



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

3 Q. Have you previously testified before this Commission?

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

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

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

11 Q. How is your testimony organized?

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

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

20 A. Yes. Mr. Ted Robertson will be filing testimony regarding Aquila's application  
21 and Public Counsel's overall recommendation. Mr. Mark Burdette will discuss  
22 some of the financial implications of Aquila's request and the reasons for  
23 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?

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

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

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

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

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

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

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

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

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

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

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

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

9 A. Yes.

10 Q. Please explain.

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

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

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

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

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

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

4 **AQUILA's PEAK DAY WORKING CAPITAL MODEL**

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

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

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

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

13 Q. What is a peak day?

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

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

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

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

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

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

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

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

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

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

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

15 A. On January 2, 2004, Aquila estimates that current gas and purchase power costs  
16 will be \*\* \_\_\_\_\_ \*\* (Current costs are referring to Aquila's projection of  
17 January's costs). Previous month gas and purchase power costs will be  
18 \*\* \_\_\_\_\_ \* (Previous costs are referring to Aquila's projection of  
19 December's costs). Storage costs will be \*\* \_\_\_\_\_ \*. Pipeline  
20 prepayments will be \*\* \_\_\_\_\_ \*. There will be a payroll adjustment of  
21 \*\* \_\_\_\_\_ \* on that day. And finally, Aquila has "stressed tested" its model  
22 by assuming a worst-case scenario for gas prices of \$11.63 per MMBtu for  
23 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**

<b>Cost</b>	<b>Amount</b>
** _____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____ *

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?



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

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

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

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

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

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

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

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

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

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

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

10      Q.   Please explain natural gas storage.

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

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

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

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

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

23      Q.   Please explain pipeline prepayments.

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

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

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

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

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

#### 17 **MISSOURI PEAK DAY WORKING CAPITAL NEEDS**

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

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

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

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

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

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

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

15 Q. Please explain.

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

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

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

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

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

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

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

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

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

4 Q. Please explain.

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

13  
14 Deciding to have additional cash on hand to deal with future emergencies is  
15 essentially making a decision to create a self-insurance fund. Prudently managed  
16 firms would not decide to self-insure instead of purchasing insurance without  
17 performing an analysis of the pros and cons of all feasible options. Aquila has not  
18 provided this type of analysis to support its purported need for cash to provide  
19 self-insurance.

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

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

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

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

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

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

13

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

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

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

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

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

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

19  
20      Even with the financial constraints the Company is currently experiencing, it  
21      should be able to obtain short-term financing to cover ice storm related damages  
22      since a lending institution knows Aquila can probably recover those costs from  
23      ratepayers. Therefore, it is not necessary to add them as a peak day cash working



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

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

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

19  
20 Second, Missouri’s LDC regulated operations are small compared to the other  
21 states. Missouri’s regulated gas operations make up only about 6% of Aquila’s  
22 total regulated natural gas operations. Since this peak day is being driven by  
23 natural gas consumption, it makes sense that a state that has so few customers

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

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

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

#### 14 NATURAL GAS PRICES

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

16 A. Aquila used a 12-month NYMEX strip.

17 Q. What is a NYMEX 12-month strip?

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

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

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

4       A.    Aquila picked April 23, 2003 to establish its 12-month strip for May 2003 – April  
5           2004.

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

7       A.    In April 2003, the natural gas market was coming off of its March highs of nearly  
8           \$10 per MMBtu. These prices were near the records set in the January 2001.  
9           Further, due to late season cold weather, storage levels were drawn down to  
10          record lows. Due to the low storage levels, there was fear in the market that there  
11          would not be sufficient storage heading into the upcoming winter heating season.  
12          That could have lead to higher gas prices for the upcoming winter.

13      Q.    Are low storage levels still a concern?

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

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

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

**TABLE 2**

<u>Month</u>	<u>Price</u>
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**

<u>Month</u>	<u>Price</u>
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**

<u>Month</u>	<u>4/23 Price</u>	<u>9/5 Price</u>
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	<u>4.91</u>	<u>4.86</u>
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

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

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

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

10      Q.   Why is \$9.00 more appropriate than \$11.63?

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

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

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

3 Q. What is Missouri's regulated operations share?

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

5 **AQUILA'S INVESTMENT GRADE PEAK DAY REQUIREMENTS**

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

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

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

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

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

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

21 Q. When does this peak day cash requirement occur?

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

23 Q. Why does the peak day shift?

A. No.



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

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

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

13 A. Absolutely not.

14 Q. Why not?

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

19 Q. Please summarize your testimony.

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

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

8           Q. Does this conclude your rebuttal testimony?

9           A. Yes it does.

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