

Exhibit No.:

Issues: Aries

Witness: Max A. Sherman

Sponsoring Party: Aquila Networks-MPS  
& L&P

Case No.: ER-2004-0034 &  
HR-2004-0024  
(Consolidated)

Before the Public Service Commission  
of the State of Missouri

FILED

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MISSOURI

Surrebuttal Testimony

of

Max A. Sherman

\*\*Denotes Highly Confidential Information\*\*

NP

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MAX A. SHERMAN  
AQUILA, INC. D/B/A AQUILA NETWORKS-MPS  
AND AQUILA NETWORKS-L&P  
CASE NOS. ER-2004-0034 AND HR-2004-0024  
(CONSOLIDATED)**

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**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI  
SURREBUTTAL TESTIMONY OF MAX A. SHERMAN  
ON BEHALF OF AQUILA, INC.  
D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P  
CASE NOS. ER-2004-0034 AND HR-2004-0024 (CONSOLIDATED)**

**INTRODUCTION**

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Q. Please state your name and business address.

A. Max A. Sherman, 10418 West 125<sup>th</sup> Terrace, Overland Park, KS 66213.

Q. What is the purpose of your testimony?

A. I have been retained by Aquila, Inc. (“Aquila” or “Company”) to review and respond to the Commission Staff’s (“Staff”) rebuttal testimony as filed in Case No. ER-2004-0034, as that testimony relates to the charges being paid by Aquila Networks – Missouri Public Service (“MPS” or “Missouri Public Service”) to MEP Pleasant Hill, LLC for capacity and energy supplied to MPS by the Aries Plant in Pleasant Hill, Missouri.

Q. Are you the same Max A. Sherman who previously filed rebuttal testimony in this proceeding?

A. Yes. I filed rebuttal testimony on January 26, 2003 on the Aries power plant.

Q. How have you organized your surrebuttal testimony?

A. I will be addressing the rebuttal testimony of Staff witnesses Mr. Mark L. Oligschlaeger and Mr. Cary G. Featherstone as their direct testimony addressed the issue of the Aries Power Supply Agreement (“PSA”) and their proposed disallowance of a portion of the capacity charges related to that contract. I have organized my rebuttal testimony as follows:

- 1 1. I explain why the capacity price adjustment of \$106,250/year is fully justified and  
2 should be allowed in rates, contrary to Mr. Featherstone's disallowance proposal.
- 3 2. I briefly review why Mr. Oligschlaeger's assertions on the cost of Aries are  
4 incorrect and have already been rebutted.
- 5 3. I note how Staff ignored third party sales data when asserting that Aries should  
6 have been owned by MPS.
- 7 4. I explain why Staff assertions that ownership and lease costs are the same is  
8 incorrect.

9 **1. THE CAPACITY PRICE ADJUSTMENT OF \$106,250 IS FULLY**  
10 **JUSTIFIED AND SHOULD BE ALLOWED IN RATES**

11 Q. What is the purpose of this part of your testimony?

12 A. Mr. Featherstone, on pages 54 and 55 of his rebuttal testimony, proposed to disallow an  
13 upward adjustment in the Aries capacity charge of \$106,250/year. My purpose is to  
14 explain the basis for the cost adjustment in the PSA. I show why it is just and reasonable  
15 and should be allowed in its entirety.

16 Q. Did the PSA provide for adjustments to the capacity charge?

17 A. Yes. It provided for (1) a change in the estimated cost of the combustion turbines, up to  
18 \$500,000 per turbine; (2) a change in MEPPH's electric interconnection costs; and (3) an  
19 adjustment for a second natural gas pipeline interconnection if MPS approved. The  
20 contract provisions are in Section 5.1 of the PSA.

21 Q. Please describe the limited price adjustment rights.

1 A. Section 5.1 (a) provided for a limited price adjustment to the capacity charge if the price of  
2 the combustion turbines, delivered to the nearest rail siding, exceeded \$32 million per  
3 turbine. The price adjustment was set at \$0.055 per kW-month for a \$1 million increase in  
4 the equipment price, and would apply to price increases of up to \$500,000/turbine. Section  
5 5.1 (b) capped MEPPH's exposure to costs on the interconnection with MPS at \$2,000,000.

6 To the extent MEPPH's cost differed from that amount, the capacity charge would be  
7 adjusted up or down in the same manner as described above for combustion turbine price  
8 increases. Section 5.1 (c) provided for a cost adjustment for a second interconnection with  
9 an interstate gas pipeline, if MPS and MEPPH mutually agreed to have it built.

10 Q. Why were these provisions necessary?

11 A. At the time Aquila Merchant was participating in the MPS bidding process, costs of these  
12 items were estimated but not known with certainty. In particular:

- 13 1. The detailed scope of supply for the combustion turbines, which determined the  
14 final price, could only be established during negotiations with the equipment  
15 supplier. Those negotiations were not and could not be initiated until after Aquila  
16 Merchant was notified by MPS it had been selected for negotiations. The  
17 negotiations commenced January 19, 1999 and the purchase contract was fully  
18 executed on July 26, 1999.
- 19 2. The price of combustion turbines was rapidly increasing due to the demand and  
20 shortage of supply for that type of generating equipment, particularly the "F" class  
21 combustion turbines planned to be used for this project.

1 3. The MEPPH direct cost of interconnecting the project with MPS was not well  
2 defined.

3 4. Whether MPS needed a second interstate gas pipeline interconnection was not  
4 known at the time.

5 Q. Why was the cost of combustion turbines rapidly increasing?

6 A. The cost increases were a result of an increase in demand for these machines. In the  
7 summer of 1998, demand for power in the central U.S. caught up with available supply.  
8 In late June, demand exceeded supply due to early summer heat, extended plant  
9 maintenance outages, and a default by an Illinois municipal utility. Prices briefly hit  
10 \$5.00/kWh (\$5000/MWh) for some transactions. In addition, open access transmission  
11 service under FERC Order 888 made it possible for non-traditional entities to enter the  
12 generation supply business on a much larger scale than previously. The price spikes in  
13 summer 1998 were well publicized, and persuaded many entities to enter the generation  
14 supply business. The result was an increase in demand for combustion turbines.

15 Q. Were the contract provisions in Section 5.1 agreed to by MPS without negotiation?

16 A. No. In particular, Aquila Merchant attempted to persuade MPS to agree to accept a price  
17 adjustment for any and all increases in the price of the combustion turbines. MPS refused  
18 and would only accept an adjustment on increases of \$500,000 per combustion turbine  
19 above Aquila Merchant's initial cost estimate. See Schedule FAD-18 at pages 22-23,  
20 DeBacker's Rebuttal Testimony. Any increases above that amount would be borne by  
21 MEPPH.

22 Q. How high did combustion turbine prices get?

1 A. By summer of 1999, I was advised by a manufacturer that these "F" class machines were  
2 being offered at a base price of approximately \$39 million each. In late 2000, I received a  
3 verbal quote from a competing manufacturer of approximately \$41 million each. These  
4 amounts are considerably above the "base" price of \*\*\* \_\_\_\_\_ \*\*\* shown in  
5 Surrebuttal Schedule MS-1.

6 Q. What was the cost estimate for the two combustion turbines?

7 A. The initial estimate was \*\*\* \_\_\_\_\_ \*\*\* which is contained in  
8 Surrebuttal Schedule MS-1.

9 Q. What was the actual cost for the two combustion turbines?

10 A. The actual cost was \*\*\* \_\_\_\_\_ \*\*\*.

11 Q. Has this information been provided to Staff?

12 A. Yes. The cost of these combustion turbines was provided to Staff in response to Data  
13 Request No. MPSC-376.

14 Q. What caused the changes in the price from Aquila Merchant's cost estimate?

15 A. A list of the changes from the vendor price quote, the associated costs, and reason for  
16 each change is provided in Surrebuttal Schedule MS-1.

17 Q. Which of these changes were attributable to MPS under the PSA?

18 A. Items 1 through 4, 6 through 8, and 10 through 14 in Surrebuttal Schedule MS-1.

19 Q. Why are these items attributable to MPS under the PSA?

20 A. The explanation for each item is as follows:

21 1. Item 1 is the "base" price from the manufacturer, "stripped", with no options.

- 1 2. Item 2, freight to the rail siding nearest the plant site, is required to deliver the  
2 turbines for installation.
- 3 3. Item 3, technical field assistance to assist in commissioning of the combustion  
4 turbines, is required to provide manufacturer technical oversight and support to  
5 the engineering, procurement and construction ("EPC") contractor during  
6 installation and commissioning.
- 7 4. Item 4, operator training, is required for safe and reliable plant operation.
- 8 5. Item 6, pulse type air filter, is an equipment upgrade that limits plant downtime  
9 and power degradation associated with the air filters.
- 10 6. Item 7, redundant control computers, is a reliability enhancement.
- 11 7. Item 8, redundant serial links, is a communications upgrade between the  
12 combustion turbines and the control computers. This is a reliability enhancement.
- 13 8. Item 10, control station in the plant control room, is an operations enhancement  
14 that is standard practice.
- 15 9. Item 11, natural gas leak detection inside the combustion turbine enclosures, is a  
16 safety enhancement.
- 17 10. Item 12, additional input/output points from the combustion turbines, is an  
18 operations and maintenance enhancement.
- 19 11. Item 13, early delivery bonus, imposed a schedule incentive to help the project  
20 meet the MPS-required in-service date of June 1, 2001.
- 21 12. Item 14, performance bond, provided a financial guaranty on performance by the  
22 combustion turbine manufacturer of its contract obligations.



- 1 Q. Which combustion turbine scope changes are not be attributable to MPS under the PSA?
- 2 A. Item 5 (two kettle boilers) adds 2 MW and slightly improves the plant heat rate. MPS  
3 benefits from the heat rate improvement, but not from the capacity increase. Similarly,  
4 MPS does not directly benefit from Item 9 (Siemens Westinghouse portion of adding  
5 power augmentation through steam injection) unless a temporary plant derate requires use  
6 of this capacity to supply MPS under the PSA.
- 7 Q. What is the total combustion turbine cost attributable to MPS under the PSA?
- 8 A. The cost, excluding Items 5 and 9 in Surrebuttal Schedule MS-1, is \*\*\* \_\_\_\_\_.
- 9 \*\*\*
- 10 Q. Does this amount cover all of the allowed cost increase specified in PSA Section 5.1 (a)?
- 11 A. Yes, and then some.
- 12 Q. Would these costs have been incurred by MPS had it built and owned the plant itself?
- 13 A. In my judgment, yes. Items 1 through 4 are indisputable. Items 6, 7, 8, 10, 11 and 12  
14 concern safety, efficiency and reliability, and are prudent expenditures for any owner.  
15 Item 13 supports a MPS schedule requirement. Item 14 provided a financial guaranty on  
16 performance by the combustion turbine manufacturer of its contract obligations, also a  
17 prudent expenditure.
- 18 Q. Did Staff propose a disallowance associated with a capacity price adjustment?
- 19 A. Yes. Page 55 of Mr. Featherstone's Rebuttal Testimony proposes that \$106,250/year not  
20 be allowed by the Commission in MPS rates.
- 21 Q. What does this amount consist of?

1 A. It is the sum of the adjustments associated with a maximum \$1 million increase in  
2 combustion turbine costs, and a decrease in plant interconnection costs.

3 Q. Was there an adjustment for the second natural gas pipeline interconnection?

4 A. No. MPS agreed to the interconnection with Williams, but not Panhandle. MEPPH  
5 chose to proceed with the Panhandle interconnection anyway, so MPS got the benefit of a  
6 second pipeline interconnection at no charge.

7 Q. What is your conclusion on the merits of the proposed \$106,250/year disallowance?

8 A. The \$106,250 adjustment is fully justified and should be allowed in rates. Given the facts,  
9 no disallowance is appropriate.

10 **2. MR. OLIGSCHLAEGER'S ASSERTIONS ON THE COST OF ARIES ARE**  
11 **INCORRECT AND HAVE ALREADY BEEN REBUTTED**

12 Q. What is the purpose of this part of your testimony?

13 A. My purpose is to demonstrate that the allegations by Staff witness Mr. Oligschlaeger in  
14 his rebuttal testimony concerning Aries are incorrect, and were addressed in detail in my  
15 rebuttal testimony. Many of allegations are refuted by the existence of the major cost  
16 elements that Staff overlooked or ignored in its proposed disallowance of capacity costs  
17 under the PSA.

18 Q. Please explain.

19 A. On Page 20, lines 18-20 of his Rebuttal Testimony, Mr. Oligschlaeger stated that:

20 "Because the cost of the Aries capacity to MPS's affiliated supplier is less than  
21 the market value paid by MPS for that power, MPS's rates should reflect only the  
22 cost to Aquila of the Aries unit capacity."  
23

24 Q. Why is this statement incorrect?

1 A. Numerous reports and other documents describing the costs of owning and operating the  
2 Aries Power Plant were provided to Staff in response to multiple data requests.  
3 Additionally, the costs were summarized and provided to Staff during a pre-hearing  
4 conference on January 13, 2004. That information is also presented in Schedule MS-8 of  
5 the Highly Confidential version of my rebuttal testimony, and is discussed in detail on pages  
6 29 through 41 of that testimony. I explained that the actual costs were much greater than  
7 the values used by Staff, and that Staff's conclusions were invalid when the actual cost data  
8 was used.

9 Q. Did Staff review the responses in the data room that contained this information?

10 A. Yes.

11 1. Staff spent over 76 hours reviewing the responses through December 31, 2003.

12 This does not include time spent reviewing those responses in the offices of the  
13 Company's law firm in Jefferson City. For example, Mr. Featherstone spent almost  
14 five hours reviewing the response to Data Request No. MPSC-231 containing  
15 project financial statements and detailed cost information. The response to Data  
16 Request MPSC-289, containing variable O&M expense, was reviewed by Mr.  
17 Oligschlaeger for over three hours and by Mr. Featherstone for over four hours.

18 2. Mr. Oligschlaeger stated, on pages 22 and 23 of his deposition, that he spent five or  
19 six days reviewing data room documents.

20 3. Mr. Featherstone, on pages 19 and 20 of his deposition, stated: "There is a data  
21 room process that has been created that we were able to, through discovery, obtain  
22 documents that was more germane to the tolling agreements, as an example.

1           There's information there that was plant specific in terms of actual operations of  
2           Aries." On page 23 of his deposition, Mr. Featherstone referred to "...budgets from  
3           the Aries plant project, and I believe there's some actual cost data, monthly cost  
4           data" that he examined in the data room. He testified on page 37 that he spent a  
5           "considerable" amount of time looking at a document that contained O&M cost  
6           information.

7   Q.   Did Staff acknowledge they had the information?

8   A.   Yes. Mr. Oligschlaeger acknowledged, on page 36 of his rebuttal testimony, that "[t]he  
9   Company has provided the Staff with certain additional information regarding Aries costs  
10   during the pre-hearing conference to this case." The Company reminded the Staff during  
11   the pre-hearing conference on January 13, 2004 that this information had been previously  
12   supplied in response to data requests.

13   Q.   Did Staff use the cost information contained in the data room in preparing their  
14   testimony?

15   A.   Mr. Oligschlaeger stated in his deposition (page 55) that he did "not directly" use the  
16   information. Mr. Featherstone, in his deposition (page 18) in response to a question on  
17   differences between his testimony in this and the previous rate case, stated "Conceptually,  
18   it'll be the same." Mr. Featherstone, in response to a question on whether he used any of  
19   that operating and maintenance ("O&M") information in preparing his testimony, stated  
20   "No" (See Featherstone deposition page 37).

21       **3.    STAFF IGNORED THIRD PARTY SALES DATA WHEN ASSERTING**  
22       **THAT ARIES SHOULD HAVE BEEN OWNED BY MPS**

1 Q. Did Staff consider revenues from sales to third parties in its argument that the plant  
2 should have been built and owned by MPS?

3 A. No.

4 Q. Please explain.

5 A. Mr. Oligschlaeger, on page 25 of his Rebuttal Testimony, stated:

6 "Concerning the point that rate base treatment would mean the full cost of the Aries  
7 unit would be reflected in customer rates, that cost would be offset under the normal  
8 ratemaking process by the proceeds of interchange sales made from the Aries unit  
9 during off-peak periods (i.e., MPS's ability to sell power during off-peak periods  
10 due to its reduced need for power during that time). One would have to know the  
11 amount of projected interchange sales, and the estimated proceeds from those sales  
12 before reaching a firm conclusion on whether rate basing or leasing the unit would  
13 be more economical from a ratepayer viewpoint."  
14

15 Q. Was interchange sales information provided to Staff?

16 A. Yes. Information on capacity and energy sales to third parties, from the capacity not sold  
17 to MPS, was provided in response to Data Request No. MPSC-386.

18 Q. What data is contained in this response?

19 A. The response contains data on capacity and energy sales, from the capacity not sold to  
20 MPS, from June 2001 through September 2003. The capacity not sold to MPS is 385  
21 MW during the winter months (October through March) period, and 85 MW during the  
22 summer months (April through September).

23 Q. Did Staff review this information?

24 A. Yes. As documented in Schedule MS-7 of my Rebuttal Testimony, Mr. Oligschlaeger  
25 checked out the response to this Data Request for 23 minutes on October 30, 2003. Mr.  
26 Featherstone checked out the response for 644 minutes on November 20 and 21, 2003.  
27 The total time Staff reviewed this response in Aquila's data room in Kansas City is over

1 eleven hours. This particular response was photocopied on December 2 for transmittal to  
2 Staff.

3 Q. Did Staff use this information in their rebuttal testimony?

4 A. No. The information was not cited in Staff's rebuttal testimony. As noted above, Staff  
5 acknowledged they had the information but did not use it. This includes an  
6 acknowledgement on page 36 of Mr. Oligschlaeger's Rebuttal Testimony that they  
7 received information at the pre-hearing conference.

8 Q. Can you summarize the data contained in response to Data Request No. MPSC-386?

9 A. \*\*\*

10 \_\_\_\_\_  
11 \_\_\_\_\_  
12 \_\_\_\_\_

13 \_\_\_\_\_.

14 Q. What do you conclude from this information?

15 A. I have several conclusions.

16 1. Staff had historical data that it could have used to estimate the revenues from  
17 interchange sales and either did not do so or did not present it.

18 2. \*\*\* \_\_\_\_\_

19 \_\_\_\_\_  
20 \_\_\_\_\_

21 \_\_\_\_\_.

22 forecasts.

1 3. Revenues from these sales do not cover the cost of the capacity not sold to MPS. The  
2 costs are explained in my rebuttal testimony and summarized in Schedule MS-8.

3 4. Staff's argument that MPS should have built and owned the plant is undermined by  
4 use of actual third party sales data.

5 **4. STAFF ASSERTIONS THAT OWNERSHIP AND LEASE COSTS ARE**  
6 **THE SAME IS INCORRECT**

7 Q. What is the purpose of this part of your testimony?

8 A. My purpose is to explain why Staff assertions that ownership and lease costs are the same  
9 are incorrect.

10 Q. What assertions are you rebutting?

11 A. On page 22 of Mr. Oligschlaeger's Rebuttal Testimony, he stated:

12 "The lease payments charged by the new owner would again be based on the  
13 capital costs of the leased unit, as well as the incremental cost of producing  
14 energy from the plant." [Lines 11-13]

15  
16 "Conceptually, the amounts should be similar, as both rate recovery of lease  
17 expense and rate recovery of amounts associated with placing generating plants in  
18 rate base are premised upon recovery of the capital and expense components of  
19 producing power, which will be identical whether the unit is owned or leased."  
20 [Lines 18-22]

21  
22 These statements are incorrect, as I will explain below.

23 Q. Why is the first statement incorrect?

24 A. The lease payments, as stated on pages 31 and 32 of my Rebuttal Testimony, do not cover  
25 plant operating and maintenance (O&M) costs, payments in lieu of property taxes,  
26 depreciation and amortization expenses, or return on the equity investment in the plant.

27 While the "incremental cost of producing energy" consists of variable O&M costs and

1 fuel, those costs have nothing to do with a lease to finance a portion of the capital cost of  
2 the plant.

3 Q. Is Staff aware that there is an equity investment in the plant?

4 A. Yes. Mr. Oligschlaeger, on page 55 of his deposition taken on January 8, 2004,  
5 acknowledged that there was equity in the plant that was not covered by the operating  
6 lease. The equity amount is shown in Schedule MS-8 of my Rebuttal Testimony. This  
7 information is contained in or can easily be developed from responses to data requests  
8 contained in the Aquila data room.

9 Q. What do you conclude from Staff's reliance on a lease payment as a proxy for costs of the  
10 plant?

11 A. First, Staff is aware that there is equity invested in the plant and has failed to include any  
12 return on that investment in its cost analysis, as I testified in my Rebuttal Testimony at  
13 32-33. Second, a lease payment covers a portion of the capital costs but not the other  
14 costs previously explained in my rebuttal testimony.

15 Q. Why is the second statement incorrect?

16 A. The capital structure (proportions of debt and equity) is not the same in a lease structure  
17 as in a rate-based asset owned by a utility. An investor-owned utility usually has a higher  
18 proportion of its capital structure as equity. Even if the cost of debt for a lease is the  
19 same, the higher proportion of equity in a utility capital structure will tend to increase the  
20 cost of ownership of a utility asset. The higher leverage associated with a lease, on the  
21 other hand, results in lower total costs of capital.

22 Q. Is the lease in effect?



- 1 A. As explained on page 31 of my Rebuttal Testimony, no.
- 2 Q. What other statements would you rebut at this time?
- 3 A. On page 23 of his Rebuttal Testimony, Mr. Oligschlaeger testified that the Aries project  
4 is leased from Cass County.
- 5 Q. Is the statement accurate ?
- 6 A. It is incomplete. The reason for Cass County's participation in the project was explained  
7 on pages 37 through 40 of my Rebuttal Testimony, and in my interview with the Staff in  
8 late October 2003 (see response to Data Request MPSC No. 549). Cass County  
9 ownership facilitated a property tax abatement. Cass County has no role in operating the  
10 plant, nor does it control the financing. The statement, and for that matter all of Mr.  
11 Oligschlaeger's rebuttal testimony on Aries, ignores the fact that there are two owners of  
12 MEPPH – Aquila Merchant and Calpine, both through subsidiaries. See Schedule MS-9.  
13 Calpine, which is the operator of the plant, is simply not mentioned.
- 14 Q. Does this conclude your testimony at this time?
- 15 A. Yes, it does.

**COMBUSTION TURBINE SCOPE AND PRICE CHANGES**

**THIS SCHEDULE IS CONFIDENTIAL IN IT'S ENTIRETY**

**SCHEDULE MS-1**

