

FILED WITH  
Executive Secretary

JUL 18 2003

IOWA UTILITIES BOARD

**AQUILA, INC.**

**SUPPLEMENTAL TESTIMONY**

**of**

**BETH A. ARMSTRONG**

*In re Aquila, Inc.*  
**Docket No. SPU-03-7**

**July 18, 2003**

Schedule TJR-19.1

1 Q. Please state your name.

2 A. My name is Beth A. Armstrong.

3 Q. Are you the same Beth A. Armstrong who filed rebuttal testimony in this  
4 proceeding?

5 A. Yes, I am.

6 Q. What is the purpose of this supplemental testimony?

7 A. In this supplemental testimony, I will respond on behalf of Aquila to the  
8 following questions posed by the Board in the order issued in this proceeding  
9 on July 3, 2003: question nos. 7, 8, 9, 10, 11, and 12. Most of those  
10 questions relate to my Exhibit (BAA-1) I filed with my rebuttal testimony. In  
11 order to facilitate the Board's understanding of my exhibit, I will devote a  
12 portion of my supplemental testimony to a detailed explanation of my  
13 calculation of Iowa's share of the working capital requirement. I am also  
14 submitting with this testimony a revised Exhibit (BAA-1) in order to clarify the  
15 abbreviations and calculations used in the exhibit and to adjust a percentage  
16 used for allocation purposes.

17 Q. Would you please describe in detail the calculation of Iowa's portion of the  
18 working capital requirement?

19 A. Yes. The working capital requirements were initially developed for  
20 U. S. Networks in total. This analysis was performed at a total U.S. Networks  
21 level for cash management purposes because it is important to know when  
22 the coincident peak working cash requirement occurs across the entire utility  
23 system versus determining utility by utility peaks that may occur at different

1 times during the year but be offset by the working capital generated from  
2 another utility. This is the analysis that supports the \$250 million peak  
3 requirement discussed in Rick Dobson's direct testimony. In response to  
4 data requests and direct testimony submitted by Mr. Vitale from the Office of  
5 Consumer Advocate (OCA), we further analyzed the state by fuel breakdown  
6 of the \$250 million in order to estimate Iowa's portion of the total working  
7 capital requirement during the U.S. Networks coincident peak.

8 Q. What factors does the working capital requirement study consider in  
9 determining the U.S. Networks peak working capital need?

10 A. The working capital study is designed to calculate the net cash outstanding  
11 by day. In order to arrive at this daily requirement we considered both cash  
12 disbursements and cash receipts. Based on this study we determined that  
13 the peak cash requirement occurs in the first few days of January. This peak  
14 is driven by gas supply purchases lagging the collection of cash during this  
15 peak supply period. Gas Supply payments outstanding during the first few  
16 days of January include: (1) payment for gas used in December (the study  
17 assumes that December gas is predominantly collected in January based  
18 upon the billing cycles); (2) the prepayment of January gas; (3) payments for  
19 gas injected into storage less an amount for gas removed from storage  
20 through early January; and (4) prepaid pipeline capacity charges. The total  
21 cash outstanding was then netted with the estimated cash receipts for the  
22 month of January. The January 2004 estimated cash receipts have been

1 increased over 2003 actual receipts to include the effect of increased gas  
2 costs.

3 Q. Are you submitting with this supplemental testimony a revised Exhibit BAA-1  
4 and supplemental schedules thereto?

5 A. Yes.

6 Q. What is the purpose of your revised exhibit?

7 A. To provide clarity to abbreviations and calculations used in the original  
8 schedule(s) in addition to adjusting a percentage used for allocation  
9 purposes.

10 Q. Please explain the information included on the revised exhibit.

11 A. In order to estimate the Iowa portion of the working capital requirement, we  
12 first estimated Iowa's portion of each of the various components of cash  
13 payments outstanding and then Iowa's percentage of cash receipts.

14 Q. Explain how Iowa's portion of the cash outstanding was determined.

15 A. Iowa's portion of the cash payments was determined based upon the sum of:

16 (1) December's gas payment which was allocated on Iowa's percentage of  
17 December gas volumes.

18 (2) January's gas payment which was based on Iowa's percentage of  
19 January's gas volumes.

20 (3) The gas storage amount was originally based on January's percentage  
21 (16.0%) however I have corrected the percentage in this testimony to be  
22 the average for the period January through March (15.8%) representing  
23 the remaining winter months for storage withdrawals.

1 (4) The prepaid pipeline capacity charges were originally based on  
2 January's percentage (16.0%); however, I have corrected the percentage  
3 in this testimony to be the average for the period January through March  
4 (15.8%), as the capacity charges are prepaid three months in advance.

5 Q. How did you determine the amount of the U.S. Networks cash receipts to be  
6 applied against the Iowa payments outstanding?

7 A. Since Iowa's cash receipts are not specifically identified in our accounting  
8 system, we developed a percentage to allocate a portion of the Peoples  
9 Natural Gas (PNG) cash receipts to the state of Iowa.

10 Q. How did you arrive at this percentage of Iowa's receipts to the total PNG  
11 cash receipts?

12 A. We used Iowa's average percentage (22.5%) of PNG's historical revenues  
13 for the months of December 2002 and January 2003. This historical revenue  
14 percentage (22.5%) was then applied to actual cash receipts for PNG's cash  
15 receipts for January 2003 yielding a result of \$20,325,385. The \$20,325,385  
16 was then divided by the U. S. Networks total receipts of \$165,200,871 for  
17 January 2003 to determine a historical percentage of Iowa's cash receipts to  
18 total U.S. Networks.

19 Q. How was the 12.3% historical Iowa cash receipts to the U.S. Networks cash  
20 receipts percentage used?

21 A. The 12.3% was applied to the U. S. Networks projected cash receipts of  
22 \$213,782,000 for January 2004. This yielded a projected cash receipts  
23 amount for Iowa of \$26,302,534. This Iowa portion of cash receipts was

1 netted with the cash outstanding calculated above of \$60,715,829 resulting in  
2 a working capital requirement of \$34,413,296.

3 Q. Can you explain why there is December data included for Gas Supply and  
4 not for Storage and Pipeline Capacity? (IUB No. 7 a.)

5 A. Yes. The gas storage amount is the projected balance as of the first of  
6 January for gas injected into storage during April through October of the  
7 2003 less amounts projected to be withdrawn during the 2003 November and  
8 December heating season based upon the winter 2003-2004 gas supply  
9 plan. Pipeline capacity charges represent capacity prepayments for January  
10 through March because Aquila is currently required to pay at the first of the  
11 month for the next three months of capacity on Northern Natural Pipeline.

12 Q. Are the amounts used for gas purchases in the exhibit sensitivity tested for  
13 colder than normal weather or significantly increased gas prices? (IUB No. 7  
14 b.)

15 A. Yes, as explained in my rebuttal testimony, page 7, lines 19-27, we stress  
16 tested the working capital requirement for higher gas prices and increased  
17 volumes to simulate the effects of a colder than normal weather scenario.  
18 We believe it is prudent from a cash management perspective that the  
19 Company has enough working capital capacity to meet these stress test  
20 conditions.

21 Q. Does the Cash Receipts amount on the Exhibit BAA-1 include more than one  
22 month of receipts? (IUB No. 7 c.)

1 A. No, the cash receipts shown in Exhibit BAA-1 are projected receipts for the  
2 month of January 2004. Payments have been accelerated due to our current  
3 credit conditions but this has had no impact on the timing of cash receipts  
4 from customers.

5 Q. If the Cash Receipts are for only one month, why are two months of gas  
6 supply applied to it? (IUB No. 7 d.)

7 A. December 2003 and January 2004 supply cost is outstanding because  
8 Aquila must prepay its gas purchases before the gas flows to our customers.  
9 Aquila will not bill for this supply until after the gas is metered to the  
10 customer. Cash collections will also lag the bill date under the customer  
11 payment terms. Therefore Aquila will not collect the full amount for  
12 December gas purchases from the customer until January and January gas  
13 supply will not be collected until February.

14 Q. On Exhibit BAA-1, Supplemental Schedule 2, Iowa's portion of cash receipts  
15 is calculated at 12.3 percent. Explain how the 12.3 percent is calculated.  
16 (IUB No. 8 a)

17 A. The 12.3% is calculated by dividing Iowa's January 2003 estimated cash  
18 receipts of \$20,328,385 by total U. S. Networks January 2003 cash receipts  
19 of \$165,200,871.

20 Q. Do the receipts/ revenues listed on Supplemental Schedule 2 include electric  
21 receipts/revenues? (IUB 8 b.)

22 A. The revenues listed on Supplemental Schedule 2 represent actual December  
23 2002 and January 2003 revenues for PNG and therefore only reflect gas

1 revenues. They were used as a basis to allocate a portion of the PNG  
2 January 2003 cash receipts to Iowa. The January 2003 actual cash receipts  
3 represent U. S. Networks in total and therefore include electric receipts from  
4 the electric operating divisions. This January 2003 U.S. Networks cash  
5 receipt total is used to determine Iowa's historical percent of total utility cash  
6 receipts. The 12.3% was then applied to the 2004 projected cash receipts  
7 for the U.S. Networks from the study.

8 Q. Under Cash Receipts for Jan 03 on Supplemental Schedule 2, abbreviations  
9 such as MGD are used. Provide a full description for each of the  
10 abbreviations. (IUB No. 8 c.)

11 A. See the revised exhibit attached to this testimony for detailed unit  
12 descriptions.

13 Q. Why is the total for PND Revenues by State Jan Rev on Supplemental  
14 Schedule 2 different from the PND amount under Cash Receipts for Jan 03  
15 on Supplemental Schedule 2? (IUB No. 8 d.)

16 A. January 2003 Cash Receipts on Supplemental Schedule 2 is the amount of  
17 cash collected during the month of January 2003 and would include a portion  
18 of December cycle bills due in January as well as a portion of January cycle  
19 bills also due in January. This is why a two-point average of December and  
20 January revenues was used as an allocation basis for January cash receipts  
21 for Iowa.

22 Q. Are all of the numbers on Exhibit BAA-1, page1, Supplemental Schedule 1,  
23 pages 1-2, and Supplemental Schedule 2 projected numbers? Do any actual



1 numbers exist for this information? Also, could you provide the year to which  
2 the numbers are applicable? (IUB No. 9)

3 A. See the clarification of labels on the revised exhibit attached to this  
4 testimony. The general methodology outlined in this exhibit is to use actual  
5 data from the prior year where applicable to determine the allocation factors  
6 that are then applied to the projected January 2004 information. The  
7 numbers on Exhibit BAA-1, page 1, Supplemental Schedule 1, pages 1-2,  
8 are budgeted MCF by state for 2003 and 2004. This projected information  
9 was used to estimate Iowa's portion of December 2003 and January 2004  
10 gas purchases. On Supplemental Schedule 2, the information depicts actual  
11 results. The cash receipts listed are actual results for PNG for January 2003  
12 and the revenues listed are actual results for December 2002 and January  
13 2003. The actual revenues were used as a basis for determining an  
14 allocation factor for Iowa's portion of the PNG cash receipts. A second  
15 allocation factor was computed using estimated Iowa January 2003 cash  
16 receipts as a percent of the January 2003 total utility cash receipts. This  
17 factor (12.3%) was applied to projected January 2004 total U.S. Networks  
18 receipts.

19 Q. Explain why the amount shown for Cash Receipts for Jan 03 Exhibit BAA-1,  
20 Supplemental Schedule 2, is a different amount than Cash Receipts on  
21 Exhibit BAA-1, page 1. (IUB No. 10)

22 A. The Cash Receipts for Jan 03 Exhibit BAA-1, Supplemental Schedule 2,  
23 represent the actual cash collected during January 2003. The Cash Receipts

1 on Exhibit BAA-1, page 1, are the projected cash receipts for January 2004  
2 and include the effect of the increased gas costs.

3 Q. In the last paragraph of the last page of Confidential Exhibit \_\_ (RD-3), Aquila  
4 discusses information for U.S. Networks. Provide corresponding information  
5 for Iowa only for the same period. (IUB No. 11)

6 A. The Iowa under-recovered PGA balance as of February 2001 was  
7 \$18,400,833 and the budget bill under-billed balance for February 2001 was  
8 \$18,256,596. Therefore Iowa contributed to a liquidity gap of \$36,65,429  
9 (sum of the above) in 2001.

10 Q. Do you wish to make any comment about IUB No.12?

11 A. Yes. While the question appears to be directed to the Consumer Advocate, I  
12 would like to re-emphasize that Aquila is asking not for rate-making treatment  
13 on the calculation of the working capital requirement, but only for the ability to  
14 collateralize its Iowa assets in order to secure the necessary funding to  
15 support the working capital requirements.

16 Q. Does this conclude your supplemental testimony?  
17

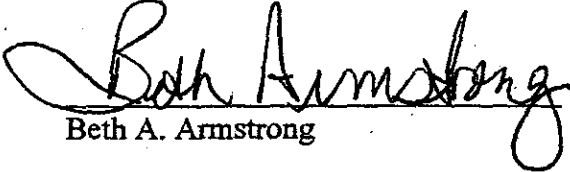
18 A. Yes.

AFFIDAVIT

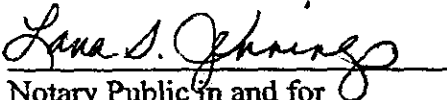
STATE OF MISSOURI     )  
                                  ) SS:  
COUNTY OF JACKSON    )

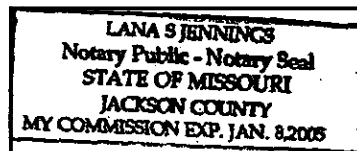
I depose and state, being first duly sworn on oath, that I am the same Beth A. Armstrong identified in the foregoing supplemental testimony; that I have caused such testimony to be prepared and am familiar with the contents thereof; and that such testimony is true and correct to the best of my knowledge and belief as of the date of this affidavit.

Dated July 17, 2003.

  
Beth A. Armstrong

Subscribed and sworn to before me this 17<sup>th</sup> day of July, 2003.

  
Notary Public in and for  
the State of MISSOURI



FILED WITH  
Executive Secretary

JUL 18 2003

IOWA UTILITIES BOARD

**AQUILA, INC.**

**SUPPLEMENTAL EXHIBIT**

**of**

**BETH A. ARMSTRONG**

*In re Aquila, Inc.*  
**Docket No. SPU-03-7**

**July 18, 2003**

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Schedule TJR-19.12

# Armstrong Iowa Rebuttal Testimony

Revised Exhibit BAA-1

	Iowa's Estimated Working Capital	Projected Dec 2003	Projected Jan 2004	
<b><u>Gas Supply</u></b>				
		\$ 131,195,528	\$ 145,795,744	
		16.1%	16.0%	See Supplemental Schedule 1
A Iowa Portion	\$ 44,562,014	\$ 21,164,610	\$ 23,397,404	
<b><u>Storage</u></b>				
			Jan	
			\$ 70,584,491	
			15.8%	See Supplemental Schedule 1
B Iowa Portion	11,136,538	\$ 11,136,538		
<b><u>Pipeline Capacity</u></b>				
			\$ 31,800,000	
			15.8%	See Supplemental Schedule 1
C Iowa Portion	5,017,277	\$ 5,017,277		
D Total Cash Needs for Iowa (D= A+B+C)	\$ 60,715,829			
<b><u>Cash Receipts</u></b>				
	\$ 213,782,000	January 2004 Projected Cash Receipts		
		See Supplemental Schedule 2		
E Iowa Portion of Cash Receipts	\$ 26,302,534			
F Iowa Peak Cash Requirement (F=D-E)	\$ 34,413,296			
Iowa's % Net Peak Cash Requirement	13.8%			
(\$34,413,296/\$250,000,000)				
Iowa's % of net plant	3%	See Supplemental Schedule 3		

Schedule TJR-19.13

**Armstrong Iowa Rebuttal Testimony**  
**Revised Exhibit BAA-1**  
**Supplemental Schedule 1**

Calculation of Iowa's portion of natural gas load

**Budgeted**  
**MCF Per Load Forecast File**

	3-Jan	3-Feb	3-Mar	3-Apr	3-May	3-Jun	3-Jul	3-Aug	3-Sep	3-Oct	3-Nov	3-Dec
MO - MPS	1,083,521	818,141	628,964	345,658	171,160	129,659	126,092	131,520	107,877	289,611	627,403	962,034
MO - SJ	177,152	125,933	99,301	60,759	36,913	15,423	14,917	15,692	28,185	53,148	99,251	144,377
Michigan	4,510,058	3,714,810	3,136,325	1,917,106	941,361	592,412	484,403	505,083	612,149	1,616,039	2,643,862	3,834,411
Minnesota	5,863,095	4,568,721	3,831,111	2,274,271	1,192,105	853,485	732,566	821,853	923,826	2,127,166	3,657,116	5,264,871
Kansas	2,246,710	1,541,087	1,337,998	866,924	533,146	662,707	665,517	679,409	435,752	771,003	1,359,418	1,850,698
Colorado	1,034,704	884,463	837,723	633,771	435,392	370,568	329,334	337,141	309,424	573,410	865,957	1,096,345
Iowa	3,550,583	2,729,983	2,233,957	1,313,146	642,903	490,750	431,804	455,636	471,729	1,158,033	2,066,353	3,041,776
Nebraska	3,728,912	2,963,092	2,385,777	1,410,001	736,887	546,519	523,545	536,860	576,489	1,240,249	2,322,817	2,660,898
<b>Total Networks Load</b>	<b>22,194,734</b>	<b>17,346,231</b>	<b>14,491,155</b>	<b>8,821,636</b>	<b>4,689,865</b>	<b>3,661,523</b>	<b>3,288,178</b>	<b>3,483,194</b>	<b>3,465,430</b>	<b>7,828,659</b>	<b>13,642,177</b>	<b>18,855,409</b>
MO - MPS	4.9%	4.7%	4.3%	3.9%	3.6%	3.5%	3.8%	3.8%	3.1%	3.7%	4.6%	5.1%
MO - SJ	0.8%	0.7%	0.7%	0.7%	0.8%	0.4%	0.5%	0.5%	0.8%	0.7%	0.7%	0.8%
Michigan	20.3%	21.4%	21.6%	21.7%	20.1%	16.2%	14.1%	14.5%	17.7%	20.6%	19.4%	20.3%
Minnesota	26.4%	26.3%	26.4%	25.8%	25.4%	23.3%	22.3%	23.6%	26.7%	27.2%	26.8%	27.9%
Kansas	10.1%	8.9%	9.2%	9.8%	11.4%	18.1%	20.2%	19.5%	12.6%	9.8%	10.0%	9.8%
Colorado	4.7%	5.1%	5.8%	7.2%	9.3%	10.1%	10.0%	9.7%	8.9%	7.3%	6.3%	5.8%
Iowa	16.0%	15.7%	15.4%	14.9%	13.7%	13.4%	13.1%	13.1%	13.6%	14.8%	15.1%	14.1%
Nebraska	16.8%	17.1%	16.5%	16.0%	15.7%	14.9%	15.9%	15.4%	16.6%	15.8%	17.0%	14.1%
	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Iowa average for storage and pipeline capacity payments

Schedule TJR-19.14

# Armstrong Iowa Rebuttal Testimony

Revised Exhibit BAA-1

Supplemental Schedule 1

Calculation of Iowa's portion of natural gas load

Budgeted  
MCF Per Load Forecast File

	4-Jan	4-Feb	4-Mar	4-Apr	4-May	Total Annual	Winter 30-04
MO - MPS	1,093,214	829,825	634,743	348,958	172,959	5,453,895	4,147,219
MO - SJ	179,035	127,849	100,439	61,488	37,393	877,189	650,951
Michigan	4,575,689	3,782,700	3,181,318	1,944,368	954,499	24,706,932	18,017,980
Minnesota	5,893,616	4,606,215	3,837,703	2,263,375	1,169,124	32,150,916	23,259,521
Kansas	2,269,615	1,575,171	1,350,625	873,653	537,347	13,030,916	8,405,527
Colorado	1,094,548	945,273	883,884	666,599	454,744	7,927,226	4,886,006
Iowa	3,602,938	2,783,910	2,266,847	1,332,359	652,193	18,754,327	15% 13,761,823
Nebraska	3,742,258	2,969,939	2,382,667	1,402,362	717,633	19,622,236	14,078,579
Total Networks Load	22,450,914	17,620,882	14,638,225	8,893,163	4,695,892	122,523,646	87,207,607

16%

MO - MPS	4.9%	4.7%	4.3%	3.9%	3.7%
MO - SJ	0.8%	0.7%	0.7%	0.7%	0.8%
Michigan	20.4%	21.5%	21.7%	21.9%	20.3%
Minnesota	26.3%	26.1%	26.2%	25.5%	24.9%
Kansas	10.1%	8.9%	9.2%	9.8%	11.4%
Colorado	4.9%	5.4%	6.0%	7.5%	9.7%
Iowa	16.7%	15.8%	15.5%	15.0%	13.9%
Nebraska	16.7%	16.9%	16.3%	15.8%	15.3%
	100.0%	100.0%	100.0%	100.0%	100.0%

Average

Iowa average for storage and pl 16.0% 15.8% 15.5% 15.8%



Schedule TJR-19.15

# Armstrong Iowa Rebuttal Testimony

Revised Exhibit BAA-1

Supplemental Schedule 2

Calculation of Iowa's portion of cash receipts

A	B	C= A*B	Iowa's % of U.S. Network Total
January 2003 Actual	Iowa's % of Peoples Natural Gas Cash Receipts	Iowa estimated receipts	
<b>U.S. Network Actual Cash receipts</b>			
MGD (Michigan Gas Utility Distribution)			
MPD (Missouri Public Service Distribution)			
PND (PNG Distribution)	22.5%	20,325,385	12.3%
SJD (St. Joe Power and Light Distribution)			
WCD (West Plains Colorado Distribution)			
WKD (West Plains Kansas Distribution)			
Total receipts for Jan 03			12.3% is 20,325,385 / 165,200,871.25
19,151,914.57			
30,268,633.01			
90,446,873.61			
7,608,725.26			
8,993,443.91			
8,731,280.89			
165,200,871.25			

Peoples Natural Gas Revenues by State	Dec 2002 Actual Revenue	Jan 2003 Actual Revenue	Dec rev %	Jan Rev %	Avg (Dec and Jan)
COLORADO	4,633,466.13	5,510,038.01	6%	5%	
IOWA	19,341,944.41	24,602,573.88	23%	22%	
KANSAS	13,466,583.27	15,995,020.38	16%	14%	
MICHIGAN	18,549.48	14,563.68	0%	0%	
MINNESOTA	27,935,788.35	40,063,557.98	33%	36%	
NEBRASKA	18,615,585.78	25,545,115.56	22%	23%	22.5%
OKLAHOMA	23,822.88	39,427.87	0%	0%	22.5% is the average of 23% and 22%
PND_GENERAL	153,306.32	(3,277.03)	0%	0%	
SOUTH DAKOTA	82,527.18	70,176.87	0%	0%	
TEXAS	(75,527.58)	33,251.31	0%	0%	
	84,196,046.22	111,870,448.51	100%	100%	



# Armstrong Iowa Rebuttal Testimony

Revised Exhibit BAA-1  
Supplemental Schedule 3

## Percentage of net plant calculation

Balances as of 12-31-02	Gross Plant	Accum Depr	Net Plant
<b>Gas</b>			
COLORADO	60,061	26,371	33,690
IOWA	139,761	90,423	49,338
KANSAS	143,734	74,413	69,321
MICHIGAN	241,705	115,412	126,293
MINNESOTA	210,770	87,690	123,080
MISSOURI	93,142	32,859	60,283
NEBRASKA	213,378	82,600	130,778
OKLAHOMA	370	310	60
PND_GENERAL	4,205	1,156	3,049
SOUTH DAKOTA	8	11	(3)
TEXAS	165	151	14
<b>Electric</b>			
COLORADO	226,241	114,522	111,719
KANSAS	360,009	180,718	179,291
MISSOURI	1,499,008	678,512	820,496
<b>TOTAL</b>	<b>3,192,557</b>	<b>1,485,148</b>	<b>1,707,409</b>

**3%**

3% is 49,338 / 1,707,409.00

Schedule TJR-19.17