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and Fuel Expense  
Witness: Michael S. Proctor  
Sponsoring Party: MoPSC Staff  
Type of Exhibit: Surrebuttal Testimony  
Case No.: ER-2009-0089  
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**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY OPERATIONS DIVISION**

**SURREBUTTAL TESTIMONY**

**OF**

**MICHAEL S. PROCTOR**

**KANSAS CITY POWER & LIGHT COMPANY**

**CASE NO. ER-2009-0089**

**Jefferson City, Missouri  
April 2009**

**\*\*Denotes Highly Confidential Information\*\***

**NP**

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of the Application of Kansas )  
 City Power and Light Company for )  
 Approval to Make Certain Changes in its )  
 Charges for Electric Service To Continue )  
 the Implementation of Its Regulatory Plan )

Case No. ER-2009-0089

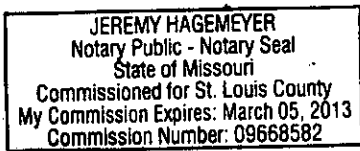
**AFFIDAVIT OF MICHAEL S. PROCTOR**

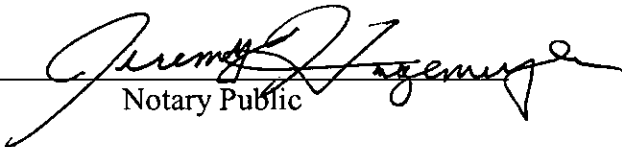
**STATE OF MISSOURI** )  
 ) ss  
**COUNTY OF COLE** )

Michael S. Proctor, of lawful age, on his oath states: that he has participated in the preparation of the following Surrebuttal Testimony in question and answer form, consisting of 12 pages of Surrebuttal Testimony to be presented in the above case, that the answers in the following Surrebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

  
 \_\_\_\_\_  
 Michael S. Proctor

Subscribed and sworn to before me this 6<sup>th</sup> day of April, 2009.



  
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 Notary Public

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1 **SURREBUTTAL TESTIMONY**

2 **OF**

3 **MICHAEL S. PROCTOR**

4 **KANSAS CITY POWER & LIGHT COMPANY**

5 **CASE NO. ER-2009-0089**

6 **Q. What is your name and business address?**

7 A. My name is Michael S. Proctor. My business address is 9900 Page Avenue,  
8 Suite 103, Overland, MO 63132.

9 **Q. Are you the same Michael S. Proctor who filed rebuttal testimony on**  
10 **behalf of the Staff of the Missouri Public Service Commission (Missouri Commission) in**  
11 **this case?**

12 A. Yes, I am.

13 **Q. To whose rebuttal testimony are you responding?**

14 A. My surrebuttal testimony is in response to the rebuttal testimony filed by  
15 Michael M. Schnitzer and Mr. WM. Edward Blunk on behalf of Kansas City Power & Light  
16 Company (KCPL).

17 **EXECUTIVE SUMMARY**

18 **Q. What issues do you have with Mr. Schnitzer's rebuttal testimony?**

19 A. Mr. Schnitzer's rebuttal testimony is really an update to his direct testimony in  
20 which he provides what is a third update to the NorthBridge estimate for the 25<sup>th</sup> Percentile  
21 value for Margins associated with KCPL's off-system sales (OSS) projected for August 2009  
22 through July 2010. As I state in my rebuttal testimony, my issue is not with the NorthBridge  
23 Model used to develop the distribution of Margins, rather it is with the inputs used to estimate  
24 the distribution of Margins; in particular, the electricity and natural gas prices.

1           **Q.     What are the specific concerns with the latest update from NorthBridge?**

2           A.     First, the latest distribution updates from NorthBridge show a mean around-  
3 the-clock (ATC) electricity price that is well below any reasonable level. My surrebuttal  
4 testimony provides two tests of reasonableness, and the mean ATC electricity price in the  
5 NorthBridge update is below the prices from these two tests. Second, the latest distribution  
6 assumes that the forecasted prices provided by KCPL are the mean of the distributions used  
7 by NorthBridge to generate its distribution of Margins. My surrebuttal testimony will show  
8 that in fact the price forecasts of KCPL are well below the mean of the price distributions for  
9 the annual average natural gas price and the ATC electricity price. Moreover, the Staff's use  
10 of a test-year determination of the mean of the ATC electricity price distribution is consistent  
11 with the calculation of the standard deviation, and test-year electricity and natural gas prices  
12 should be used in the NorthBridge model to determine the distribution for Margins.

13           **Q.     What issues do you have with Mr. Blunk's rebuttal testimony?**

14           A.     Mr. Blunk's rebuttal testimony discusses the Staff's use of a flat-line natural  
15 gas price. Mr. V. William Harris from the Staff is also addressing this issue from the  
16 perspective of the Staff's direct filing where actual test year electricity prices were used for  
17 purchased power. I will address this issue from the perspective of the Staff's rebuttal filing  
18 where I recommended that normalized test-year prices that are trued up are used along with a  
19 normalized profile for electricity prices.

20           **Q.     What are the specific concerns you have with Mr. Blunk's rebuttal**  
21 **testimony?**

22           A.     From the perspective of using strictly test-year prices, I do not disagree with  
23 Mr. Blunk's testimony. He is correct that in the test year as updated, very high electricity

1 | prices in July 2008 were associated with very high natural gas prices. However, 2008 was an  
2 | abnormal year, and when electricity prices are normalized for the high prices in July 2008,  
3 | what is in fact the case is that natural gas prices will actually fall in July. My surrebuttal  
4 | testimony looks at the average price profiles for both natural gas and electricity prices over  
5 | the four relatively normal years of 2003, 2004, 2006 and 2007, and recommends that these  
6 | profiles be used in conjunction with normalized profile for electricity prices.

7 | **1. KCPL's FORECAST OF AVERAGE ANNUAL NATURAL GAS AND ATC**  
8 | **ELECTRICITY PRICES ARE BELOW A REASONABLE LEVEL**

9 |  
10 | **Q. How do your concerns about the levels for average annual natural gas and**  
11 | **ATC electricity prices relate to the latest estimates provided by Mr. Schnitzer?**

12 | A. Schedule MP-4, attached to the highly confidential version of my surrebuttal  
13 | testimony shows the path of the various estimates as they have been revised over time. The  
14 | upper graph on Schedule MP-4 shows the relationship between the mean level for average  
15 | annual natural gas price and the mean level for ATC electricity price for the distributions of  
16 | these two variables used as inputs to the NorthBridge Model. The highest mean prices for  
17 | natural gas and electricity are those associated with KCPL's direct filing, the middle mean  
18 | prices are associated with the September 30 update, and the lowest prices are associated with  
19 | the latest update provided on March 11 in Mr. Schnitzer's rebuttal testimony.

20 | The lower graph on Schedule MP-4 shows the relationship between the mean level for  
21 | OSS Margins and the mean level for ATC electricity prices. As with the upper graph, the  
22 | highest Margins and ATC electricity price correspond to the earliest filing, the middle  
23 | Margins and ATC electricity price are associated with the September 30 update, and the  
24 | lowest Margins and ATC electricity price correspond to the most recent update filing on  
25 | March 11 in Mr. Schnitzer's rebuttal testimony.

1           What these graphs show are declining estimates for natural gas and electricity prices  
2 and their impact on NorthBridge's estimate of Margins that have occurred from the summer  
3 of 2008 to late this winter. While I agree that expectations about future price levels have  
4 significantly declined over this period of time, my concern is with using forecasts based on  
5 futures prices for natural gas as a driver for what should be included in this rate case. While I  
6 have addressed this concern in my rebuttal testimony, the graphs on Schedule MP-4 show yet  
7 another significant decline in Margins proposed by KCPL that I believe are well outside the  
8 level that should be included for purposes of setting rates for KCPL. My surrebuttal  
9 testimony will address why I believe this latest estimate is too low.

10           **Q.     What analysis have you performed as a test for the reasonableness of the**  
11 **updated estimates provided in Mr. Schnitzer's rebuttal testimony?**

12           A.     I have made two calculations as a test for the reasonableness of the updated  
13 estimates. First, I updated the SPP North prices for February and March 2009. Next, I  
14 estimated the updated electricity prices for April to be at the average price from the  
15 September 2008 through March 2009 period. I calculated the ATC electricity price for May  
16 2008 through April 2009 as updates to the test year. Second, I estimated an ATC electricity  
17 price using the normalized profile from my rebuttal testimony by adjusting it down by the  
18 ratio of the actual levels for electricity prices for the months of September 2008 through  
19 March 2009 to the normalized profile levels for those same months – a ratio of 83.07%. The  
20 resulting profile represents a normalized monthly profile for a year based on the average  
21 electricity prices observed in SPP North from September 2008 through March 2009. The  
22 results of these two estimates are shown in comparison to the NorthBridge estimates for  
23 September 30, 2008 update and March 11, 2009 update on Schedule MP-5 attached to the

1 highly confidential version of my surrebuttal testimony. In the graphs on Schedule MP-5, I  
2 use Staff LU (Likely Update) to represent the first estimate, and Staff LB (Lower Bound) to  
3 represent the second estimate.

4 **Q. Why do you call the first estimate Staff Likely Update (Staff LU)?**

5 A. In my rebuttal testimony, I stated the Staff position is that the Missouri  
6 Commission should adopt a test year approach to determining normalized electricity prices.  
7 The test year approach allows for a true-up of the test year, and I have included that true-up  
8 for February and March 2009 and an estimate for the likely trued-up ATC electricity prices  
9 for April of 2009 in the Staff LU estimate. In contrast, KCPL is proposing to go beyond the  
10 true-up date used in this case for all other items of the revenue requirement calculation but  
11 make an isolated adjustment only for off-system sales margin.

12 **Q. What are the Staff LU prices for each month?**

13 A. These prices are shown on Schedule MP-6 for both the actual monthly profile  
14 and the normalized monthly profile recommended in my rebuttal testimony.

15 **Q. What does the Staff LU indicate?**

16 A. As shown by the first graph on Schedule MP-5, the likely update is closer to  
17 the prices for natural gas and ATC electricity price filed in my rebuttal testimony than it is to  
18 the March 11 update filed in Mr. Schnitzer's rebuttal testimony. The second graph on  
19 Schedule MP-5 shows that the 25<sup>th</sup> Percentile level for Margins is closer to the Margins filed  
20 in my rebuttal testimony than the March 11 update by Mr. Schnitzer. Thus, the forecast of  
21 natural gas prices and electricity prices provided to Mr. Schnitzer by KCPL are significantly  
22 lower than what a normalized test year is likely to produce.



1           **Q.     Does this show that KCPL's forecasted prices are unreasonably low?**

2           A.     Not necessarily. This is why I performed the second estimate where I lowered  
3 all of the monthly prices to levels consistent with those observed from September 2008  
4 through March 2009. As stated previously, these results are labeled as Staff LB on the  
5 Schedule MP-5.

6           **Q.     Why did you call this estimate Staff Lower Bound (Staff LB)?**

7           A.     This estimate represents the electricity price associated with the low levels of  
8 natural gas prices observed over September 2008 through March 2009, with no possibility of  
9 natural gas prices increasing from those levels for the period August 2009 through July 2010.  
10 This is a lower bound estimate in the sense that a forecast that assumes natural gas price will  
11 stay at these very low levels going into the future, and while this is a possibility, it is at the  
12 lower end of the probability distribution.

13           **Q.     Is the Staff changing its rebuttal testimony position and treating this**  
14 **estimate as a revision for normalized prices?**

15           A.     No. The Staff's position has not changed. The normalized prices are those  
16 submitted in my rebuttal testimony subject to true-up for February, March and April SPP  
17 North prices. This estimate represents a lower bound of reasonableness against which to  
18 compare the updated KCPL and NorthBridge revised estimates.

19           **Q.     How does the Staff LB compare to the NorthBridge estimates?**

20           A.     As shown in the graphs on Schedule MP-5, while the Staff LB estimates are  
21 below the Staff LU estimates for true-up test year levels, they are still above the March 11  
22 revised NorthBridge estimates. My conclusion is that the KCPL forecasts for natural gas and  
23 electricity prices provided to NorthBridge assume that natural gas and electricity prices for

1 August 2009 through July 2010 will be below the low levels observed in the period  
2 September 2008 through March 2009, and while that is possible, it is not very likely.

3 **2. THE ASSUMPTION THAT KCPL'S FORECASTS FOR AVERAGE ANNUAL**  
4 **NATURAL GAS AND ATC ELECTRICITY PRICES ARE THE MEANS FOR**  
5 **PRICE DISTRIBUTIONS USED AS INPUTS BY NORTHBRIDGE IS FAULTY**  
6

7 **Q. Doesn't NorthBridge estimate a probability distribution around its**  
8 **estimate of natural gas and electricity prices?**

9 A. Yes, but these distributions are driven by the assumption that these lower  
10 prices are the mean of that distribution, rather than observations in the lower percentiles of the  
11 correct price distributions. Moreover, my understanding is that KCPL uses forward natural  
12 gas prices to drive its estimate of the mean (average of the distribution) for the forecast  
13 period, and then NorthBridge uses the standard deviation from historical observations on  
14 natural gas and electricity prices to determine a distribution around that mean. Thus, the  
15 mechanics of the modeling procedure dictate the resulting distributions for all of the inputs  
16 and therefore for the outputs for Margins.

17 **Q. Do you disagree with this procedure for developing price distributions**  
18 **that are used as inputs into the calculation of the distribution for Margins?**

19 A. Yes. Moreover, price distributions are based on the uncertainty around a  
20 specific type of forecast known as a "random walk". A random walk forecast is very simple, it  
21 forecasts next year's price will be the same as this year's price with an "error" term added for  
22 random changes. This simple forecasting method is consistent with using the test-year  
23 average prices, adjusted for known and measurable change as the basis for the forecast for  
24 prices during the period when new rates go into effect, and is consistent with determining the  
25 distribution of these prices by estimating the standard deviation of the errors resulting from

1 this forecast. Specifically, the standard deviations calculated by NorthBridge are based on the  
2 difference between this year's price and last year's price; i.e., the forecasting error resulting  
3 from using last year's price as the forecast for this year's price. Thus, the probability  
4 distributions for prices used by NorthBridge as inputs to its model reflect the volatility  
5 associated with assuming that the mean of these distributions is the prices observed in the  
6 previous year. This is consistent with using test year prices as the means for these  
7 distributions.

8 **Q. What did NorthBridge assume was the mean for the price distributions**  
9 **used as inputs to its Model?**

10 A. Instead of fixing the mean at a test year level, NorthBridge uses the forecasts  
11 provided by KCPL as the means of the probability distributions for prices. In essence,  
12 KCPL's price forecasts are not means of the distribution from the random walk forecasts; they  
13 are instead a forecast of where these prices will be within the distribution having the test year  
14 prices as the forecasts. This is illustrated in Schedule MP-7 attached to the highly  
15 confidential version of my surrebuttal testimony.

16 The upper graph on Schedule MP-7 shows the distribution associated with the test-  
17 year ATC electricity price as the mean of the ATC electricity price distribution. The KCPL  
18 updated forecast is for the ATC electricity price to fall well below that mean. The middle  
19 graph on Schedule MP-7 shows the distribution associated with the test-year annual average  
20 natural gas price at the Henry Hub. The KCPL updated forecast is for the annual average  
21 natural gas price at the Henry Hub to fall below that mean. Finally, the lower graph on  
22 Schedule MP-7 shows the distribution for Margins that result using the test-year distribution.  
23 In this graph, the 25<sup>th</sup> percentile of the test-year distribution is shown along with the mean

1 (not the 25<sup>th</sup> percentile level) that the NorthBridge Model estimated using KCPL's forecasts  
2 as means for the probability distributions for prices as well as the 25<sup>th</sup> percentile from the  
3 NorthBridge Model estimate.

4 **Q. What is the impact on Margins from assuming that the KCPL forecasts**  
5 **for natural gas and electricity prices are the means (averages) of the price distributions**  
6 **used as inputs in the NorthBridge Model?**

7 A. Using the KCPL forecasts for natural gas and electricity prices as the means  
8 for the distribution of these inputs to the NorthBridge model instead of test-year normalized  
9 prices trued-up through April 2009 results in underestimating the 25<sup>th</sup> percentile level for  
10 Margins by almost \$7 million.

11 **3. NORMALIZED PROFILES FOR NATURAL GAS PRICES SHOULD BE USED**  
12 **IN CONJUNCTION WITH NORMALIZED PROFILES FOR ELECTRICITY**  
13 **PRICES.**

14  
15 **Q. What is Mr. Blunk's rebuttal testimony regarding the use of flat-lined**  
16 **natural gas prices?**

17 A. A major point in his rebuttal testimony is found in response to a question at the  
18 bottom of page 2 of Mr. Blunk's rebuttal testimony regarding how using a flat-lined natural  
19 gas price will distort fuel and purchased power expense. Mr. Blunk states, "For example,  
20 market prices for electricity and natural gas peaked in July last year. The flat-lined approach  
21 of using the same natural gas price for all months of the year would have artificially lowered  
22 the price of natural gas for July. The production cost model would then be more likely to  
23 dispatch a natural gas unit when true market conditions may have dictated purchasing power."

24 [Blunk Rebuttal at page 2, line 22 through page 3, line 3].

1           **Q.     Do you agree with Mr. Blunk’s analysis for July 2008?**

2           A.     Yes, I do.  However, what occurred in July 2008 was abnormal.  Both  
3 electricity prices and natural gas prices were abnormally high.  In my rebuttal testimony I  
4 recommended that the high electricity prices observed in the test year updated through  
5 September 2008 be normalized by setting these abnormally high prices equal to their 2007  
6 levels.

7           **Q.     If the Missouri Commission adopts your recommendation to use**  
8 **normalized test-year prices trued up through either March or April of 2009, what levels**  
9 **should be used for monthly natural gas prices for purposes of calculating fuel and**  
10 **purchased power expense?**

11          A.     In my rebuttal testimony I recommended that a normalized monthly profile be  
12 used for electricity prices.  If that recommendation is followed, then I also recommend that a  
13 similar normalized monthly profile be used for natural gas prices.  Schedules MP-8.1 and MP-  
14 8.2 attached to my surrebuttal testimony show the normalized profiles for both electricity and  
15 natural gas prices.  These normalized profiles were calculated by averaging the percent that  
16 each monthly price is of the annual average price for the years 2003, 2004, 2006 and 2007.  
17 While data is available for 2005 and 2008, in these two years electricity and natural gas prices  
18 both experienced abnormal increases (2005) and decreases (2008) in the last six months of the  
19 year.  In addition, in 2008 they experienced abnormal price increases during the first six  
20 months of the year.

21          **Q.     What does Schedule MP-8.1 demonstrate about the relationship between**  
22 **monthly natural gas and electricity prices?**

1           A.     The upper graph in Schedule MP-8.1 plots the average price profiles as a  
2 percent of average annual price from the lowest to the highest electricity price (September  
3 through August). What this graph shows is a strong correlation of monthly electricity prices  
4 and natural gas prices from September through June. However, in July and August, when  
5 loads are the highest and electricity prices are the highest, natural gas prices fall from their  
6 higher levels in June. The lower graph smoothes out the averages on the upper graph, and  
7 shows monthly prices for both electricity and natural gas increasing from September through  
8 February, where both reach a peak. Then monthly prices fall in March and remain constant  
9 through June. In July and August, electricity prices increase, but natural gas prices fall.

10           **Q.     Is the smoothed electricity price profile shown in the lower graph of**  
11 **Schedule MP-8.1 the same as in your rebuttal testimony?**

12           A.     No, it differs. After doing the averages for both electricity and natural gas  
13 prices and looking at these simultaneously, as well as plotting them from lowest to highest  
14 electricity prices, it became clear that both were peaking in February. I had not seen that  
15 relationship at the time I did the analysis for my rebuttal testimony. In addition, I averaged  
16 the July and August electricity prices for the smoothed profile. Previously, the August price  
17 was higher than the July price. The smoothed price profiles are primarily to help to see  
18 patterns and smooth out any random variations that are not picked up by averaging over a  
19 small sample of four years.

20           **Q.     What does Schedule MP-8.2 demonstrate about the relationship between**  
21 **monthly natural gas and electricity prices?**

22           A.     The graphs on Schedule MP-8.2 are the same profiles as on Schedule MP-8.1,  
23 but are plotted for May 2008 through April 2009, to reflect twelve months through the end of

1 | the true up period. This would be the sequence in which the production cost model would be  
2 | run for the trued-up period.

3 |       **Q.     Does this complete your surrebuttal testimony?**

4 |       **A.     Yes, it does.**

**Schedule MP-4**

**Is Deemed**

**Highly Confidential**

**In Its**

**Entirety**



**Schedule MP-5**

**Is Deemed**

**Highly Confidential**

**In Its**

**Entirety**

**Schedule MP-6**

**Is Deemed**

**Highly Confidential**

**In Its**

**Entirety**

**Schedule MP-7**

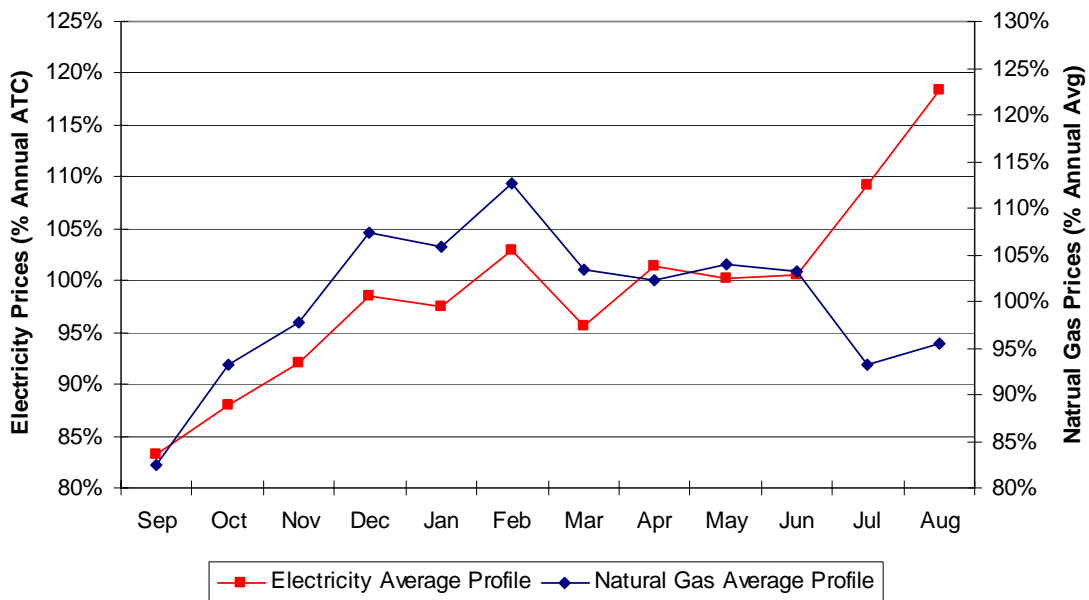
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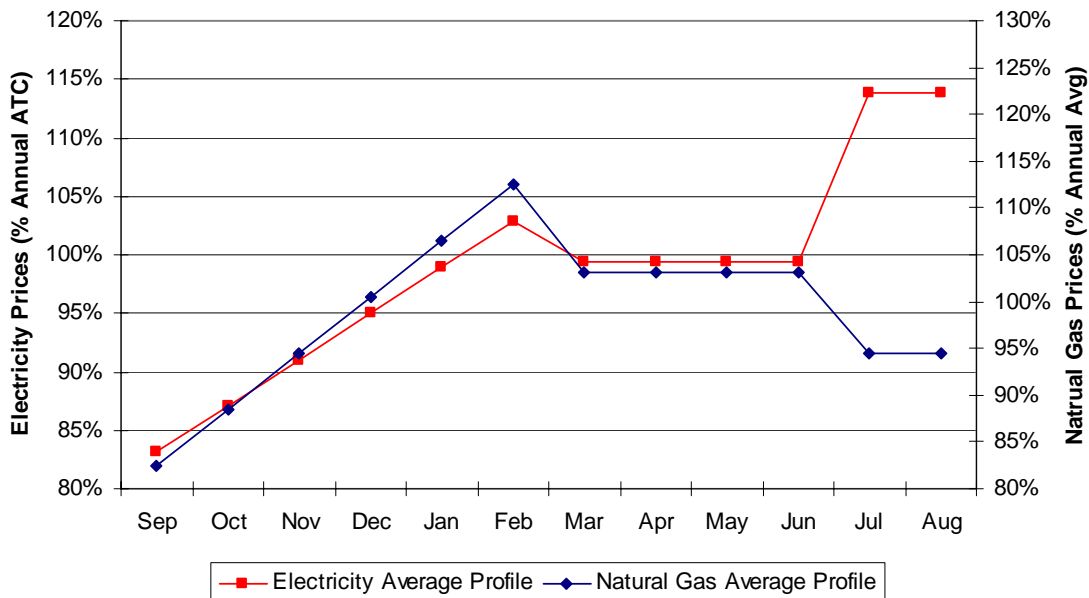
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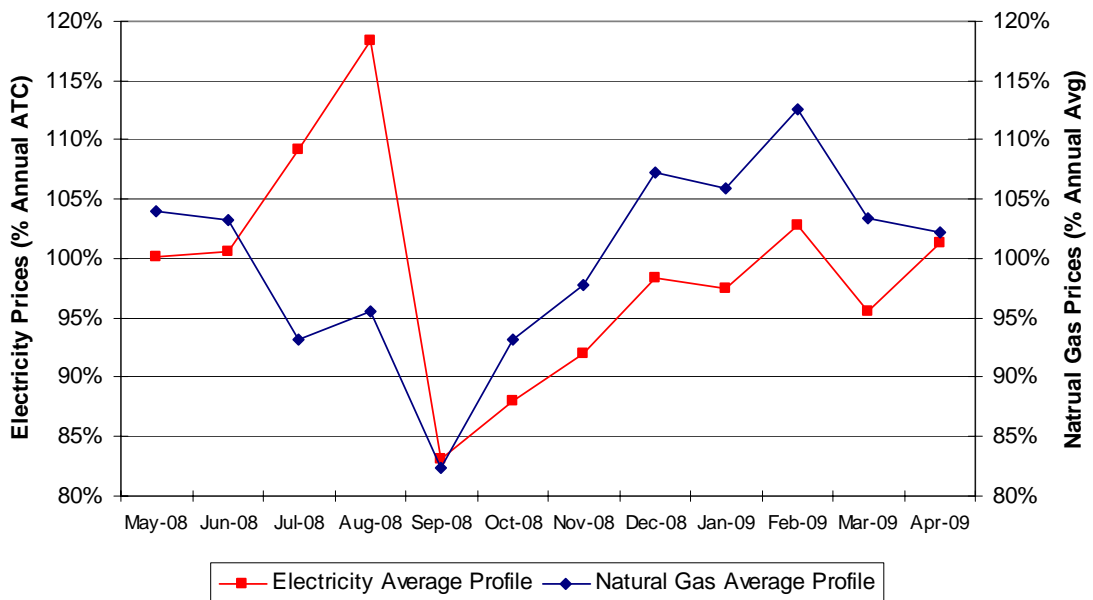
**Average (2003, 2004, 2006, 2007) Price Profiles:  
Lowest to Highest Electricity Prices**



**Smoothed Price Profiles:  
Lowest to Highest Electricity Prices**



**Average (2003, 2004, 2006, 2007) Price Profiles:  
Trued Up Test Year**



**Smoothed Price Profiles:  
Trued Up Test Year**

