EXHIBIT

Exhibit No.: _____

Issue(s): Cash Working Capital Model
Witness/Type of Exhibit: Busch/Rebuttal
Sponsoring Party: Public Counsel
Case No.: EF-2003-0465

REBUTTAL TESTIMONY

OF

JAMES A. BUSCH

Submitted on Behalf of the Office of the Public Counsel

AQUILA, INC.

Case No. EF-2003-0465

** Denotes Highly Confidential **

NP

September 10, 2003

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the matter of the Application by Aquila, Inc. for authority to assign, transfer, mortgage or encumber its franchise, works or system.	)))	Case No. EF-2003-0465

AFFIDAVIT OF JAMES A. BUSCH

STATE OF MISSOURI	)	
	)	ss
COUNTY OF COLE	)	

James A. Busch, of lawful age and being first duly sworn, deposes and states:

1. My name is James A. Busch. I am the Public Utility Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony consisting of pages 1 through 26 and Schedules JAB-1 through JAB-9.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

_____
James A. Busch

Subscribed and sworn to me this 10th day of September 2003.

_____
Kathleen Harrison, Notary Public

My commission expires January 31, 2006.

TABLE OF CONTENTS

REBUTTAL TESTIMONY

OF

JAMES A. BUSCH

CASE NO. EF-2003-0465

AQUILA, INC

Q. Please state your name and business address.

A. My name is James A. Busch and my business address is P. O. Box 7800, Jefferson City, MO 65102.

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

A. I am a Public Utility Economist with the Missouri Office of the Public Counsel (Public Counsel).

Q. Please describe your educational and professional background.

A. In June 1993, I received a Bachelor of Science degree in Economics from Southern Illinois University at Edwardsville (SIUE), Edwardsville, Illinois. In May 1995, I received a Master of Science degree in Economics, also from SIUE. I am currently a member of the American Economic Association and Omicron Delta Epsilon, an honorary economics society. Prior to joining Public Counsel, I worked just over two years with the Missouri Public Service Commission as a Regulatory Economist in the Procurement Analysis Department and worked one year with the Missouri Department of Economic Development as a Research Analyst. I accepted my current position with Public Counsel in September 1999.

Further, I also am a member of the adjunct faculty of Columbia College, Jefferson City Campus, teaching economics at both the graduate and undergraduate level.

Q. Have you previously testified before this Commission?

A. Yes. Attached is Schedule JAB-1, which is a list of the cases in which I have filed testimony before this Commission.

Q. What is the purpose of your testimony in Case No. EF-2003-0465?

A. The purpose of my rebuttal testimony is to discuss Aquila's working capital model, the assumptions pertaining to natural gas costs that Aquila built into its working capital model, and to look at Aquila's Missouri-specific peak working capital needs.

Q. How is your testimony organized?

A. First, I will discuss Aquila's rationale for making this Application. Second, I will discuss Aquila's peak day working capital model. Third, I will break down Aquila's model into a Missouri specific model. Fourth, I will discuss the natural gas prices used by Aquila in its model and then re-run the model using updated natural gas prices. Finally, I will discuss Aquila's peak day working capital requirements under the assumption that Aquila is still an investment grade utility.

Q. Are other Office of the Public Counsel witnesses filing testimony in this proceeding?

A. Yes. Mr. Ted Robertson will be filing testimony regarding Aquila's application and Public Counsel's overall recommendation. Mr. Mark Burdette will discuss some of the financial implications of Aquila's request and the reasons for Aquila's current financial situation.

RATIONALE OF AQUILA'S REQUEST

Q. What is the purpose of Aquila's Application in this proceeding?

A. Aquila is attempting to get Missouri Public Service Commission approval to pledge its Missouri regulated assets as collateral for a $430 million term loan, of which the Company estimates that $250 million is needed for its peak day cash working capital requirements for its regulated operations. For a further discussion of the details of the loan, please refer to Public Counsel witness Mr. Ted Robertson's testimony.

Q. Briefly describe Aquila's regulated operations.

A. Aquila has regulated operations in seven states. It has natural gas Local Distribution Companies ("LDCs") (with approximate customer numbers in parenthesis) in Missouri (53,000), Kansas (104,000), Colorado (52,000), Nebraska (189,000), Iowa (144,000), Minnesota (191,000), and Michigan (158,000). Also, it has electric operations (with approximate customer numbers in parenthesis) in Missouri (282,000), Colorado (87,000), and Kansas (69,000). Schedule JAB-2 is a partial response from Aquila to OPC DR NO. 5012 that shows these customer numbers and the geographic location of Aquila's regulated U.S. operations.

Q. Has Aquila already received the proceeds from this $430 million term loan?

A. Yes.

Q. Does Aquila assert that $250 million of the $430 million term loan is going to be used to satisfy the cash working capital requirements for its regulated utilities?

A. Yes. In its Application and the testimony submitted by Mr. Rick Dobson, the Company alleged that $250 million is needed for the cash working capital requirements of its regulated utilities.

Q. Has further discovery and investigation of Aquila's Application revealed that its cash working capital request is actually for peak day working capital needs as opposed to the traditional working capital requirements?

A. Yes. Aquila has asserted that its regulated utilities have peak day cash working capital needs of $250 million. Aquila developed a peak day cash working capital model to substantiate its claim.

Q. Is Aquila's peak day cash working capital model methodology different from a cash working capital determination used in general rate cases?

A. Yes, it is. In general rate cases, cash working capital needs in Missouri are generally based on a lead/lag study that determines the length of time between when cash is paid by the Company to outside suppliers and when cash is actually received from customers.

Q. Is the entire $250 million peak day working capital requirement for Missouri operations?

A. No. This amount is for all of Aquila's regulated utility peak day cash working capital requirements.

Q. Does Aquila actually need $250 million to cover its peak day cash working capital needs?

A. No. As I will discuss further in this rebuttal testimony, Aquila's needs are far less than the $250 million that it has asserted.

Q. What is driving Aquila's peak day working capital needs according to its model?

A. One of the main drivers forcing Aquila to need additional cash on hand in today's environment versus its historical needs is the increased level of prepayment requirements made by suppliers and pipelines due to Aquila's substandard investment quality. Aquila's failed unregulated operations have created the financial situation it is currently facing.

Q. In its testimony, does Aquila imply that Missouri's peak day cash working capital needs are similar to those of the other states?

A. Yes.

Q. Please explain.

A. In Aquila's testimony, it is asserted that the peak day working capital needs are from all regulated operations. According to Aquila, fairness then dictates that all states provide their regulated assets as collateral to cover the loan.

Q. Do you agree with the implication that Missouri's peak day needs are similar to the other states?

A. No. My testimony will show that not only are Missouri's requirements far less than the other states, but that Missouri ratepayers are already providing sufficient cash when Aquila's system is at its peak requirement. I will discuss Missouri's share of the peak day cash working capital requirements later in this rebuttal testimony.

Q. What is Public Counsel's recommendation regarding this Application?

A. Public Counsel believes that Missouri assets should only be used to secure debts that are necessary to provide safe and adequate service to Missouri ratepayers.

Since this loan is not needed for the provision of safe and adequate service to Missouri ratepayers, Aquila's Missouri regulated assets should not be pledged as collateral for the loan.

AQUILA's PEAK DAY WORKING CAPITAL MODEL

Q. Did Aquila provide its peak day cash working capital model?

A. Yes. In response to data requests, Aquila has provided the model that it used to determine Aquila's alleged peak day working capital need.

Q. Has Aquila provided Missouri's portion of its peak day working capital need?

A. No. Aquila has not made any formal presentation of a state-by-state peak day working capital need. However, through Aquila's response to OPC DR No. 626, Aquila has provided its estimate of Missouri's portion of the peak day working capital need.

Q. What is a peak day?

A. A peak day is the day when Aquila's cost and revenue differential is at a maximum.

Q. Please explain the methodology Aquila utilized in its model to determine the peak day cash working capital needs.

A. Aquila determines its peak day cash needs by comparing its expected monthly cash receipts with its expected monthly cash outlays on a daily basis. Cash receipts consist of the actual cash Aquila anticipates it will collect from its customers each month. Monthly cash outlays includes estimates of current month gas and purchase power purchases, previous month gas and purchase power purchases, storage, pipeline prepays, payroll, and incremental gas costs for the

month of January 2004. If the cash outlays exceed cash receipts, then Aquila needs extra cash for working capital; if cash receipts exceed cash outlays, then Aquila does not need extra cash.

Q. According to Aquila's model, does Aquila have days in which it needs extra cash?

A. Yes. Aquila's methodology results in there being a need for extra cash.

Q. What is the peak day need according to Aquila's model?

A. Aquila's model estimates that on January 2, 2004, Aquila will need an approximately $241 million extra cash to cover its costs.

Q. Hasn't Aquila stated that of its $430 million term loan, $250 million was necessary to cover its peak day working capital needs?

A. That is correct. With limited explanation, Aquila has added an extra $9 million on top of the $241 million need that its flawed model produces.

Q. How are the peak day cash working capital requirements for Aquila's regulated operations determined for January 2, 2004?

A. On January 2, 2004, Aquila estimates that current gas and purchase power costs will be ** _____** (Current costs are referring to Aquila's projection of January's costs). Previous month gas and purchase power costs will be ** _____ * (Previous costs are referring to Aquila's projection of December's costs). Storage costs will be ** _____ *. Pipeline prepayments will be ** _____ *. There will be a payroll adjustment of ** _____ * on that day. And finally, Aquila has "stressed tested" its model by assuming a worst-case scenario for gas prices of $11.63 per MMBtu for January. Along with the higher gas price, Aquila also increased its necessary gas

volumes by 10% above the normalized level. This "stress test" adds an additional $71,140,752 to cash outflows. Cash receipts, as calculated by Aquila, are ** _____ * for January 2. Summed together, total cash outstanding is approximately ** _____ *. When you subtract the approximate ** _____ * cash receipts from the cash outflows, you get Aquila's estimated need of approximately $241 million. The following Table 1 shows these amounts for January 2004.

TABLE 1

Cost	Amount
**	
	*

Q. Please explain the current month gas costs component of the Aquila's peak day working capital model.

A. Current month gas costs consists of Aquila's estimated natural gas costs for its LDC operations plus purchase power for electric operations and gas costs for gas-fired turbines in Missouri.

Q. How did Aquila determine its projection of future monthly natural gas costs?

A. Aquila looked at its future projections of normal monthly gas volumes for its LDCs and multiplied the normal volumes by an assumed price of natural gas.

Q. What was the assumed price of natural gas?

A. Aquila utilized a 12-month NYMEX futures strip as a forecast for natural gas prices. I will address this assumption later on in this rebuttal testimony.

Q. How did Aquila determine its monthly purchase power costs?

A. Aquila simply used its budgeted amount of purchase power for the three states where it has electric operations, Missouri, Colorado, and Kansas.

Q. How did Aquila determine its cost projections for natural gas used to run its gas-fired turbines?

A. Aquila, with gas-fired turbines only in Missouri, used a monthly budgeted amount of natural gas multiplied by its assumed natural gas price.

Q. Why does Aquila use current month gas and purchase power costs in its determination of peak day cash needs?

A. Due to its difficult financial situation, caused by its foray into non-regulated activities, Aquila is now required to prepay for natural gas supplies. This requirement for prepayment is solely due to Aquila's poor financial situation. Attached, as Schedule JAB-3 is an example of a supply contract that shows the reasons prepayments are required. This Schedule was received from Aquila in response to OPC DR No. 604. As you will notice, prepayment is only required when the buyers ability to pay is called into question due to financial considerations.

Q. Don't companies usually pay for these costs later in the month that they are incurred?

A. Yes, companies usually pay for monthly gas supplies after receipt and use. For example, for gas used in the month of September, a utility typically receives its bill from the supplier late in the month of September.

Q. That explains why current month gas and purchase power costs are built into Aquila's model. Why are previous month gas and purchase power costs built into Aquila's model?

A. According to Company personnel, previous month gas and purchase power costs are included in the determination of peak day needs because of the lag between Aquila's payment to suppliers and Aquila's receipt of cash from its customers.

Q. Please explain natural gas storage.

A. Storage is utilized by LDCs as both a physical hedge for price stability and to ensure adequate supplies in the winter months. Storage is usually filled in the summer and then withdrawn in the winter.

Q. Are gas injections into storage paid for when they are purchased?

A. Yes. These injection costs are paid when they occur in the summer injection season. The utility generally builds this factor in its rate base when calculating its non-gas rates.

Q. Why is Aquila including storage in its peak day calculation when the storage costs have already been paid during its off-peak summer season?

A. Aquila has stated that this amount is needed to show the amount of cash already spent for storage injections that is outstanding since the ratepayers will not pay for the stored gas until it is withdrawn and consumed in the winter.

Q. Please explain pipeline prepayments.

A. Similar to gas supplies, Aquila, due to its financial trouble caused by its unregulated business affairs, also has to prepay for its pipeline capacity. Attached, as Schedule JAB-4 is Aquila's response to OPC DR No. 609 that summarizes FERC tariffs that indicate that prepayment may be required only when the creditworthiness of the shipper is in question. Since Aquila has been downgraded to below investment grade status, prepayments are now being required. The amount shown in Aquila's model includes the prepayments for three months.

Q. Please explain payroll cash needs that are reflected in Aquila's model.

A. Roughly every two weeks, Aquila needs to meet its payroll obligations.

Q. Please explain the incremental gas cost amount built into the model.

A. As I briefly discussed earlier, Aquila decided to "stress test" its peak day working capital needs. This was done by assuming that the weather in January is colder than normal leading to a 10% in volumes plus a higher gas price. The higher gas price used by Aquila was $11.63 per MMBtu. This additional "stressed test" amount was added to the model for only the month of January 2004.

MISSOURI PEAK DAY WORKING CAPITAL NEEDS

Q. Has Aquila determined Missouri's peak day working capital needs in its Application or filed testimony in this proceeding?

A. No. Aquila has only submitted the output of a model that shows an overall regulated company need. However, Aquila has submitted an estimate of Missouri's peak day working capital needs in response to data requests. Furthermore, Aquila has filed with the Iowa Utilities Board an Iowa-specific

estimate of Iowa's working capital needs. Aquila employee Beth A. Armstrong's rebuttal testimony in Docket No. SPU-03-7 contained this estimate. Ms. Armstrong re-filed her Iowa estimate on July 18, 2003 as a Supplemental Exhibit. Her estimate in her Supplemental Exhibit is attached as Schedule JAB-5.

Q. Have you determined Missouri's estimated peak day working capital needs?

A. Yes. I calculated an estimated Missouri-specific need by using the information provided in Aquila's model, plus the methodology used by Aquila in determining Iowa's need to estimate Missouri's needs. I will compare this estimate with the Missouri specific estimate that Aquila provided in response to OPC DR No. 626, which is attached as Schedule JAB-6.

Q. Referencing OPC DR No. 626, what is Missouri's peak day need according to Aquila?

A. Using the methodology Aquila used to determine its peak day need, Missouri's portion of net working capital is ($3,065,349).

Q. Please explain.

A. When comparing Iowa's need, as submitted to the Iowa Utilities Board, and looking at page three of Schedule JAB-6, adding Missouri's share of gas supply, purchase power, gas turbine needs, storage, pipeline prepays, payroll, and incremental gas sensitivity then subtracting that from Missouri's share of cash receipts, Missouri is actually providing excess cash of approximately $3.1 million to the rest of Aquila's regulated operations. This means that Missouri has no need for peak day working capital.

Q. Does Aquila stop with its Missouri analysis at this point?

A. No. On page 2 of Schedule JAB-6, Aquila adds various categories of costs to Missouri's portion of working capital needs. Some of these costs can be attributed to electric operations in Missouri that Iowa does not have.

Q. What are the costs that Aquila adds to Missouri's portion of working capital needs?

A. In order to make Missouri's portion positive, Aquila added the following amounts: Missouri PGA ** _____ **, Underbilled Budget Billing ** _____ **, Missouri Ice Storm ** _____ *, Jan 03 and Dec 02, coal supply purchases ** _____ *, and Jan 03 Capital Expenditures ** _____ **. When these costs are added together, it turns Missouri's negative $3.1 million into a positive ** _____ **. This means that Missouri allegedly has a positive ** _____ ** impact on Aquila's peak day cash working capital need.

Q. Are these costs added to the Company's estimate of its total regulated operations need?

A. No. The $240 million need, as submitted by Aquila and testified to in its Iowa filing, is based on current and previous month gas and purchase power costs, storage, pipeline prepays, payroll, and an incremental gas cost. However, it would be reasonable to assume that the other states would also have PGA and underbilled budget billing concerns, as well as Capital Expenditures.

Q. Why should these costs not be included in Aquila's Missouri model?

A. These additional costs are tenuous at best. For example, assuming that Missouri needs working capital for an ice storm that may or may not occur seems to be stretching the concept of working capital needs.

Q. Please explain.

A. Assume you are purchasing a house for $150,000. When applying for your mortgage, you would not apply for $200,000 to have excess cash on hand to cover any emergencies that may or may not happen in the future. You would only apply for the amount of money you would need to purchase your home. Any emergencies that would arise after the sale would be taken care of through either insurance, or some other type of financing. It would not be prudent to go into debt deeper at the onset just to have cash on hand to handle potential repairs that may or may not be needed.

Deciding to have additional cash on hand to deal with future emergencies is essentially making a decision to create a self-insurance fund. Prudently managed firms would not decide to self-insure instead of purchasing insurance without performing an analysis of the pros and cons of all feasible options. Aquila has not provided this type of analysis to support its purported need for cash to provide self-insurance.

Q. What is your determination of Missouri's peak day working capital needs?

A. My calculation of Missouri's peak day needs, based upon Aquila's methodology, is approximately ($8,000,000). This calculation is attached to my testimony as Schedule JAB-7.

Q. What are the implications of your negative $8 million calculation?

A. It means that Missouri ratepayers are already providing more than enough cash to Aquila to meet Aquila's Missouri specific working capital needs.

Q. Why does come your calculation show Missouri at negative $8 million while Aquila's calculation shows Missouri at negative $3 million?

A. There are three major differences in our calculations. The first difference is storage injection costs. Aquila's storage is based upon budgeted volumes multiplied by Aquila's assumed natural gas prices. This amount is then divided among the states based on each state's percentage of total regulated Company load. My methodology uses Aquila's budgeted volumes along with its budgeted prices for storage injections. I then allocated these lower storage injection costs based upon the budgeted plans specific to each state.

The second major difference is payroll. Aquila allocated almost half of its payroll to Missouri. I allocated payroll to each state's regulated operations based on percent of total customers. Third, I allocated cash receipts based upon the same methodology used by Aquila in its Iowa testimony regarding Iowa-specific working capital needs, which is based upon expected cash receipts for December and January.

Q. Why is your methodology for estimating storage costs more reasonable than Aquila's?

A. My methodology is more reasonable because it does a better job of allocating costs to the appropriate state. Also, it is consistent with the methodology used by

Aquila to allocate purchase power expense. Aquila allocated purchase power by simply looking at the budgeted amounts for each state with purchase power requirements. However, Aquila allocated storage based simply upon load percentage. Aquila's response to Staff DR No. 5012 indicates that gas storage is actually budgeted by Aquila in a manner similar to purchase power. To take the final step of allocating storage injection costs to the appropriate states, I asked Aquila which states the gas supply personnel purchased gas for. When a gas supplier purchased gas for more than one state, I simply allocated his budgeted amount to each state based upon percentage of winter load. This information is attached to my rebuttal testimony as Schedule JAB-8.

Q. Regarding the additional costs added to Missouri's peak day need by Aquila in OPC DR No. 626, do you add any of these same costs to your calculation?

A. No. Most of these costs pertain to what-if scenarios. What will Aquila's cash needs be if an ice storm hits? What will be the impact on budget billing if gas prices rise? The items that may or may not occur should be dealt with when they occur, not before. For instance, an ice storm did hit Aquila's electric operations in January 2001. However, Aquila has been able to recoup those costs from ratepayers using an Accounting Authority Order.

Even with the financial constraints the Company is currently experiencing, it should be able to obtain short-term financing to cover ice storm related damages since a lending institution knows Aquila can probably recover those costs from ratepayers. Therefore, it is not necessary to add them as a peak day cash working

capital need. If Aquila does have a difficult time obtaining short term financing to cover some of the other potential occurrences due to its poor credit ratings resulting from its failures in non-regulated activities, Missouri ratepayers should not be forced to "bail out" the Company from the consequences of its failed non-regulated business ventures.

Q. Why does Aquila's Missouri regulated operations have a negative peak day cash working capital requirement when the other states have a positive peak day need.

A. There are two reasons why Missouri can have a negative peak day cash requirement while the other states are having a positive peak day need. First, Missouri is on average a warmer state than the most of the other states during the winter. Michigan, Minnesota, Nebraska, Iowa, and Colorado, are generally colder states than Missouri in the winter. Kansas' weather is very similar to Missouri's weather in January. The peak day occurs in January; thus it is driven by natural gas demand for heating purposes. Missouri's peak demand for natural gas per customer will be less than the majority of the other states due to its generally warmer weather. Attached, as Schedule JAB-9 are graphs of the mean temperature for January for the years 1995 – 2003. This data is from the National Climatic Data Center website.

Second, Missouri's LDC regulated operations are small compared to the other states. Missouri's regulated gas operations make up only about 6% of Aquila's total regulated natural gas operations. Since this peak day is being driven by natural gas consumption, it makes sense that a state that has so few customers

would not have the same need for working capital that other states with over three times the number of gas customers would have. When you combine the fact that Missouri has fewer gas customers and generally warmer weather, it makes sense that Missouri's need is less than the other states.

Q. Wouldn't Missouri's regulated electric operations make up for the lack of natural gas demand from Aquila's Missouri LDC properties?

A. Missouri's electric operations do add some volumes to the natural gas purchasing needs. However, Aquila's gas turbines are used as peakers and thus have relatively small natural gas needs in the winter. Additionally, since Missouri does provide a large electric customer base for Aquila, when the LDCs in other states need money for natural gas, Missouri electric customers are providing cash while needing little cash for its own purposes. These factors help explain Missouri's negative peak day cash working capital need.

NATURAL GAS PRICES

Q. In Aquila's model, what did it use as an estimate for its natural gas prices?

A. Aquila used a 12-month NYMEX strip.

Q. What is a NYMEX 12-month strip?

A. NYMEX is the New York Mercantile Exchange. This is the market where natural gas futures are bought and sold. A 12-month strip is the future price for a consecutive 12-month period of natural gas prices. The future price for natural gas is what a futures contract for a specific month is being bought and sold for on a given date. It is not a predictor or estimate of future prices. A futures contract

can, however, be entered into to hedge against future price movements. This would then establish a future price of natural gas.

Q. What date did Aquila pick to establish its 12-month strip?

A. Aquila picked April 23, 2003 to establish its 12-month strip for May 2003 – April 2004.

Q. What were the general market conditions in April 2003?

A. In April 2003, the natural gas market was coming off of its March highs of nearly $10 per MMBtu. These prices were near the records set in the January 2001. Further, due to late season cold weather, storage levels were drawn down to record lows. Due to the low storage levels, there was fear in the market that there would not be sufficient storage heading into the upcoming winter heating season. That could have lead to higher gas prices for the upcoming winter.

Q. Are low storage levels still a concern?

A. Not really. Storage enjoyed record injections throughout the summer injection season. Currently storage is about 7% below the five-year average.

Q. What were the prices Aquila used in its model?

A. The prices for May 2003 – April 2004 are as follows:

TABLE 2

Month	Price
May	5.57
Jun	5.67
Jul	5.74
Aug	5.76
Sep	5.72
Oct	5.81
Nov	5.90
Dec	5.97
Jan	5.82
Feb	5.56
Mar	4.91
Apr	4.91

Q. What were the actual prices for May 2003 – September 2003?

A. Actual NYMEX settlement prices for May 2003 – September 2003 are as follows:

TABLE 3

Month	Price
May	5.12
June	5.95
July	5.29
August	4.69
September	4.93

As you can see, prices were lower in four of five months and an average of $0.50 per MMBtu lower than the NYMEX 12-month strip on April 23, 2003.

Q. What is the outlook for natural gas prices for the next seven months?

A. According to the NYMEX seven-month strip October 2003 – April 2004, natural gas prices average about $5.15 per MMBtu. When added to the actual NYMEX prices of May – September, the 12-month average is $5.17 per MMBtu. As is always the case with natural gas prices, future movement is dependent on the weather. A colder winter could lead to higher prices. On the other hand, if the winter is mild, a significant drop in prices could occur as well.

Q. How does this price compare to Aquila's 12-month estimate?

A. The 12-month strip that Aquila used average $5.61 per MMBtu. This is a $0.44 difference. Table 3 shows the comparison between the natural gas prices used by Aquila and the prices I used in my calculation.

TABLE 4

Month	4/23 Price	9/5 Price
May	5.57	5.12
Jun	5.67	5.95
Jul	5.74	5.29
Aug	5.76	4.69
Sep	5.72	4.93
Oct	5.81	4.77
Nov	5.90	5.02
Dec	5.97	5.28
Jan	5.82	5.45
Feb	5.56	5.40
Mar	4.91	5.30
Apr	4.91	4.86
Average	5.61	5.17

Q. How does this price differential affect consumers?

A. When you plug in the actual prices as surrogates for what Aquila's storage injections and substitute the remaining months prices with prices that reflect more current market information, Aquila's peak day working capital need falls from $250 million to approximately $218 million.

Q. Are you utilizing NYMEX futures to estimate future gas prices?

Q. No. I do not believe that NYMEX futures are good estimators for future natural gas prices. In this case, I have utilized NYMEX settlement prices as a proxy for actual natural gas prices through the summer, and have used NYMEX futures as surrogate for prices in the future. This helps keep the comparison between

Aquila's methodology and my analysis in sync even though it is not the best method for estimating future natural gas prices.

Q. Aquila "stress tests" its model for an abnormal January scenario of $11.63 per MMBtu natural gas price and additional volumes consumed. Do you agree with this "test?"

A. No. First, it is similar to what Aquila did with the additional costs it added to Missouri's peak day requirements. It is building a model based upon an abnormal level of future costs. Second, a more rational stress test would be $9.00 per MMBtu.

Q. Why is $9.00 more appropriate that $11.63?

A. The two highest NYMEX settlements were in January 2001 and March 2003. Both months saw natural gas prices settle over $9.00 per MMBtu. If Aquila is going to build in a what-if scenario for gas costs, it should cap that price at a level that has actually occurred. Further, Aquila determined its $11.63 price utilizing a Black-Scholes methodology. Two factors that are important in the Black-Scholes methodology are the underlying asset price and time. Since Aquila initially submitted its model, January futures have fallen from $5.82 to $5.45. Also, there are only three months until January expiration versus the nine months to expiration when Aquila's model was run. The reduction in underlying price and time would cause the potential price to decrease as well.

Q. With a $9.00 price of natural gas as a "stress test," what would be Aquila's peak day cash working capital requirement?

A. With a $9.00 price of natural gas, Aquila's total regulated peak day cash working capital requirement falls to $192 million.

Q. What is Missouri's regulated operations share?

A. Missouri's share of this amount would be approximately negative $10.5 million.

AQUILA'S INVESTMENT GRADE PEAK DAY REQUIREMENTS

Q. What is the main cause of Aquila's peak day cash requirements?

A. The main cause of Aquila's peak day cash needs is the fact that Aquila is now required to prepay for natural gas supplies and pipelines.

Q. If Aquila were truly shielding its regulated customers from the effects of its non-regulated forays, would prepayments affect those consumers?

A. No. Shielding consumers from all effects of the negative creditworthiness would insulate the regulated customers from the effects of non-regulated financial problems. Asking ratepayers to provide collateral for a $250 million loan that is largely needed to meet prepayment obligations is not my idea of shielding ratepayers from the negative consequences of Aquila's failed non-regulated activities.

Q. Absent prepayments, what would be Aquila's peak day cash working capital requirement?

A. According to Aquila's model, if Aquila were investment grade, its Company-wide peak day needs would be approximately $70 million.

Q. When does this peak day cash requirement occur?

A. Utilizing the model provided by Aquila, this occurs on October 25.

Q. Why does the peak day shift?

A. The peak day shifts because the factors that are now driving the model are storage costs as opposed to prepayment obligations.

Q. Has Aquila in the past needed a special loan requiring regulated asset collateralization to meet its peak day needs?

A. No.

Q. Is the only reason that Aquila needed this loan because of the financial difficulties resulting from its non-regulated operations?

A. Yes.

Q. Should Missouri regulated assets be used as collateral for Aquila's non-regulated problems?

A. No.

SUMMARY

Q. Based upon your testimony, what amount is Aquila's peak day working capital needs for its regulated operations, assuming you believe in the concept of a peak day working capital model?

A. My testimony shows that Aquila's need for its regulated operations based on its peak day working capital model is approximately $70 million. This is the amount needed when prepayment requirements are excluded and gas costs for storage injections are lowered to more realistic levels. Missouri's share of this new peak cash working capital is still approximately ($8,000,000). Missouri's peak remains relatively unchanged because the new peak in October includes for more purchase power expense in Missouri.

Q. Prepayments are the major cause of the $250 million peak day need. Why does your calculation take them out?

A. I do not consider the prepayments in my total because the prepayments are caused by Aquila's financial trouble associated with its non-regulated activities. Regulated consumers should not be forced to subsidize increased peak day cash working capital needs due to un-regulated activities. Further, Aquila has stated it was going to protect its regulated customers from the negative effects of its financial struggles. If Aquila is going to pass along capital costs to its consumers as if it was an investment grade company, it should pass along other costs as if it were an investment grade company as well.

Q. If the Commission does not approve Aquila's Application will Aquila be unable to meet its cash work capital needs, even if you believe its $250 million claim?

A. Absolutely not.

Q. Why not?

A. There are two reasons why Aquila's ability to meet its cash working capital needs will not be affected if this Commission does not approve this Application. One, Aquila already has the proceeds of the loan. Two, Aquila will be over-collateralized as discussed in the testimony of Mr. Ted Robertson.

Q. Please summarize your testimony.

A. My testimony shows that Aquila has inflated its peak day cash working capital needs. It shows that the natural gas costs originally built into the model have overstated the amount of extra cash Aquila supposedly needs. My testimony also shows that Missouri's ratepayers are already providing a positive cash flow to

Aquila when its regulated operations in other states are apparently drawing cash from the Company. Finally, my testimony shows that, absent Aquila's failure in non-regulated activities, Aquila would not be in the financial situation it is currently in and therefore would not need the amount of peak day cash working capital that it claims it needs. Therefore, this Commission should not approve Aquila's Application to encumber Missouri assets as collateral for the $430 million term loan.

Q. Does this conclude your rebuttal testimony?

A. Yes it does.

Cases of Filed Testimony
James A. Busch

Company	Case No.
Union Electric Company	GR-97-393
Missouri Gas Energy	GR-98-140
Laclede Gas Company	GO-98-484
Laclede Gas Company	GR-98-374
St. Joseph Light & Power	GR-99-246
Laclede Gas Company	GT-99-303
Laclede Gas Company	GR-99-315
Fiber Four Corporation	TA-2000-23; et al.
Missouri American Water Company	WR-2000-281/SR-2000-282
Union Electric Company d/b/a AmerenUE	GR-2000-512
St. Louis County Water	WR-2000-844
Empire District Electric Company	ER-2001-299
Missouri Gas Energy	GR-2001-292
Laclede Gas Company	GT-2001-329
Laclede Gas Company	GO-2000-394
Laclede Gas Company	GR-2001-629
UtiliCorp United, Inc	ER-2001-672
Union Electric Company d/b/a AmerenUE	EC-2002-1
Laclede Gas Company	GR-2002-356
Empire District Electric Company	ER-2002-424
Southern Union Company	GM-2003-0238

AQUILA, INC.
CASE NO. EF-2003-0465
DATA REQUEST NO. OPC-5012

FILE COPY

DATE OF REQUEST: August 21, 2003

DATE RECEIVED: August 21, 2003

DATE DUE: September 10, 2003

REQUESTOR: Douglas E. Micheel

QUESTION:

Please provide any and all written, electronic or any other form of information provided by Aquila to financial analysts regarding Aquila's financial plan. (Schedule RD-1 Direct Testimony of Rick Dobson.)

RESPONSE: Please see attachments. Although there were no "collateral specific" presentations made to analysts, the financial plan is mentioned in the following presentations.

ATTACHMENT: Attached analyst presentations.

ANSWERED BY:

Neala Clark

SIGNATURE OF RESPONDENT

SEP 0 8 2003

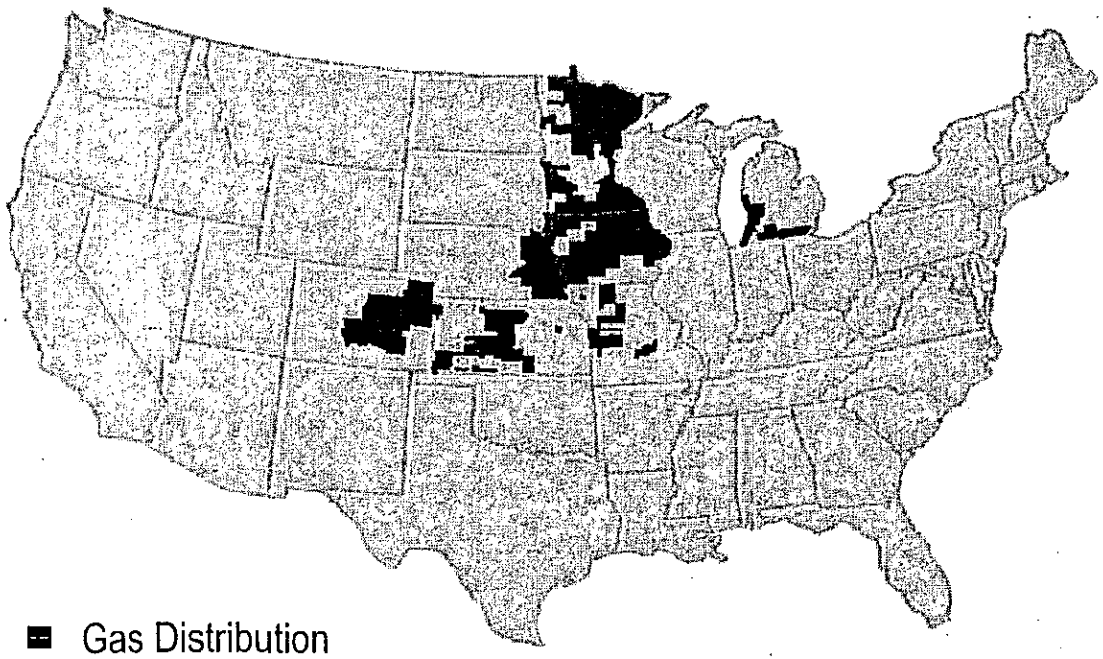
Aquila Update
Missouri Community Meeting
Discussion Document

Rick Green
Chief Executive Officer

St. Joseph Area
June 26, 2003

Aquila

The Road Ahead: A Domestic Utility Company



- Gas Distribution
- Electricity Distribution
- Combination Gas & Electric

Diversification:

Gas Customers

- Colorado: 52,000
- Iowa: 144,000
- Kansas: 104,000
- Michigan: 158,000
- Minnesota: 191,000
- Missouri: 53,000
- Nebraska: 189,000

Electric Customers

- Colorado: 87,000
- Kansas: 69,000
- Missouri: 282,000

US Operations

- ✓ 7 states
- ✓ Gas Customers: 891,000
- ✓ Electric Customers: 438,000
- ✓ On-system appliance repair business

Diversification mitigates utility risks

SCHEDULE JAB-3

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY.

SCHEDULE JAB-4

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY.

AQUILA, INC.

SUPPLEMENTAL EXHIBIT

of

BETH A. ARMSTRONG

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

July 18, 2003

Armstrong Iowa Rebuttal Testimony

Revised Exhibit BAA-1

		Iowa's Estimated Working Capital	Projected Dec 2003	Projected Jan 2004	
	Gas Supply				
	Working Capital Model		$ 131,195,528	$ 145,795,744	
	Iowa Percentage of load		16.1%	16.0%	See Supplemetal Schedule 1
A	**Iowa Portion**	**$ 44,562,014**	**$ 21,164,610**	**$ 23,397,404**	
	Storage			Jan	
	Working Capital Model			$ 70,584,491	
	Iowa Percentage of load			**15.8%**	See Supplemetal Schedule 1
B	**Iowa Portion**	**11,136,538**		**$ 11,136,538**	
	Pipeline Capacity				
	Working Capital Model			$ 31,800,000	
	Iowa Percentage of load			**15.8%**	See Supplemetal Schedule 1
C	**Iowa Portion**	**5,017,277**		**$ 5,017,277**	
D	**Total Cash Needs for Iowa (D= A+B+C)**	**$ 60,715,829**			
	Cash Receipts				
	Working Capital Model	$ 213,782,000	January 2004 Projected Cash Receipts		
	Iowa % of cash receipts (Avg Dec/Jan)	12.3%	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 JAB-5
Page 2 of 6

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	464,403	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
Total Networks Load	**22,194,734**	**17,346,231**	**14,491,155**	**8,821,636**	**4,689,865**	**3,661,523**	**3,288,178**	**3,483,194**	**3,465,430**	**7,828,659**	**13,642,177**	**18,855,409**
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%	5.6%
Iowa	16.0%	15.7%	15.4%	14.9%	13.7%	13.4%	13.1%	13.1%	13.6%	14.8%	15.1%	[redacted]
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%
	100.0%	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Iowa average for storage and pipeline capacity payments

Schedule JAB-5
Page 3 of 6

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	877,199		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	16%
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	

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	[redacted]	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 pi	16.0%	15.8%	15.5%	**15.8%**

Schedule JAB-5
Page 4 of 6

Armstrong Iowa Rebuttal Testimony

Revised Exhibit BAA-1

Supplemental Schedule 2

Calculation of Iowa's portion of cash receipts

U.S. Network Actual Cash receipts	A January 2003 Actual	B Iowa's % of Peoples Natural Gas Cash Receipts	C= A*B Iowa estimated receipts	Iowa's % of U.S. Network Total	
MGD (Michigan Gas Utility Distirbution)	19,151,914.57				
MPD (Misouri Public Service Distribution)	30,268,633.01				
PND (PNG Distribution)	90,446,873.61	22.5%	20,325,385	12.3%	12.3% is 20,325,385 / 165,200,871.25
SJD (St. Joe Power and Light Distribution)	7,608,725.26				
WCD (West Plains Colorado Distribution)	8,993,443.91				
WKD (West Plains Kansas Distibution)	8,731,280.89				
Total receipts for Jan 03	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	13,466,563.27	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%**	22.5% is the average of 23% and 22%
OKLAHOMA	23,822.88	39,427.87	0%	0%		
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		
Gas						
	COLORADO	60,061	26,371	33,690		
	IOWA	139,761	90,423	49,338	3%	3% is 49,338 / 1,707,409.00
	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		
Electric						
	COLORADO	226,241	114,522	111,719		
	KANSAS	360,009	180,718	179,291		
	MISSOURI	1,499,008	678,512	820,496		
TOTAL		3,192,557	1,485,148	1,707,409		

Schedule JAB-5
Page 6 of 6

SCHEDULE JAB-6

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY.

	Estimated Working Capital	Missouri Projected Dec 2003	Projected Jan 2004
Gas Supply			
Working Capital Model			
State's Percentage of Load			
State's Portion	$14,273,542.38	$6,792,264.33	$7,481,278.05
Purchased Power	$9,666,000.00	$5,447,254.00	$4,218,746.00
Power Plant Notional	$7,290,037.65	$3,982,700.43	$3,307,337.22
Sub-Total	$16,956,037.65		
Gas Supply Total	$31,229,580.03		
Storage			
Working Capital Model			
State's Percentage of Load			
State's Portion	$2,391,884.31		2,391,884.31
Pipeline Capacity			
Working Capital Model			
State's Percentage of Load			
State's Portion	$1,709,146.93		$1,709,146.93
Payroll			
Working Capital Model			
State's Percentage of Customers			
State's Portion	$1,484,183.60		$1,484,183.60
Incremental Gas Stress Test			
Working Capital Model			
State's Percentage of Load			
State's Portion	$ 4,031,406.22		$ 4,031,406.22
Total Cash Needs	$40,846,201.10		
Cash Receipts			
Working Capital Model	$213,782,000		
State's Percent of cash receipts	22.9%		
State's Portion	$49,016,069.62		
Peak Cash Requirement	($8,169,868.51)		
% of Net Peak Cash Requirement	-3.3%		

Schedule JAB-7

SCHEDULE JAB-8

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

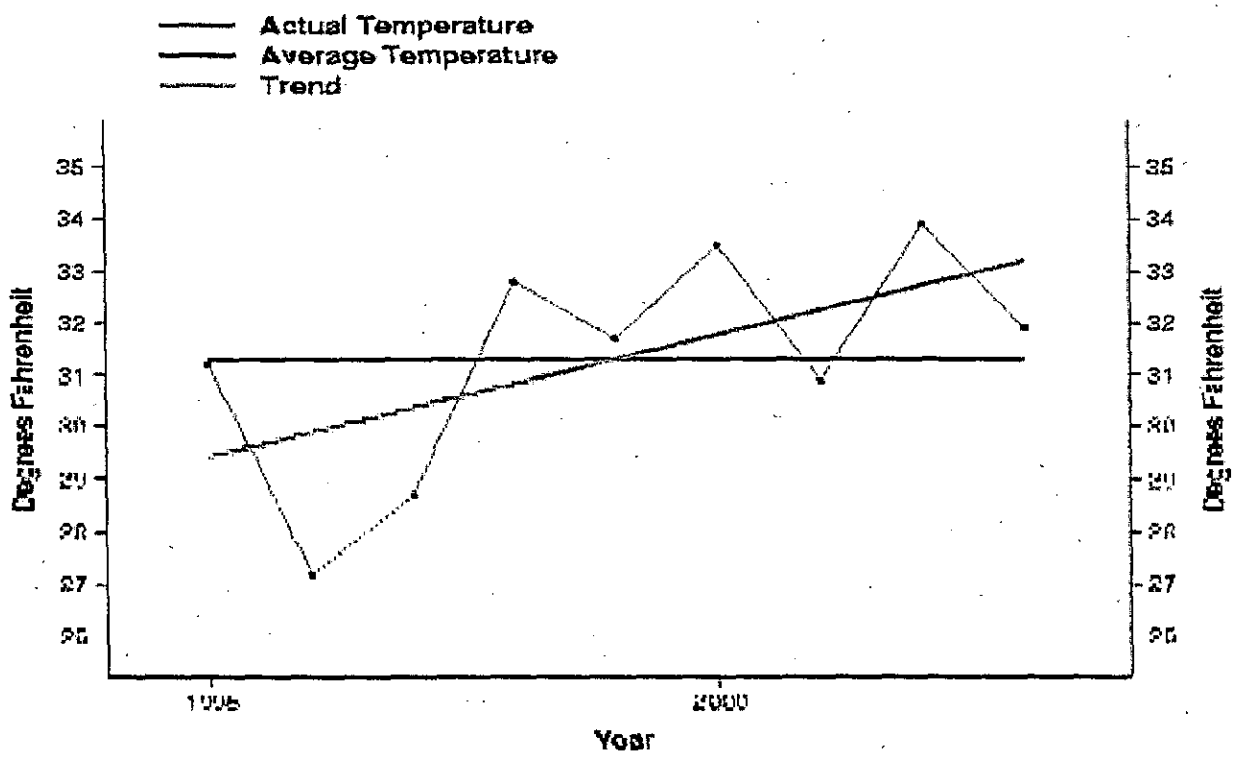
IN ITS ENTIRETY.

Climate At A Glance

January Temperature
Kansas

January 2003: 31.9 degF Rank: 6

January 1995 - 2003 Average = 31.31 degF
January 1995 - 2003 Trend = 4.67 degF / Decade



NCDC / Climate At A Glance / Climate Monitoring / Search / Help

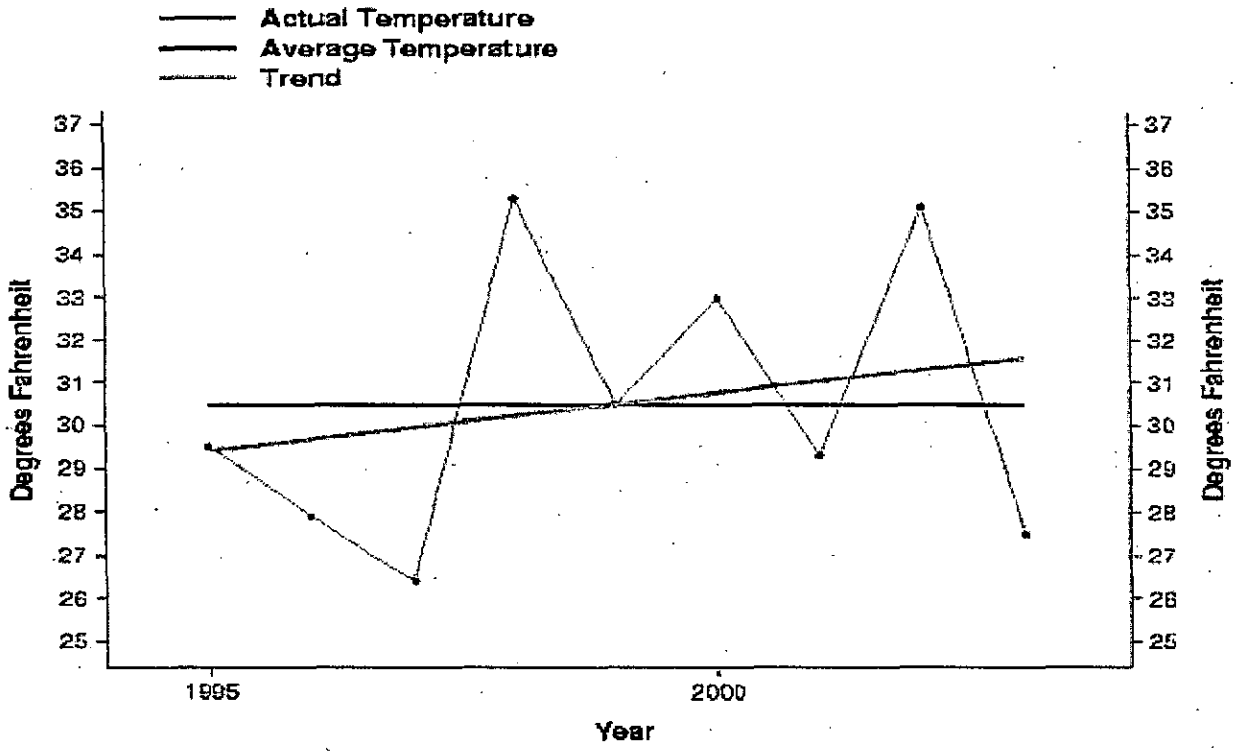
This graph was dynamically generated 09 /08 /2003 at 14:21:25
via http://www.ncdc.noaa.gov/oa/climate/research/cag3/NA.html
Please send questions to Jay.Lawrimore@noaa.gov
Please see the NCDC Contact Page if you have questions or comments.

Climate At A Glance

January Temperature
Missouri

January 2003: 27.5 degF Rank: 2

January 1995 - 2003 Average = 30.50 degF
January 1995 - 2003 Trend = 2.85 degF / Decade



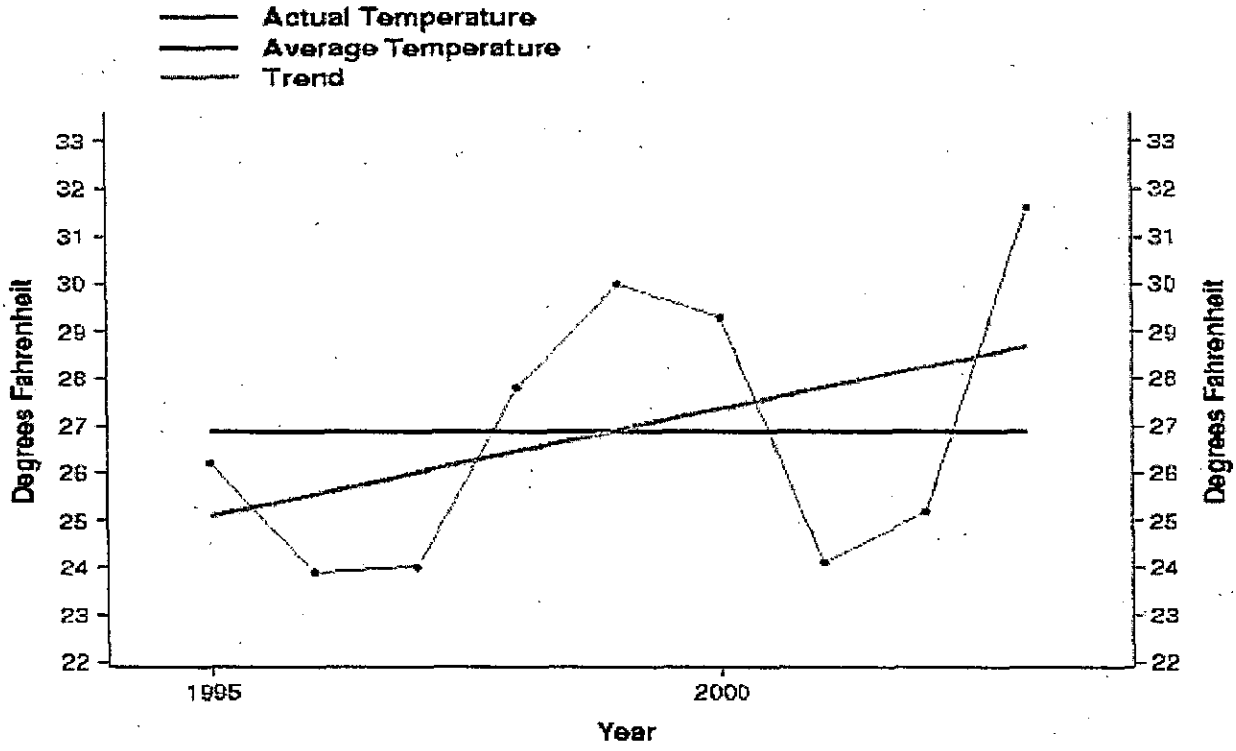
This graph was dynamically generated 09 /08 /2003 at 14:20:31
via http://www.ncdc.noaa.gov/oa/climate/research/cag3/NA.html
Please send questions to Jay.Lawrimore@noaa.gov
Please see the NCDC Contact Page if you have questions or comments.

Climate At A Glance

January Temperature
Colorado

January 2003: 31.6 degF Rank: 9

January 1995 - 2003 Average = 26.90 degF
January 1995 - 2003 Trend = 4.53 degF / Decade



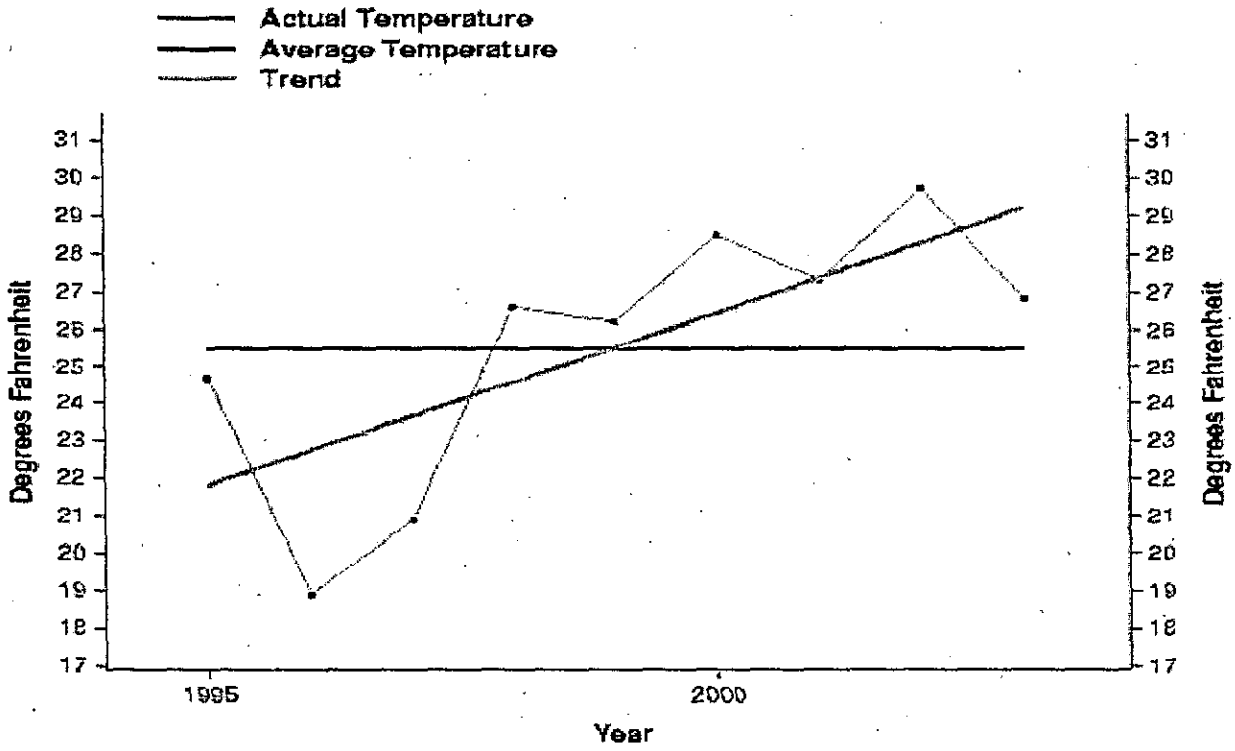
This graph was dynamically generated 09 /08 /2003 at 14:24:17
via http://www.ncdc.noaa.gov/oa/climate/research/cag3/NA.html
Please send questions to Jay.Lawrimore@noaa.gov
Please see the NCDC Contact Page if you have questions or comments.

Climate At A Glance

January Temperature
Nebraska

January 2003: 26.8 degF Rank: 6

January 1995 - 2003 Average = 25.51 degF
January 1995 - 2003 Trend = 9.25 degF / Decade



NCDC / Climate At A Glance / Climate Monitoring / Search / Help

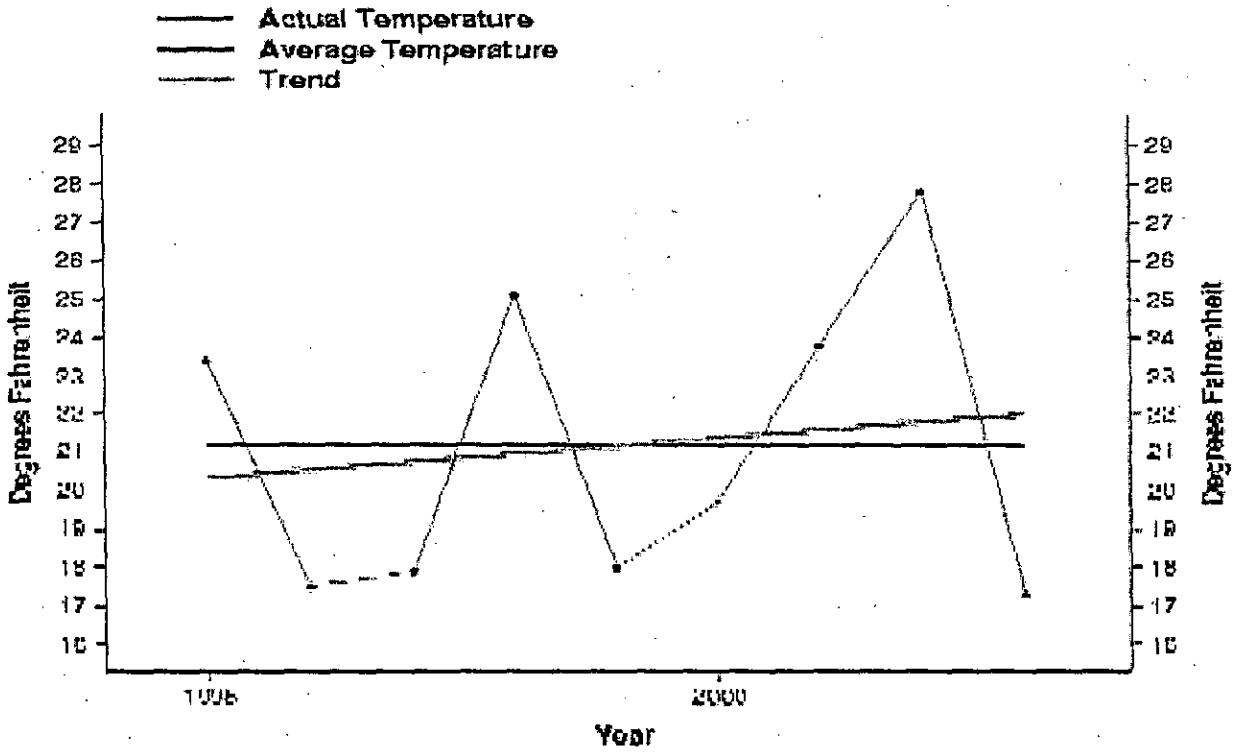
This graph was dynamically generated 09 /08 /2003 at 14:23:46
via http://www.ncdc.noaa.gov/oa/climate/research/cag3/NA.html
Please send questions to Jay.Lawrimore@noaa.gov
Please see the NCDC Contact Page if you have questions or comments.

Climate At A Glance

January Temperature
Michigan

January 2003: 17.3 degF Rank: 1

January 1995 - 2003 Average = 21.17 degF
January 1995 - 2003 Trend = 2.15 degF / Decade



NCDC / Climate At A Glance / Climate Monitoring / Search / Help

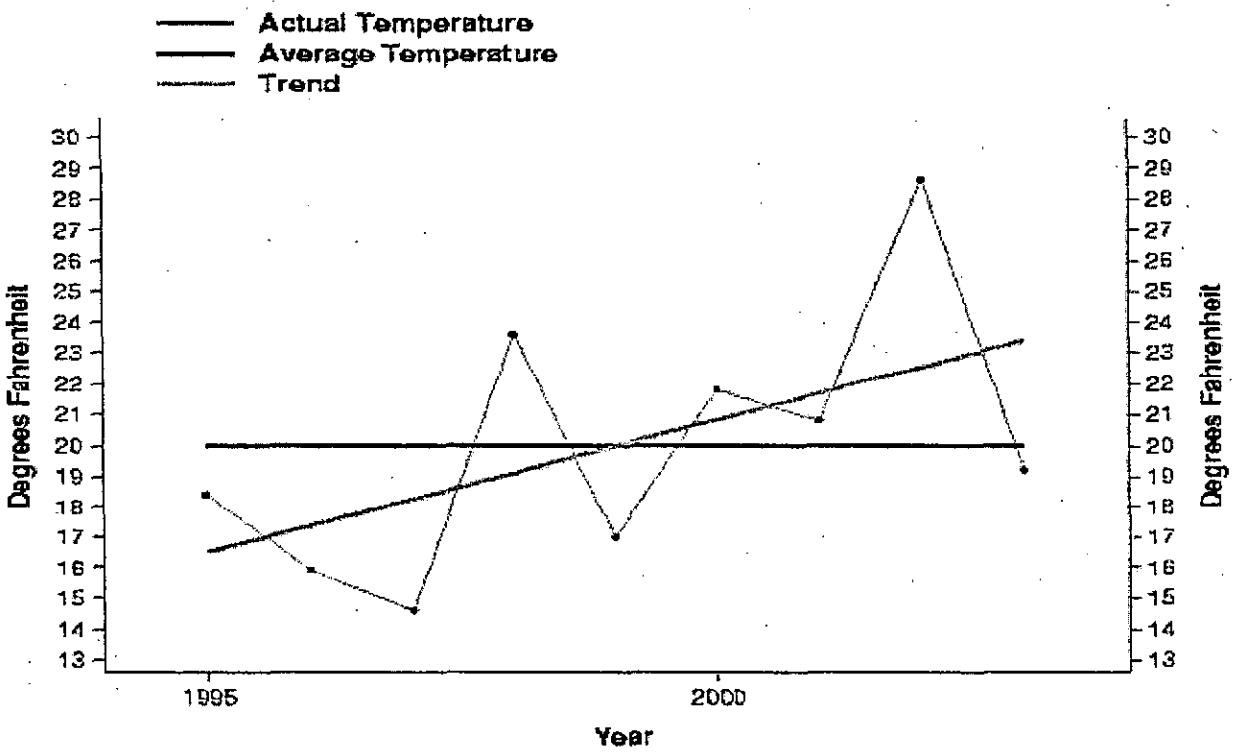
This graph was dynamically generated 09 /08 /2003 at 14:26:08
via http://www.ncdc.noaa.gov/oa/climate/research/cag3/NA.html
Please send questions to Jay.Lawrimore@noaa.gov
Please see the NCDC Contact Page if you have questions or comments.

Climate At A Glance

January Temperature
Iowa

January 2003: 19.2 degF Rank: 51

January 1995 - 2003 Average = 19.99 degF
January 1995 - 2003 Trend = 8.65 degF / Decade



NCDC / Climate At A Glance / Climate Monitoring / Search / Help

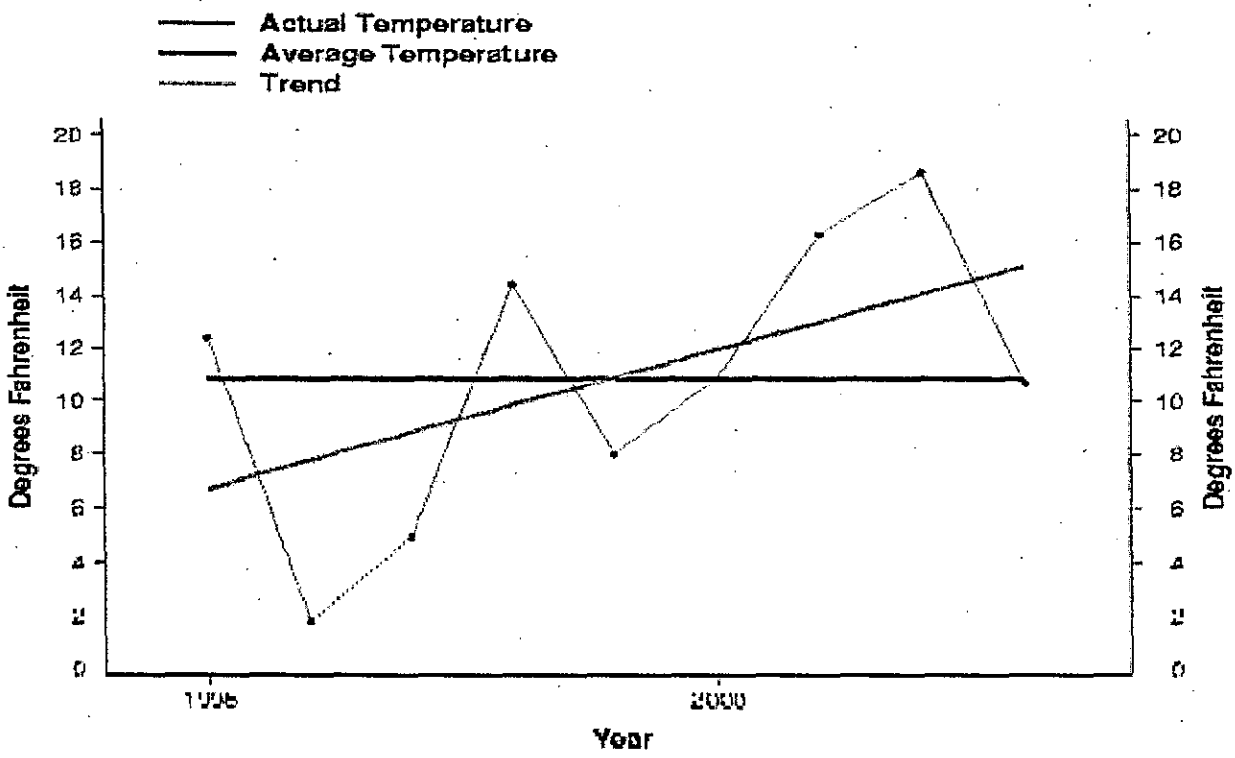
This graph was dynamically generated 09 /08 /2003 at 14:24:52
via http://www.ncdc.noaa.gov/oa/climate/research/cag3/NA.html
Please send questions to Jay.Lawrimore@noaa.gov
Please see the NCDC Contact Page if you have questions or comments.

Climate At A Glance

January Temperature
Minnesota

January 2003: 10.7 degF Rank: 4

January 1995 - 2003 Average = 10.90 degF
January 1995 - 2003 Trend = 10.45 degF / Decade



NCDC / Climate At A Glance / Climate Monitoring / Search / Help

This graph was dynamically generated 09 /08 /2003 at 14:25:42
via http://www.ncdc.noaa.gov/oa/climate/research/cag3/NA.html
Please send questions to Jay.Lawrimore@noaa.gov
Please see the NCDC Contact Page if you have questions or comments.