

Exhibit No.: 007

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

FILED

APR 26 2007

**Missouri Public
Service Commission**

Direct Testimony

of

Matthew E. Daunis

Aquila Exhibit No. 7
Case No(s). ER-2007-0001
Date 4-26-07 Rptr XF

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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;

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

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

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

9 (C) ensuring appropriate returns on energy efficiency programs.

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

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

16 A. Yes.

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

18 A. The DSM Plan was developed as part of the IRP analysis. First, measures with similar
19 characteristics and costs were bundled into resource options for portfolio analysis.

20 Measures within the selected resource options were then incorporated into DSM
21 programs. Table 3-8 of the IRP defines the DSM options that were used for portfolio
22 development. Table 3-9 of the IRP illustrates that the DSM options that contained
23 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.

Direct Testimony:
Matthew E. Daunis

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
Total Incorporated in IRP	101,663

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
Program Totals	107,714	

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
Total	\$4,165,000	\$2,550,000	\$425,000	\$680,000	\$510,000

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-_____

AFFIDAVIT OF MATTHEW E. DAUNIS

Matthew E. Daunis
Matthew E. Daunis

Subscribed and sworn to before me this 11th day of August, 2006.

of July, 2006.

Terry D. Lutes
Notary Public
Terry D. Lutes

8-20-2018



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