Exhibit No.:	
Issues:	*Overview of Electric Generation; Fuel and Purchased Power Expense; Fuel Prices; Demand Charges-Purchased Power Capacity Contracts; Fuel Inventories; Transmission Expense; and Emission Allowances*
Witness:	*Graham A. Vesely*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Direct Testimony*
Case Nos.:	*ER-2004-0034 and HR-2004-0024 (consolidated)*
Date Testimony Prepared:	*December 9, 2003*

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

GRAHAM A. VESELY

AQUILA, INC. d/b/a AQUILA NETWORKS-MPS (Electric)

AND AQUILA NETWORKS-L&P (Electric and Steam)

CASE NOS. ER-2004-0034 AND HR-2004-0024

(Consolidated)

Jefferson City, Missouri
December 2003

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of Aquila, Inc. d/b/a Aquila Networks L&P and Aquila Networks MPS to implement a general rate increase in electricity.	)))	Case No. ER-2004-0034
In the matter of Aquila, Inc. d/b/a Aquila Networks L&P to implement a general rate increase in Steam Rates.	)))	Case No. HR-2004-0024

AFFIDAVIT OF GRAHAM A. VESELY

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Graham A. Vesely, of lawful age, on his oath states: that he has participated in the preparation of the following Direct Testimony in question and answer form, consisting of 13 pages to be presented in the above case; that the answers in the following Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

Graham A. Vesely

Subscribed and sworn to before me this 8th day of December 2003.

Notary Public

TONI M. CHARLTON
NOTARY SEAL
NOTARY PUBLIC
STATE OF MISSOURI

TONI M. CHARLTON
NOTARY PUBLIC STATE OF MISSOURI
COUNTY OF COLE
My Commission Expires December 28, 2004

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CASE NOS. ER-2004-0034 AND HR-2004-0024

(Consolidated)

Q. Please state your name and business address.

A. Graham A. Vesely, Noland Plaza Office Building, 3675 Noland Road, Suite 110, Independence, MO 64055.

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

A. I am a Regulatory Auditor for the Missouri Public Service Commission (Commission).

Q. Please describe your education background.

A. In May of 1985, I received a Bachelor's degree in Civil Engineering from Saint Martins College, Olympia, Washington. In May of 1998, I completed an MBA degree with a focus in Accounting from Central Missouri State University, Warrensburg, Missouri. I am a Certified Public Accountant with a permit to practice in Missouri.

Q. Please describe your employment history.

A. In May of 1985, I was employed as a Facilities Maintenance Engineer by the United States Air Force. From March 1988 until May 1995, I was employed by the Army Corps of Engineers as a member of a construction management group. Subsequently, I began working with the engineering firm of Malsy & Associates,

Lincoln, Missouri, as a Civil Engineer. On February 26, 1999, I began my current employment with the Commission.

Q. What is the nature of your duties while in the employ of this Commission?

A. I am responsible for assisting in the audits and examinations of the books and records of utility companies operating within the state of Missouri.

Q. With reference to Case Nos. ER-2004-0034 and HR-2004-0024, have you made an investigation of the books and records of Missouri Public Service (MPS) and Light and Power (L&P), two divisions of Aquila Inc. (Aquila or Company) relating to the proposed rate application?

A. Yes, with the assistance of other members of the Commission Staff (Staff).

Q. Have the electric and steam cases been combined?

A. Yes, these two cases have been consolidated by the Commission's Order Consolidating Cases issued July 24, 2003.

Q. Have you filed testimony previously?

A. Yes. Schedule 1 attached to this direct testimony identifies the cases in which I have participated.

Q. Please describe your principal areas of responsibility in this case.

A. In the area of fuel and purchased power expense I am responsible for determining the price of coal, natural gas, and fuel oil that was used in the Staff's case, as well as for assigning the value of fuel inventories used in the Staff's case. I am also responsible for annualizing the expense associated with sulfur dioxide emissions allowances, and transmission expense.

Q. What knowledge, skills, experience, training, or education do you have in these subjects?

A. I have acquired general knowledge of these topics through my experience in previous rate cases before this Commission. I have reviewed the testimony, work papers, and order from the previous MPS and L&P cases. I have reviewed the Company's testimony, work papers, and data request responses related to these topics. In addition, my college coursework included accounting, auditing, and engineering classes. During my employ with the Commission I have attended formal training on regulatory issues and received informal on-the-job training from senior audit Staff throughout the course of this and previous audits.

Q. What adjustments are you sponsoring in Case Nos. ER-2004-0034 and HR-2004-0024

A. I am sponsoring the following adjustments to the Income Statement Accounting Schedule 9:

MPS: S-10.5, S-15.3, S-22.2, S-30.1, S-31.1, and S-39.1

L&P (Electric): S-10.4, S-12, S-16.2, S-23.1, S-28.1, S-29.1, and S-38.1

L&P (Steam): S-5.1

OVERVIEW OF ELECTRIC GENERATION

Q. What generating facilities does the Company own and use for the production of electric power?

Missouri Public Service (MPS)

A. Aquila owns, wholly or in part, the following electrical power generating facilities:

Jeffrey Energy Center--Units 1, 2 and 3 (8% ownership share)

Sibley Units 1, 2 and 3 (100%)

Greenwood 1, 2, 3 and 4 (100%)

Nevada (100%)

Ralph Green (100%)

KCI (100%)

Q. Please describe each plant, including the type of units at each plant and the primary and secondary fuel sources for each.

A. The Jeffrey Energy Center (Jeffrey) is jointly owned by Westar Energy (Westar) and Aquila-MPS, with Aquila-MPS's ownership share being 8%. Westar is the operating partner of the three generating units at Jeffrey. Each of the Jeffrey units is a base-load steam unit utilizing coal as the primary fuel and No. 2 oil for start-ups and flame stabilization. The first unit at Jeffrey went into service in 1978 and the last unit went into commercial operation in 1983.

The Sibley generating station consists of three coal-burning base-load units, the first and last units of which went into commercial operation in 1960 and 1969, respectively.

The Greenwood plant consists of four gas turbines. The first went into service in 1975 and the last went into commercial operation in 1979. In 1996, this

facility was converted from oil to natural gas as its primary fuel. Oil continues to be used mainly as an emergency backup fuel.

The Nevada generating facility, which consists of one oil-fired turbine used for peaking purposes, went into service in 1974.

The Ralph Green plant went into commercial operation in 1981 and consists of one gas turbine peaking unit.

The KCI plant was purchased by Aquila-MPS in 1977, and consists of two gas turbine peaking units.

Light&Power (L&P)

Aquila-L&P's generating facilities include the Lake Road station and the Iatan station. L&P owns 100% of the Lake Road station. Kansas City Power & Light Company (KCPL) is the majority owner (70%) and operator of the Iatan station. L&P owns 18% of the Iatan station, while The Empire District Electric Company owns the remaining 12%.

Q. Please describe the Iatan station and Lake Road station.

A. Iatan is a large 670-megawatt (MW) base-load power plant that utilizes low cost, low sulfur western coal as the boiler fuel. No. 2 fuel oil is required for boiler start-ups and flame stabilization.

The Lake Road station consists of four steam-turbine generators, three combustion turbines, six steam boilers and one heat recovery steam generator. The station's generating units have a combined net electric generating capability of 254 MW. The station consists of three separate systems: a 900-pound system, an 1,800-pound

system and a combustion turbine (CT) system. The 900-pound system also supplies steam to industrial customers.

Q. What types of fuel do these systems use?

A. The 900-pound system uses coal and natural gas. The 1,800 pound system uses coal as the primary fuel and natural gas as the start-up fuel or as an alternative fuel. The CT system consists of CT No. 5 and two aircraft jet turbines. CT No. 5 uses natural gas and the jets burn No. 2 fuel oil.

FUEL AND PURCHASED POWER EXPENSE

Q. What was your responsibility in this case with regard to fuel and purchased power expense?

A. I was responsible for establishing the prices that the Staff would adopt in its case for coal, natural gas, and fuel oil burned in the Company's generating facilities; I also calculated the annual level of demand expense Aquila incurs under its existing purchased power contracts, except for the MEPPH contract for which I was provided a value by Staff witness Mark L. Oligschlaeger. I provided MPS and L&P fuel prices to Staff witness David Elliott (of the Engineering Section of the Energy Department) for input into the RealTime™ production cost model (production cost model or fuel model) on a joint dispatch basis. Staff witness Elliott input these prices to the fuel model to compute normalized net system fuel and purchased power expense, exclusive of purchased power demand charges, cost of off-system sales (sales to other electric utilities), and cost of energy exchanged. I subsequently added the costs associated with purchased power capacity (demand) charges to the fuel model's results. I also added the

following costs to the fuel model's results to arrive at an overall total annualized level of fuel and purchased power expense:

- Maintenance and leasing costs for unit trains
- Fixed (demand) natural gas transportation costs
- Non-labor fuel handling costs

The RealTime™ production cost model will be discussed in detail by Staff witness Elliott in his direct testimony. Labor costs related to fuel handling will be addressed in Staff witness Dana E. Eaves' payroll annualization. Property taxes related to unit trains will be addressed in Staff witness Trisha D. Miller's property tax annualization.

FUEL PRICES

Q. Were the coal prices the same for each plant?

A. No. The coal burned at each plant may not be the same, may be provided under a different contract, and may be subject to different freight charges.

Q. How were the fuel prices for coal determined?

A. The fuel prices were based on contractual coal and freight prices at September 30, 2003. Aquila uses a blend of two different coals at its Sibley and Lake Road coal-burning plants that is optimal for the operational characteristics of the unit; therefore I provided Staff witness Elliott with a blending percent for each coal, in accordance with the mix used historically at each plant. At Jeffrey Energy Center the contract identifies a price for the first specified level of tons per year of coal received under the contract ("Tier 1" price), and another price for all coal beyond that amount

received under the contract ("Tier 2" price). This fact is reflected in my computation of coal prices provided to witness David Elliott for input to the Staff's fuel model.

Q. How did you arrive at the fuel oil prices that you provided to Staff witness Elliott?

A. Aquila burns No. 2 oil as a primary fuel at its Nevada facility. All other No. 2 fuel oil is burned as an emergency fuel or for start-ups and flame stabilization. I am sponsoring a price for fuel oil at the Nevada, Greenwood, and Lake Road plants based on data of Aquila's most recent purchases at that plant. Finally, at Iatan I am sponsoring a fuel price based on prices used by Aquila to value its fuel inventory at that site, as no other information was obtained in response to a Staff data request.

Q. How did you arrive at the price of natural gas for generation used in the Staff's model?

A. I averaged the prices Aquila actually paid throughout the test year and the update period. Further, instead of trying to establish one single price for all of Aquila's power plants where natural gas is used, I am sponsoring a separate natural gas price at each location in order to better reflect Aquila's actual cost at that site. All of the Staff's natural gas prices reflect the commodity price of natural gas and include any pipeline costs Aquila is charged for delivery to each power plant site. These prices do not include any fixed demand charges for pipeline transportation. Those fixed charges are added to fuel costs to arrive at total fuel expense.

Q. Why did you select an average of gas prices over the twelve-month period of the test year and the nine months of the update period, for a total of twenty-one months?

A. First, consistent with the Staff's practice, I have relied on historical prices only and not on any forecasts for the price of gas beyond September 30, 2003. Second, because the price of natural gas tends to fluctuate up and down, it is common to use some kind of averaging method. The actual price Aquila paid for natural gas did vary widely from the beginning of the test year through the end of the update period. The Staff's averaging method gives equal weight, without bias, to the price Aquila paid each month for natural gas at each power plant.

Q. Why is the Staff not recommending a mechanism of the type that includes an additional charge to customers for a limited period of time, subject to true-up and refund if gas prices ended up being low enough?

A. Such a mechanism might be helpful; however, it is the Staff's understanding that this Commission cannot impose such a measure on Aquila and that, rather, a proposal of this type requires the concurrence of Aquila.

Q. Please describe one example of such a mechanism.

A. Staff has previously concurred with a plan under which a base amount of fuel and purchased power expense is designed into permanent utility rates, and an additional amount of expense is included in rates on a temporary basis during the period of especially high natural gas price uncertainty. At the end of the pre-determined period of time an audit is held of the utility's fuel and purchased power costs, and any over-collection (determined based, among other things, on the cost paid for natural gas) is refunded to customers, with interest.

Q. Where has this type of mechanism been used before?

A. Most recently it was used in Case No. ER-2001-299, The Empire District Electric Company (Empire). Earlier, in the 1980s, it was employed to include forecasted fuel costs in Kansas City Power and Light and Empire cases when the price of coal and natural gas increased to significantly above normal historical levels.

Q. If the Staff did propose using this type of mechanism in this case, what range of natural gas prices would it recommend for computing total fuel and purchased power expense?

A. While I cannot say what the impact on total fuel and purchased power expense would be at this point, based on a review of historical natural gas prices, the Staff would recommend a base fuel and purchased power expense amount with a ceiling, subject to a true-up and refund provision. As part of this process, natural gas prices included in the Staff's calculations would be higher than those being recommended in this direct filing.

Q. What would be the benefit of doing this?

A. If an agreement among all parties were reached and the Commission approved such a plan, with rates to be set accordingly, Aquila would have some protection against having to pay natural gas prices above those I am sponsoring in my direct testimony. Customers' rates would reflect natural gas prices actually paid by Aquila (up to the top of the range) in providing them with utility service. However, any funds collected for fuel and purchased power above those required to meet actual costs would be refunded to customers, with interest. If natural gas prices paid by Aquila for producing electrical service turned out to be low enough, customers could well see

savings they would otherwise not experience using the prices I am sponsoring in my direct testimony.

Q. Is Aquila's current financial condition a concern in using this type of a mechanism?

A. Yes. As Aquila would be collecting from customers funds that are subject to refund, the Staff would agree with using this mechanism only if it were possible to exclude these funds from being in any way subject to the claims of Aquila's creditors and shareholders.

DEMAND CHARGES-PURCHASED POWER CAPACITY CONTRACTS

Q. Please list the capacity contracts that Aquila had as of the end of the update period.

A. Aquila had contracted with the following organizations to secure firm purchased power arrangements:

MPS

- Sunflower Electric Power Corporation
- MEP Pleasant Hill (Base)
- MEP Pleasant Hill (Peak)

L&P

- Sunflower Electric Power Corporation
- Nebraska Public Power District

Q. How did you reflect the contractual purchased power demand costs in this case?

A. I annualized the demand costs Aquila pays under these contracts by multiplying the respective monthly demand charges by twelve and summing up the results, with the exception of the MEP Pleasant Hill contract. Staff witness Mark L. Oligschlaeger provided me with the total (base and peak) annualized demand charge for MEP Pleasant Hill.

FUEL INVENTORIES

Q. What was your responsibility in this case regarding fuel inventories?

A. My responsibility was to determine a reasonable value for fuel inventory to include in rate base. Aquila maintains inventories of coal at its Sibley, Jeffrey, Lake Road, and Iatan plants. It maintains fuel oil inventories at Greenwood, Nevada, Lake Road and Iatan.

Q. What coal inventory levels have you included in this case?

A. The Staff has included a 61-day supply for coal inventories at the Sibley plant, a 72-day supply at Jeffrey, a 49-day supply at Iatan and a 75-day supply at Lake Road. The numbers of days are consistent with the inventory policies of Sibley, Jeffrey, Iatan and Lake Road generating facilities. The inventory tonnages represent coal quantities sufficient for the respective number of average-burn days, as per the results of the generation levels determined using the production cost model. A 13-month average has been used for oil inventories for purposes of this case.

TRANSMISSION EXPENSE

Q. Please explain your adjustment in this area.

A. Aquila has contracts securing the ability to use the transmission lines owned by other companies or organizations, in order to be able to receive the power it

purchases under certain firm commitments. For Aquila-MPS I have annualized the transmission expense paid to Sunflower and MAPP in order to be able to transmit the power received under the firm purchase agreement with Sunflower. For Aquila-L&P I have annualized the transmission expense paid to NPPD in order to be able to transmit the power received under the firm purchase agreement with NPPD. The adjustments represent the amounts by which the test year level of expense must be increased or decreased in order to include the Staff's annualized values in this case.

EMISSION ALLOWANCES

Q. What were your responsibilities in this area?

A. I was responsible for including in the Staff's case the annualized level of expense Aquila pays to secure rights from the Federal Government to produce sulfur dioxide emissions from its power plants as a result of burning fossil fuels. Aquila secures these rights by purchasing emission credits, or allowances, which are then held in reserve until they are either used up by Aquila or possibly, if not entirely needed for its operations, sold to other utilities. The unused level of emissions allowances that Aquila carried on its books at September 30, 2003 is included, on a 13-month average basis, in rate base.

Q. Does this conclude your direct testimony?

A. Yes, it does.

GRAHAM A. VESELY

CASE PARTICIPATION

Date Filed	Issue	Case Number	Exhibit	Case Name
4/19/2001	Payroll	GR2001292	Direct	Missouri Gas Energy, A Division of Southern Union Company
4/19/2001	Payroll Taxes	GR2001292	Direct	Missouri Gas Energy, A Division of Southern Union Company
5/13/1999	Maintenance Expense Normalization	ER99247	Direct	St. Joseph Light & Power Company
4/19/2001	Cash Working Capital	GR2001292	Direct	Missouri Gas Energy, A Division of Southern Union Company
5/13/1999	Maintenance Expense Normalization	EC98573	Direct	St. Joseph Light & Power Company
5/13/1999	Customer Growth	EC98573	Direct	St. Joseph Light & Power Company
5/13/1999	Customer Growth	ER99247	Direct	St. Joseph Light & Power Company
5/13/1999	Maintenance Expense	GR99246	Direct	St. Joseph Light & Power Company
4/19/2001	Bonuses	GR2001292	Direct	Missouri Gas Energy, A Division of Southern Union Company
5/13/1999	Normalization	GR99246	Direct	St. Joseph Light & Power Company
12/6/2001	Payroll Taxes	EC2002265	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service
12/6/2001	Incentive Compensation	EC2002265	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service
10/16/2002	Fuel and Purchase Power Expense	ER2002424	Surrebuttal	The Empire District Electric Company
8/16/2002	Fuel Inventory	ER2002424	Direct	The Empire District Electric Company
3/1/2000	Pension Asset Transfer	GM2000312	Rebuttal	Atmos Energy Company and Associated Natural Gas Company
12/6/2001	Payroll	EC2002265	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service
12/6/2001	Fuel Inventories	ER2001672	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service
8/16/2002	Fuel and Purchase Power	ER2002424	Direct	The Empire District Electric Company
12/6/2001	Fuel Inventories	EC2002265	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service
12/6/2001	Insentive Compensation	ER2001672	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service
12/6/2001	Payroll	ER2001672	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service

Date Filed	Issue	Case Number	Exhibit	Case Name
12/6/2001	Employee Benefits	EC2002265	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service
12/6/2001	Payroll Taxes	ER2001672	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service
12/6/2001	Employee Benefits	ER2001672	Direct	UtiliCorp United Inc. d/b/a Missouri Public Service
1/22/2002	Incentive Compensation	EC2002265	Surrebuttal	UtiliCorp United Inc. d/b/a Missouri Public Service
1/22/2002	Incentive Compensation	ER2001672	Surrebuttal	UtiliCorp United Inc. d/b/a Missouri Public

INFORMAL CASES

Raytown Water Company

Timbercreek Sewer Company

Silverleaf Resorts

Taney County Utilities