

Exhibit No.:

Issues: Demand-Side  
Management

Witness: Matthew E. Daunis

Sponsoring Party: Aquila Networks-MPS  
& L&P

Case No.: ER-

Before the Public Service Commission  
of the State of Missouri

Direct Testimony

of

Matthew E. Daunis

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**ON BEHALF OF AQUILA, INC.**  
**D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P**  
**CASE NO. ER-\_\_\_\_\_**

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**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI  
DIRECT TESTIMONY OF MATTHEW E. DAUNIS  
ON BEHALF OF AQUILA, INC.  
D/B/A AQUILA NETWORKS-MPS AND AQUILA NETWORKS-L&P  
CASE NO. ER-\_\_\_\_\_**

1 Q. Please state your name and business address.

2 A. My name is Matthew E. Daunis. My business address is 10700 East 350 Highway,  
3 Kansas City, MO 64138.

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

5 A. I am employed as Manager of Energy Efficiency Programs for Aquila, Inc. (“Aquila” or  
6 “Company”).

7 Q. What is your educational background?

8 A. I received a Bachelor’s degree in Mechanical Engineering from the University of Maine  
9 in 1976. I received a Masters degree in Business Administration from the University of  
10 Nebraska in 1985.

11 Q. Please describe your professional experience.

12 A. I have been employed in the utility industry in positions requiring knowledge of Demand  
13 Side Management, customer service, and marketing for about 20 years. Prior to that, I  
14 was employed by a major HVAC manufacturer for ten years in various marketing and  
15 sales positions.

16 **EXECUTIVE SUMMARY**

17 Q. What is the purpose of your testimony in this case before the Missouri Public Service  
18 Commission (“Commission”)?

1 A. The purpose of my testimony is to present Aquila's proposed Demand-Side Management  
2 ("DSM") programs and their costs as identified in the Electric DSM Plan, 2006-2010 and  
3 incorporated in the 2005 Integrated Resource Plan ("IRP").

4 In my testimony I explain that:

5 1) Demand-side resources should be considered on an equivalent basis to supply side  
6 resources as directed by the MPSC and encouraged by both the National Association of  
7 Regulatory Commissioners ("NARUC") and federal legislation and recovered through  
8 rates, and

9 2) The appropriate portfolio of demand-side resources are those determined in the 2005  
10 IRP and further described in Appendix A of the IRP.

11 **DEMAND-SIDE RESOURCES AND INTEGRATED RESOURCE PLANNING**

12 Q. Please define supply-side and demand-side resources.

13 A. Supply-side and demand-side resources are defined in Missouri CSR 240-22 as follows:

14 (11) Demand-side resource (or program) means an organized process for  
15 packaging and delivering to a particular market segment a portfolio of end-use  
16 measures that is broad enough to include at least some measures that are  
17 appropriate for most members of the target market segment.

18 (53) Supply-side resource or supply resource means any device or method by  
19 which the electric utility can provide to its customers an adequate level and  
20 quality of electric power supply.

21 In general the distinction between demand-side and supply-side can be thought of as  
22 which side of the meter the resource is on. If it is on the Company's side of the meter it is  
23 supply-side. If it is on the customers' side of the meter it is demand-side. However, there

1 is also an element of control or dispatchability in the definitions. The supply side  
2 definition indicates “any device or method by which the *utility*...”. Certain “devices”  
3 may be on the customer side of the meter, such as on-site generation or direct load  
4 controls, but still be under the control of the utility.

5 Q. Does the Commission require that demand-side resources be considered on an equivalent  
6 basis as supply side resources?

7 A. Yes. 4 CSR 240-22.010 (2)(A) states that in order to meet the objective of the resource  
8 planning process the utility shall “consider and analyze demand-side efficiency and energy  
9 management measures on an equivalent basis with supply-side alternatives in the resource  
10 planning process.”

11 Q. How are demand-side resource load impact estimates incorporated into the resource  
12 plan?

13 A. The load impacts are incorporated in a manner consistent with a supply side resource.  
14 Various portfolios of resources are developed that meet the Company’s projected load  
15 requirements. These portfolios contain supply side resources that provide additional  
16 generation at specified costs as well as demand-side resources that reduce demand and  
17 energy requirements at specified costs.

18 Q. How does Aquila choose among the various portfolios that are developed?

19 A. The specifics of the decision process are described in the direct testimony of Aquila  
20 witness, Davis Rooney. In general terms, the financial impact, rate impact,  
21 environmental impact and risk profile are considered. Aquila chooses a preferred  
22 resource plan from among the potential resource portfolios that, in the company’s  
23 judgment, best meets the various planning objectives.

1 Q. How did Aquila determine the portfolio of DSM programs that were considered and  
2 selected by the IRP process?

3 A. The “Aquila Networks State of Missouri Electric Demand-Side Management Plan, 2006-  
4 2010” DSM Plan illustrates the development of the DSM programs. This process  
5 considered the identified energy efficiency potential, projected cost-effectiveness, and  
6 balance and equity within the program portfolio.

7 In addition, Aquila sought input on program design and development from a group of  
8 stakeholders, which included Commission staff, Missouri Office of the Public Counsel,  
9 Missouri Department of Natural Resources, the City of Kansas City and the Missouri  
10 Valley Community Action Agency. Advisory group meetings were held on February 16,  
11 2005 and March 9, 2005.

12 The 2005 IRP identified implementation of these programs as part of the preferred  
13 resource portfolio.

14 Q. Are DSM programs generally accepted as a component of resource portfolios?

15 A. Yes. In addition to the requirements of the Commission that I’ve outlined, they are  
16 actively encouraged by both NARUC and the federal government. On July 23, 1999,  
17 NARUC adopted a resolution entitled “Resolution Supporting Energy Efficiency and  
18 Load Management As Cost-Effective Approaches to Reliability Concerns.” In part the  
19 resolution reads:

20 Resolved, That NARUC urges State public utility commissions to encourage and  
21 support programs for cost-effective energy efficiency and load management  
22 investments as both a short-term and long-term strategy for enhancing the  
23 reliability of the nation’s electric system, and reducing its costs.

1 The federal government in Section 111(a) (7) of the Energy Policy Act of 1992  
2 (“EPACT”) states that “Each electric utility shall employ integrated resource planning”.

3 Integrated resource planning is defined as:

4 a planning process for new energy resources that evaluates the full range of  
5 alternatives, including new generating capacity, power purchases, energy  
6 conservation and efficiency, cogeneration and district heating and cooling  
7 applications, and renewable energy resources, in order to provide adequate and  
8 reliable service to its electric customers at the lowest system cost. The process  
9 shall take into account necessary features for system operation, such as diversity,  
10 reliability, dispatchability, and other factors of risk; shall take into account the  
11 ability to verify energy savings achieved through energy conservation and  
12 efficiency and the projected durability of such savings measured over time; and  
13 shall treat demand and supply resources on a consistent and integrated basis.

14 Q. Does the Energy Policy Act of 2005 address demand-side resources?

15 A. Yes. Section 139 of the Act directs the Secretary of Energy, in association with NARUC  
16 and the state energy offices, to study the impact of state policies that encourage energy  
17 efficiency including:

- 18 (1) performance standards for achieving energy use and demand reduction targets;  
19 (2) funding sources, including rate surcharges;  
20 (3) infrastructure planning approaches (including energy efficiency programs) and  
21 infrastructure improvements;

(4) the costs and benefits of consumer education programs conducted by State and local governments and local utilities to increase consumer awareness of energy efficiency technologies and measures; and

(5) methods of—

(A) removing disincentives for utilities to implement energy efficiency programs;

(B) encouraging utilities to undertake voluntary energy efficiency programs; and

(C) ensuring appropriate returns on energy efficiency programs.

Further, Section 123(b) states that each state's energy efficiency plan should have a goal of achieving a 25% improvement in the efficiency of energy use by 2012 over a 1990 baseline.

Q. Do you conclude that demand-side resources are an accepted and appropriate component of Aquila's resource portfolio, consistent with the objectives of the NARUC resolution and the Energy Policy Acts of 1992 and 2005?

A. Yes.

Q. How are the demand-side resources incorporated in the 2005 IRP?

A. The DSM Plan was developed as part of the IRP analysis. First, measures with similar characteristics and costs were bundled into resource options for portfolio analysis. Measures within the selected resource options were then incorporated into DSM programs. Table 3-8 of the IRP defines the DSM options that were used for portfolio development. Table 3-9 of the IRP illustrates that the DSM options that contained Residential, Commercial and Industrial measures screened at cost level A (less than \$30



1 MWh) and cost level B (less than \$45 MWh) resulted in the greatest reduction in cost for  
2 both the Least Cost Plan and the Preferred Plan. Schedule MED-1 lists the programs that  
3 fall into these cost categories. These programs are described in more detail in Appendix  
4 A of the IRP.

5 Q. Has the Company estimated the costs associated with the implementation of these  
6 programs?

7 A. Yes, Schedule MED-2 lists the projected costs for each program.

8 Q. Is Aquila proposing to offer programs in addition to those in Schedule MED-2?

9 A. Yes. Aquila is proposing to include several public purpose programs in the portfolio. The  
10 public purpose programs are designed to assist the most vulnerable energy customers in  
11 our service territory. In addition we will offer a school based education program. These  
12 programs and their costs are listed in Schedule MED-3.

13 Q. How is the portfolio of programs updated over time?

14 A. At each iteration of the IRP, the costs of continuing the existing programs and the costs  
15 of potential new programs are incorporated in the process. The IRP identifies the  
16 appropriate portfolio of programs. The next iteration of the IRP is due to be completed in  
17 February of 2007. This iteration will identify the portfolio of programs for calendar year  
18 2008 and forward.

19 Q. Is Aquila currently offering the programs identified in the 2005 IRP?

20 A. Yes, but only minimally. In accordance with the stipulated settlement reached in Case  
21 Nos. ER-2005-0436 and HR-2005-0450 (Consolidated) Aquila is offering three  
22 programs: Weatherization, Commercial Audit and Change-A-Light.

1 Q. Do these three programs result in the lowest cost portfolio of energy resources and  
2 energy efficiency resources for the Company?

3 A. No. As previously discussed, the full range of DSM offerings identified in the IRP  
4 process results in the lowest cost portfolio of resources for meeting our customers needs.  
5 The full range of DSM offerings is also part of the preferred plan that balances costs and  
6 risks given future uncertainties.

7 Q. How does Aquila plan to incorporate the DSM programs it has recommended in the 2005  
8 IRP?

9 A. Aquila will begin implementing the programs immediately upon approval by the  
10 Commission of Aquila's proposal in this proceeding. The implementation will consist of  
11 four steps. First Aquila will draft tariffs to fully define the program offerings. Second,  
12 Aquila will present the tariffs to a collaborative consisting of the Commission Staff,  
13 OPC, MDNR and any other interested party for comment. The collaborative process was  
14 used successfully by The Empire District Electric Company to incorporate DSM  
15 programs in its recent regulatory plan regarding participation in Iatan 2. Third the  
16 program tariffs will be filed with the Commission for approval. Finally, the Company  
17 will implement the approved tariffs.

18 Q. Have the impacts of the programs been included in the filed rate case?

19 A. Yes. The first year budgets have been incorporated in the revenue requirement as  
20 described by Company witness Susan Braun. The first year budget for the base programs  
21 is \$2,033,200. The first year budget for the public purpose programs is \$490,000. The  
22 total first year budget is \$2,523,200. The recovery of the DSM program is described in  
23 greater detail by Company witness Dennis R. Williams.

1 Q. Does this conclude your direct testimony?

2 A. Yes.

## Summary of Aquila Networks State of Missouri Electric Demand-Side Management Plan Programs

Integrated Resource Plan Cost Category	Expected MWh Savings, 5th Year of Plan
A: Less than \$30/MWh	81,841
B: \$30 to \$45/MWh	19,822
<b>Total Incorporated in IRP</b>	<b>101,663</b>

Programs Included in Cost Categories A and B	MWh Savings, 5th Year of Plan	Levelized Cost / MWh
Residential Lighting (includes Change-A-Light)	26,383	\$15.39
Residential Thermal Envelope (includes Home Performance w/ ES)	9,326	\$45.90
Residential Space Heating & Cooling Replacement	4,260	\$40.60
Residential Programmable Thermostats & HVAC Maintenance	3,768	\$34.90
Residential New Construction (based on ES new homes)	5,423	\$41.45
Residential Audit	5,512	\$38.51
Comprehensive C&I Program	53,041	\$23.41
<b>Program Totals</b>	<b>107,714</b>	

### Annual Proposed Program Budgets - Aquila Networks State of Missouri Electric Demand-Side Management Plan

		Residential							Research & Development	
	Total	Lighting	Envelope	Heating and Cooling	Thermostat and HVAC Maintenance	New Construction	Audit	Commercial and Industrial	Energy Efficiency	Demand Response
Year 1	\$2,033,200	\$164,100	\$377,000	\$29,200	\$85,200	\$134,700	\$177,800	\$970,200	\$20,000	\$75,000
Year 2	\$2,487,200	\$222,100	\$501,200	\$39,700	\$109,000	\$172,900	\$222,400	\$1,194,900	\$25,000	\$0
Year 3	\$3,241,900	\$283,500	\$627,600	\$50,600	\$133,600	\$211,100	\$267,100	\$1,638,400	\$30,000	\$0
Year 4	\$3,493,600	\$318,700	\$642,900	\$51,600	\$136,200	\$211,800	\$295,300	\$1,802,100	\$35,000	\$0
Year 5	\$3,749,500	\$355,700	\$660,500	\$52,500	\$139,000	\$212,600	\$323,100	\$1,966,100	\$40,000	\$0
Total	\$15,005,400	\$1,344,100	\$2,809,200	\$223,600	\$603,000	\$943,100	\$1,285,700	\$7,571,700	\$150,000	\$75,000

**Annual Proposed Public Purpose Program Budgets -  
Aquila Networks State of Missouri Electric Demand-Side Management Plan**

Low Income and Schools		Low Income			Schools
	Total	Weatherization	Energy Education	Affordable Housing	Education
Year 1	\$490,000	\$300,000	\$50,000	\$80,000	\$60,000
Year 2	\$735,000	\$450,000	\$75,000	\$120,000	\$90,000
Year 3	\$980,000	\$600,000	\$100,000	\$160,000	\$120,000
Year 4	\$980,000	\$600,000	\$100,000	\$160,000	\$120,000
Year 5	\$980,000	\$600,000	\$100,000	\$160,000	\$120,000
<b>Total</b>	<b>\$4,165,000</b>	<b>\$2,550,000</b>	<b>\$425,000</b>	<b>\$680,000</b>	<b>\$510,000</b>

**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

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Case No. ER-\_\_\_\_\_

County of Jackson    )  
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State of Missouri     )

**AFFIDAVIT OF MATTHEW E. DAUNIS**

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

Matthew E. Daunis

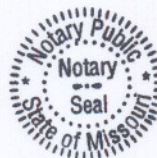
Matthew E. Daunis

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

Terry D. Lutes  
Notary Public  
Terry D. Lutes

My Commission expires:

8-20-2008



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