has taught us that ash viscosity, sodium, moisture, sulfur and heat contents must be within specific ranges for successful operation. Using this knowledge, we can screen candidate coals to identify those with the best chance for success.

Q. What were the results of your screening for candidates?

A. Of course, sulfur content is of utmost importance and must be less than 2% to satisfy environmental concerns. The low sulfur requirement limits options to coals mined in the western states. Further screening based on the physical and chemical properties narrowed the candidates to coals from three mines located in Utah, and Wyoming.

Q. What is the next step in the selection process?

A Responses are due by late May and will be evaluated and contracted in June 2005. We expect that the selected supplier will be shipping under new contract to be supplying coal beginning in Sept. 2005.

Q. Will the successful bid be the lowest cost coal on a dollars per ton basis?

A. Not necessarily. While all of the coals tested will have potential for use in our boilers, each one will have different degrees of suitability. The evaluation process will consider soot-blowing requirements, coal crusher operations and maintenance, emissions allowance expense, ash handling characteristics, and the propensity to foul the boiler over long-term operations. Issues like these can lead to not only increased O&M cost in the near term, but also premature need to replace major boiler components and an increase in forced outages leading to more purchase power expense.

Q. Will the selection of a new supplier affect your rail transport contracts?

A. Yes. Aquila has requested the carriers (RRs) for new rates or tariffs to provide for the transportation services component of the new contract coal delivery. The actual carrier and the term of service required will be determined by the coal supplier selection. Any new agreements for rail transport should be secured by the summer of 2005.

Q. How should these yet to be determined coal costs be treated in this rate case?

A. Once the costs for the coal and rail transport are known, the new contract with known costs should be included in the case.

Q. Are any other coal costs expected to change in the near future?

A. Yes. The coal supply arrangements for Iatan. In 2003 a vintage long-term contract for the coal supply to Iatan expired. Kansas City Power & Light Company went going through a

test burn program similar to ours. As a co-owner of this plant, Aquila has seen its fuel cost change as KCPL replaced the expiring contract with a portfolio of generic contracts of various source and duration. We expect to know longer-range new costs by early this summer. We would also ask that this new contract and any other costs related to it be included in the cost of service of this case.

IV. THE NEED FOR ADDITIONAL CAPACITY

Q. Why is Aquila constructing additional generation?

A. Aquila needs additional generation beginning summer 2005 in order to replace an expiring purchase power contract and to meet additional load growth.

Q. How did Aquila determine that this construction was prudent?

A. Aquila utilizes the principles of least cost utility planning. Least cost utility planning is an economic analysis method with the lowest total system operating cost as the objective target. Least cost utility planning methods are applied to an Integrated Resource Plan (IRP). The IRP is the result of testing all available resource candidates under various scenarios and determining which of those candidates most economically meets the needs of the system.

Q. How did Aquila determine the candidates for meeting the resource needs?

A. Aquila developed candidates from three methods. The first method was the use of a Request for Proposals (RFP). An RFP is a formal request sent to prospective suppliers asking them to submit competitive bids to supply the resource. The second method was a process called "canvassing" where Aquila used informal contacts with other utilities at the management, operations and planning levels to promote dialog over supplying bids or

solving mutual resource goals together. The third method was to develop in-house estimates for self-build resource projects. Each of these methods produced candidates for consideration.

Q. Why is Aquila building capacity instead of renewing the existing contract or buying another contract?

A. Aquila determined through least cost planning methods that building an additional plant was part of a best-cost solution. Not all of the needed capacity is met by the new construction. Aquila is buying the remaining capacity needs.

Q. What has changed that makes building a better option?

A. There are many factors that influence the purchase price of additional capacity. Overbuilding helps to create a favorable purchase market which may have been a factor when Aquila secured cost effective purchases in the nineteen eighties and early nineteen nineties. Deeper access to markets may also favorably influence the purchase market. Open transmission access rules kept the cost of purchases down in the late nineteen nineties and the turn of the century as the amount of overbuilt generation receded. A period of rapid additions fueled by merchant expansion occurred in the early part of the 2000-decade. This merchant capacity still exists but the cost of new construction is competitive with the offers merchants are willing to make. In the case of Aquila's meeting its 2005 capacity requirements the best solution was a diverse portfolio of resources that included building resources and securing long-term capacity purchases.

Q. Did Aquila consult with anyone during the process of least cost planning?

A. Yes. Aquila met with Staff and representatives of the OPC on numerous occasions to discuss Aquila's progress during the planning process. These meetings were designed to keep these representatives informed and to provide valuable feedback to Aquila about the representatives concerns.

Q. Did the Staff and the OPC approve the resource addition?

A. Aquila did not seek nor receive approval. The goal of the meetings was to keep the representatives informed and seek feedback, generally, on the prudence/reasonableness of Aquila's actions.

Q. Does this conclude your testimony?

A. Yes

Schedule JGB – 1: Comparison of Capacity Mix

Unit	Capacity (MW) Test Case	2004	Forecast 2005	
Sibley Generating Station Unit 1	54	54	54	
Sibley Generating Station Unit 2	53	53	53	
Sibley Generating Station Unit 3	395	395	395	
Ralph Green 3	69	69	69	
KCI 1	15	15	15	
KCI 2	16	16	16	
Greenwood Energy Center Unit 1	60	60	60	
Greenwood Energy Center Unit 2	62	62	62	
Greenwood Energy Center Unit 3	60	60	60	
Greenwood Energy Center Unit 4	60	60	60	
Nevada	20	20	20	
Jeffrey Energy Center Unit 1	57	57	57	
Jeffrey Energy Center Unit 2	57	57	57	
Jeffrey Energy Center Unit 3	57	57	57	
Lake Road Boiler #4unit-#6boiler	96.8	96.8	96.8	
Lake Road Generator #1	20	20	20	
Lake Road Generator #2	25	25	25	
Lake Road Generator #3	10	10	10	
Lake Road #5	62	62	62	
Lake Road #6 Jet	20	20	20	
Lake Road #7 Jet	20	20	20	
Iatan (18% Ownership)	121	121	121	
NPPD Cooper	75	0	75	
NPPD Gentleman	100	100	100	
Wind MPS	13	13	13	
Wind SJLP	7	7	7	
South Harper 1	105	0	105	(1)
South Harper 2	105	0	105	(2)
South Harper 3	105	0	105	(3)
Purchase (Project X)	200	0	200	(4)
Calpine Aries	0	500	0	
Crossroads	0	0	200	(5)
Other	0	50	100	(6)
Total Capacity	2120	2080	2213	
Forecast Peak	1810	1751	1821	
Actual Peak		1735		
Capacity Reserve	310	329	392	
Capacity Margin	14.6%	15.8%	17.7%	

1 - Estimated In Service - 7/1/2005 - Not included in 2005 Capacity calculation
2 - Estimated In Service - 8/1/2005 - Not included in 2005 Capacity calculation
3 - Estimated In Service - 9/1/2005 - Not included in 2005 Capacity calculation
4 - Project X is anticipated purchase currently in negotiation
5 - Capacity Purchase to cover South Harper construction Contingencies
6 - Non-renewing 1-year purchases from Sunflower Energy

Schedule JGB - 2: 3-Month Average 2006 NYMEX Strip, Oct 1 to Dec 31, 2004

2006 Futures Average	
Jan	7.529
Feb	7.507
Mar	7.286
Apr	6.298
May	6.129
Jun	6.147
Jul	6.168
Aug	6.190
Sep	6.162
Oct	6.189
Nov	6.488
Dec	6.764
Annual	6.5

Schedule JGB-3: Coal Shortfall Supplements

2004	**Sibley**				**Freight**		
	Tons	**Supplier**	**Mine**	**Coal Price**	**UP RR**	**BNSF**	
May	24,738.50	Andalex	Tower	$32.00	$11.59	$0.83	
June	36,298.40	Andalex	Tower	$32.00	$11.59	$0.83	
July	23,668.50	Andalex	Tower	$31.50	$11.98	$0.85	
August	12,078.70	Andalex	Tower	$31.00	$11.98	$0.85	
September	12,532.10	Andalex	Tower	$31.00	$11.98	$0.85	
October	11,734.00	Andalex	Tower	$31.00	$11.98	$0.86	
November	12,351.85	Knight Hawk	Captain	$26.00	$10.28	$0.86	
December	11,795.00	Knight Hawk	Captain	$26.00	$11.06	$0.86	
2005	**Sibley**				**Freight**		
	Tons	**Supplier**	**Mine**	**Coal Price**	**UP RR**	**BNSF**	
January	11,047.79	Consol	Emery	$39.35	$12.29	$0.86	
	11,532.68	Arch	West Elk	$31.00	$12.85	$0.86	
	11,126.14	Consol	Emery	$39.50	$12.29	$0.86	
February	12,626.20	Knight Hawk	Captain	$26.00	$10.86	$0.86	
March	11,041.79	Consol	Emery	$39.50	$12.29	$0.86	
	10,708.59	Consol	Emery	$39.50	$12.29	$0.86	
	12,642.00	Knight Hawk	Captain	$26.00	$10.79	$0.86	
April	n/a	-	-	-	-	-	
May	11,438.33	Consol	Emery	$39.50	$12.29	$0.88	
	12,581.00	Knight Hawk	Captain	$26.00	$10.79	$0.88	
2004	**Lake Road**				**Freight**		
	Tons	**Supplier**	**Mine**	**Coal Price**	**UP RR**		
June	12,016.00	Andalex	Tower	$32.00	$13.55		
July	n/a	-	-	-	-		
August	11,770.00	Andalex	Tower	$32.00	$13.55		
September	11,564.90	Andalex	Tower	$31.00	$13.55		
October	11,154.20	Andalex	Tower	$31.00	$13.55		
2005	**Lake Road**				**Freight**		
	Tons	**Supplier**	**Mine**	**Coal Price**	**UP RR**		
January	11,084.60	Arch	West Elk	$31.00	$14.79		
February	n/a	-	-	-	-		
March	11,344.85	Arch	West Elk	$31.00	$14.79		
April	11,191.18	Arch	West Elk	$31.00	$15.35		

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 JERRY G. BOEHM

Jerry G. Boehm, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Direct Testimony of Jerry G. Boehm;" 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.

J. G. Boehm
Jerry G. Boehm

Subscribed and sworn to before me this 24th day of May, 2005.

Terry D. Lutes
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