

Exhibit No.: 1119

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 No.: ER-2004-0034

Date Testimony Prepared: December 9, 2003 as modified February 27, 2004

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

DIRECT TESTIMONY

OF

GRAHAM A. VESELY

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

CASE NO. ER-2004-0034

*Jefferson City, Missouri
December 2003*

FILED²

FEB 27 2004

**Missouri Public
Service Commission**

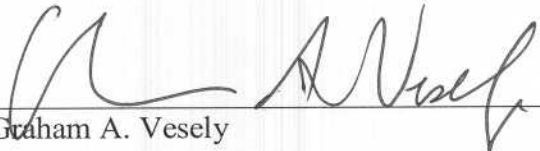
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

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

AFFIDAVIT OF GRAHAM A. VESELY

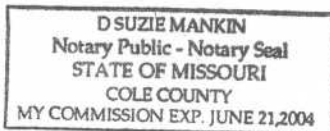
STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Graham A. Vesely, of lawful age, on his oath states: that he has participated in the preparation of the following direct testimony as modified on February 27, 2004, in question and answer form, consisting of 13 pages to be presented in the above case; that the answers in the following direct testimony as modified on February 27, 2004, 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 26th day of February 2004.





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

CASE NO. ER-2004-0034

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Direct Testimony of
Graham A. Vesely

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

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

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

6 Q. With reference to Case No. ER-2004-0034, have you
7 made an investigation of the books and records of Missouri Public Service (MPS)
8 , division of Aquila Inc. (Aquila or Company) relating to the
9 proposed rate application?

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

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15 Q. Have you filed testimony previously?

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

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

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

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

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

11 Q. What adjustments are you sponsoring in Case No. ER-2004-0034
12 ?

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

15 MPS: S-10.5, S-15.3, S-22.2, S-30.1, S-31.1, and S-39.1
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19 **OVERVIEW OF ELECTRIC GENERATION**

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

1 **Missouri Public Service (MPS)**

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

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

5 Sibley Units 1, 2 and 3 (100%)

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

7 Nevada (100%)

8 Ralph Green (100%)

9 KCI (100%)

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

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

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

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

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

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

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

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

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8 **FUEL AND PURCHASED POWER EXPENSE**

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

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

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

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

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

11 **FUEL PRICES**

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

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

15 Q. How were the fuel prices for coal determined?

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

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

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

5 A. Aquila burns No. 2 oil as a primary fuel at its Nevada facility. All other
6 No. 2 fuel oil is burned as an emergency fuel or for start-ups and flame stabilization.
7 I am sponsoring a price for fuel oil at the Nevada and Greenwood plants
8 based on data of Aquila’s most recent purchases at that plant.

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

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

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

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

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

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

14 Q. Please describe one example of such a mechanism.

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

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

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

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

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

14 Q. What would be the benefit of doing this?

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

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

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

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

9 **DEMAND CHARGES-PURCHASED POWER CAPACITY CONTRACTS**

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

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

14 MPS

- 15 • Sunflower Electric Power Corporation
- 16 • MEP Pleasant Hill (Base)
- 17 • MEP Pleasant Hill (Peak)

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

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

6 **FUEL INVENTORIES**

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

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

11 .
12 Q. What coal inventory levels have you included in this case?

13 A. The Staff has included a 61-day supply for coal inventories at the Sibley
14 plant and a 72-day supply at Jeffrey

15 . The numbers of days are consistent with the inventory policies of Sibley and
16 Jeffrey generating facilities. The inventory tonnages represent coal
17 quantities sufficient for the respective number of average-burn days, as per the results of
18 the generation levels determined using the production cost model. A 13-month average
19 has been used for oil inventories for purposes of this case.

20 **TRANSMISSION EXPENSE**

21 Q. Please explain your adjustment in this area.

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

1 purchases under certain firm commitments. For Aquila-MPS I have annualized the
2 transmission expense paid to Sunflower and MAPP in order to be able to transmit the
3 power received under the firm purchase agreement with Sunflower.

4

5 The adjustment
6 represents the amount by which the test year level of expense must be increased or
7 decreased in order to include the Staff's annualized value in this case.

8 **EMISSION ALLOWANCES**

9 Q. What were your responsibilities in this area?

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

18 Q. Does this conclude your direct testimony?

19 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