PUBLIC VERSION

“**[redacted]**” ***Designates Confidential Information Has Been Removed. Certain Schedules Attached to this Testimony Also Contain Confidential Information And Have Been Removed.***

BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

DIRECT TESTIMONY OF

MICHAEL M. SCHNITZER

ON BEHALF OF KANSAS CITY POWER & LIGHT COMPANY

IN THE MATTER OF THE APPLICATION OF KANSAS CITY POWER & LIGHT COMPANY TO MODIFY ITS TARIFFS TO CONTINUE THE IMPLEMENTATION OF ITS REGULATORY PLAN

DOCKET NO. 07-KCPE-_____-RTS

Q: Please state your name and business address.

A: My name is Michael M. Schnitzer. My business address is 30 Monument Square, Concord, Massachusetts 01742.

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

A: I am a Director of the NorthBridge Group, Inc. (“NorthBridge”). NorthBridge is a consulting firm specializing in providing economic and strategic advice to the electric and natural gas industries.

Q: Please summarize your relevant professional background.

A: In 1992, I co-founded NorthBridge. Before that, I was a Managing Director of Putnam, Hayes & Bartlett, which I joined in 1979. I have focused throughout this time on assisting energy companies with strategic issues, particularly those relating to competition and wholesale market structure issues.

I have testified before the Federal Energy Regulatory Commission ("FERC") and a number of state commissions on issues relating to competitive restructuring and wholesale market design, including Locational Marginal Pricing and Financial Transmission Rights, Regional Transmission Organizations, standard market design, resource adequacy, and transmission expansion policies. On several occasions I have been invited by FERC staff to participate as a panelist in technical conferences on these subjects.

I hold a Master of Science degree in Management from the Sloan School of Management of the Massachusetts Institute of Technology, which I received in 1979. My concentration was in finance. I also received a Bachelor of Arts degree in chemistry, with honors, from Harvard College in 1975. A copy of my resume is attached as Schedule MMS-1.

Q: Have you previously testified in a proceeding before the State Corporation Commission of the State of Kansas ("Commission")?

A: Yes. I provided Direct Testimony and Rebuttal Testimony in Docket No. 06-KCPE-828-RTS ("2006 Rate Case") on behalf of Kansas City Power & Light Company ("KCPL" and "Company") in support of its proposal for the treatment of off-system energy and capacity sales revenue and related costs as "above the line" for ratemaking purposes.

I. PURPOSE OF TESTIMONY AND CONCLUSIONS

Q: Please describe the purpose of your Direct Testimony.

A: I am providing a probabilistic analysis of the Company's level of net revenues from non-firm off-system sales (i.e., revenues less associated expenses) ("Off-System Contribution Margin" and "Margin") in this case ("2007 Rate Case")[1]. My analysis supports the Company's proposal in this 2007 Rate Case to calculate its Energy Cost Adjustment ("ECA") factors at the beginning of each calendar year using the value at the 25th Percentile of a probability distribution for Off-System Contribution Margin, as described in the Direct Testimony of Mr. Chris B. Giles and of Mr. Tim M. Rush. My current analysis of this probability distribution forecasts the 25th Percentile for 2008 at **[redacted]** and this value is used by the Company as the basis for disaggregating retail base energy rates into two components: a base rate and an ECA rate.

My testimony is organized in three parts. In the first part, I discuss the risk and volatility of Off-System Contribution Margin, addressing the main points of my Direct Testimony in the 2006 Rate Case. In the second part of my testimony, I discuss changes in the underlying drivers of the probability distribution of Margin since the 2006 Rate Case was filed on January 31, 2006. In the third part of my testimony, I provide a prospective analysis of the probability distribution of Margin in 2008.

[1] My testimony in the 2006 Rate Case addressed the probability distribution of Off-System Contribution Margin for the **2007** calendar year. Similarly, my Direct Testimony in this 2007 Rate Case addresses the probability distribution of Off-System Contribution Margin for the **2008** calendar year.

Q: Could you please summarize your conclusions?

A: Yes, there are three. First, as in the 2006 Rate Case, a forecast of Off-System Contribution Margin that takes into account all available forward market information, provides the most accurate, unbiased prediction of Margin in 2008. A forecast made in January 2007 will vary from the level of Margin actually realized, and the range of potential outcomes can be represented by a probability distribution that quantifies the variability in the outcomes. Second, changes in the underlying drivers of Margin since the original filing of the 2006 Rate Case demonstrate the continued volatility of those drivers in calendar year 2006. Third, a comprehensive prospective assessment of the 2008 Margin indicates a broad range of possible outcomes centered on a median value of **[redacted]**, with a 25 percent likelihood of less than a **[redacted]** contribution from such Margin.

II. RISK AND VOLATILITY IN OFF-SYSTEM SALES

Q: Please elaborate on your first conclusion.

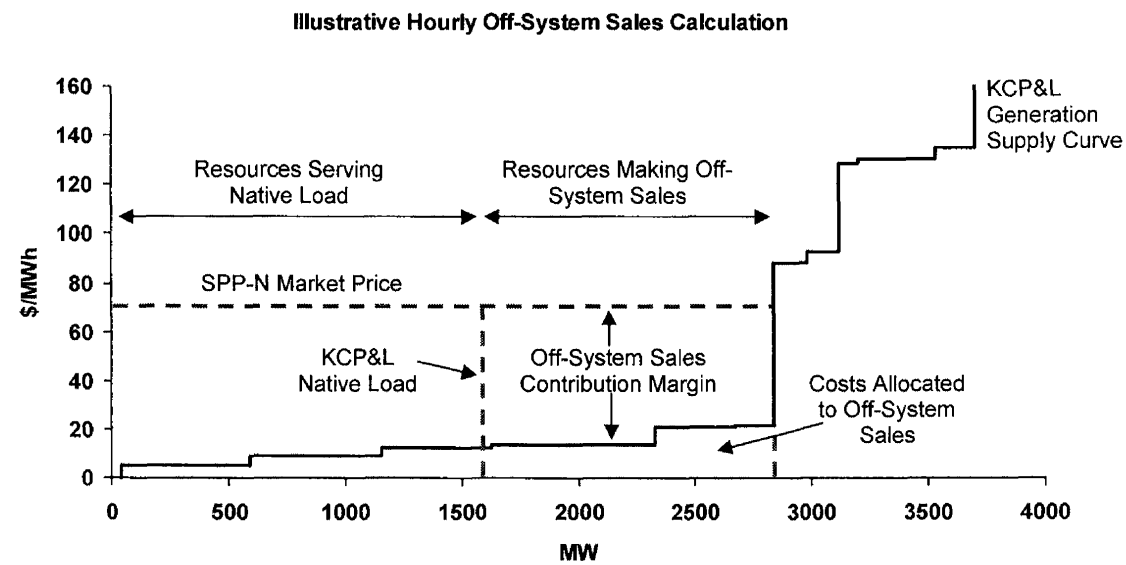
A: My Direct Testimony in the 2006 Rate Case discussed the risk factors associated with making coal-based off-system sales, particularly where (as in the case of KCPL) the net revenue from the sales constituted a large portion of a company's earnings. The key points from that testimony are set out below and are equally applicable to an analysis of 2008 Off-System Contribution Margin.

Q: What is Off-System Contribution Margin?

A: After serving retail sales to its native load and "Firm" wholesale sales to customers such as City Utilities of Springfield, KCPL makes "Non-Firm" sales to the short-term market with prices and terms determined at the time of sale. In any hour, Off-System

Contribution Margin is the difference between gross revenues and costs for those sales. As illustrated in Figure 1, costs are allocated to Non-Firm sales based on the incremental cost of operating the units in KCPL's generation supply curve to make the additional sales in excess of the sum of KCPL retail sales and firm wholesale sales ("Native Load"), which costs are based largely on the price of coal.

Figure 1 – Illustrative Hourly Off-System Contribution Margin

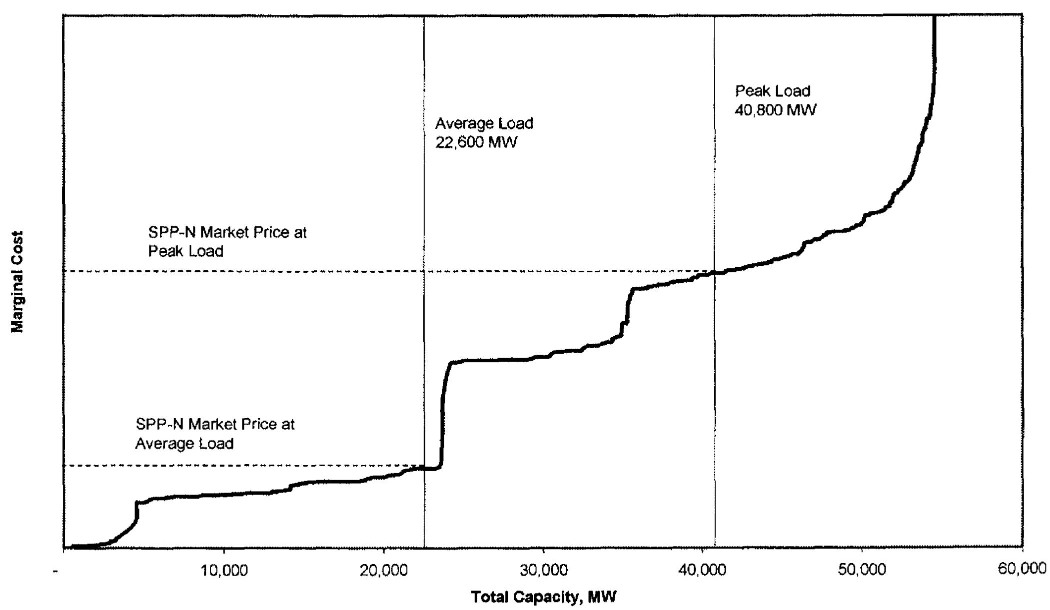


Although there is some potential for volatility in the cost of making Non-Firm sales, the primary source of volatility is on the revenue side.

Q: What determines the revenue from Non-Firm sales?

A: Revenues are simply the market price realized times the quantity available for sale. As illustrated in Figure 1, KCPL makes off-system sales at a regional Southwest Power Pool-North ("SPP-North") market price. The price for Non-Firm sales in any particular hour is simply the intersection of the regional supply and demand curves in that hour. The concept is illustrated in Figure 2 below, showing illustrative average and peak loads. The supply curve is the aggregate ranking of available resources in the market from lowest cost to highest cost. The left side of the supply curve represents baseload units such as nuclear and coal with low dispatch costs. The middle section of the curve represents higher priced cycling units that can be ramped up and down to follow load. Lastly, the right side of the curve represents peaking units with the highest marginal cost that serve load in the hours of highest demand. The demand curve is shown as a vertical line, reflecting the fact that in any given hour, demand is largely inelastic. In any hour, the intersection of the supply curve and the demand curve determines the marginal unit for serving aggregate load. The marginal cost of that unit sets what is in effect the "market price." This simplified illustration does not deal with demand-side resources or any locational differences in price resulting from transmission congestion.

Figure 2 – SPP-North Supply-Demand Balance (2006)



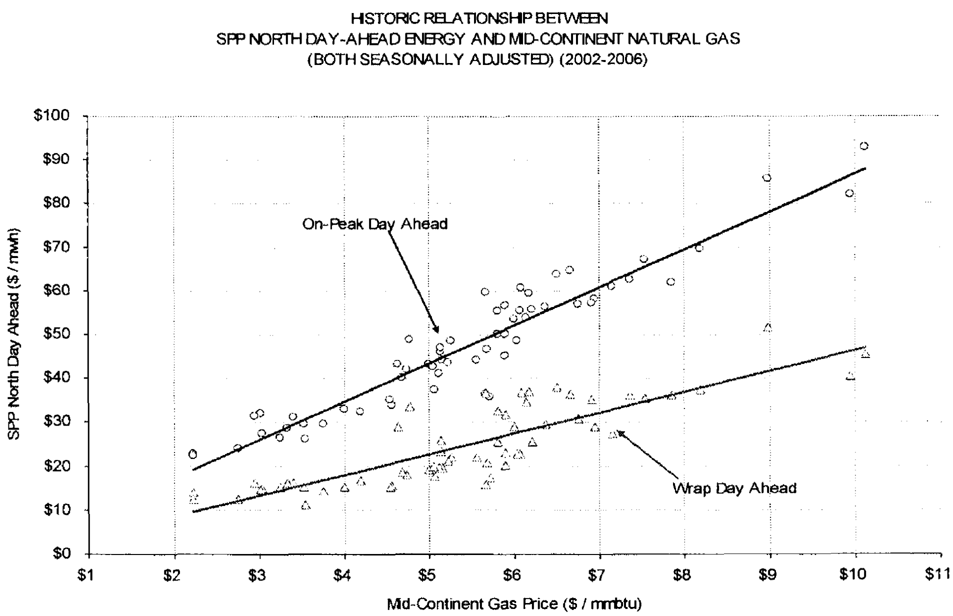
Q: What are the main sources of volatility in KCPL's off-system sales revenues?

A: As discussed above, revenues are simply the product of market price and quantity sold. Therefore, off-system sales revenue volatility is a function of the market price volatility and the variability in the sales quantity.

Q: Please describe the volatility of market prices.

A: Historically, observed day-ahead spot prices in SPP-North are highly correlated with the price of natural gas as shown in Figure 3 below.

Figure 3 – Spot Price Correlation with Natural Gas

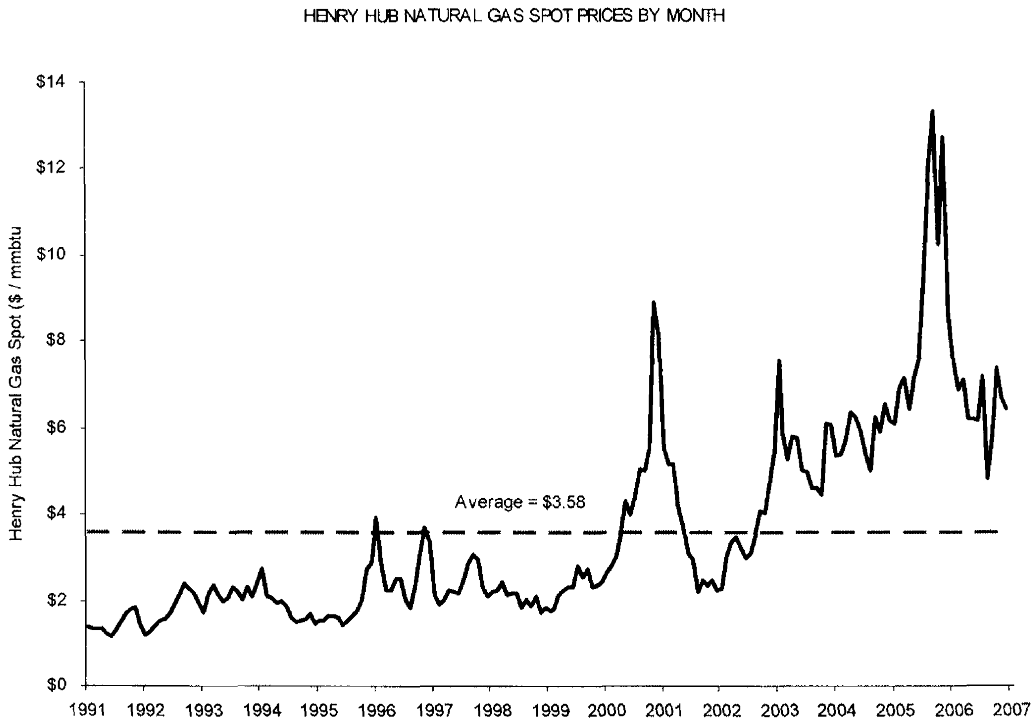


Because of the strong correlation with natural gas prices, the market price can be conveniently represented as two separate components: the price of natural gas and the "market heat rate." The market heat rate is not the same as a physical heat rate. For example, an efficient baseload coal unit may have a physical heat rate of 9,500 Btu/kwh, while a gas peaking unit may have a physical heat rate of 12,000 Btu/kwh. Instead, a market heat rate represents the market price of electricity in any hour denominated in \$/mwh divided by the current delivered price of natural gas denominated in \$/mmBtu. Dividing through and adjusting for units produces a quotient which is a market heat rate denominated in Btu/kwh. Price volatility can be described as a function of these two factors: gas price and market heat rate.

Q: Please describe the volatility of natural gas prices.

A: As shown in Figure 4 below, since 1991 monthly Henry Hub Natural Gas Spot prices have fluctuated significantly, rising from below \$2.00/mmBtu to over \$10.00/mmBtu in 2005 and 2006, with a simple average price over this period of \$3.58/mmBtu. The spikes in gas prices (particularly in 2001 and 2005) shows how quickly spot gas prices can rise. The sharp drop in gas prices in 2006 illustrates that spot gas prices can fall just as quickly. Forward gas prices reflect market expectations of future spot prices. As spot prices change in response to external shocks (e.g., Hurricane Katrina) forward prices will quickly adjust to new levels.

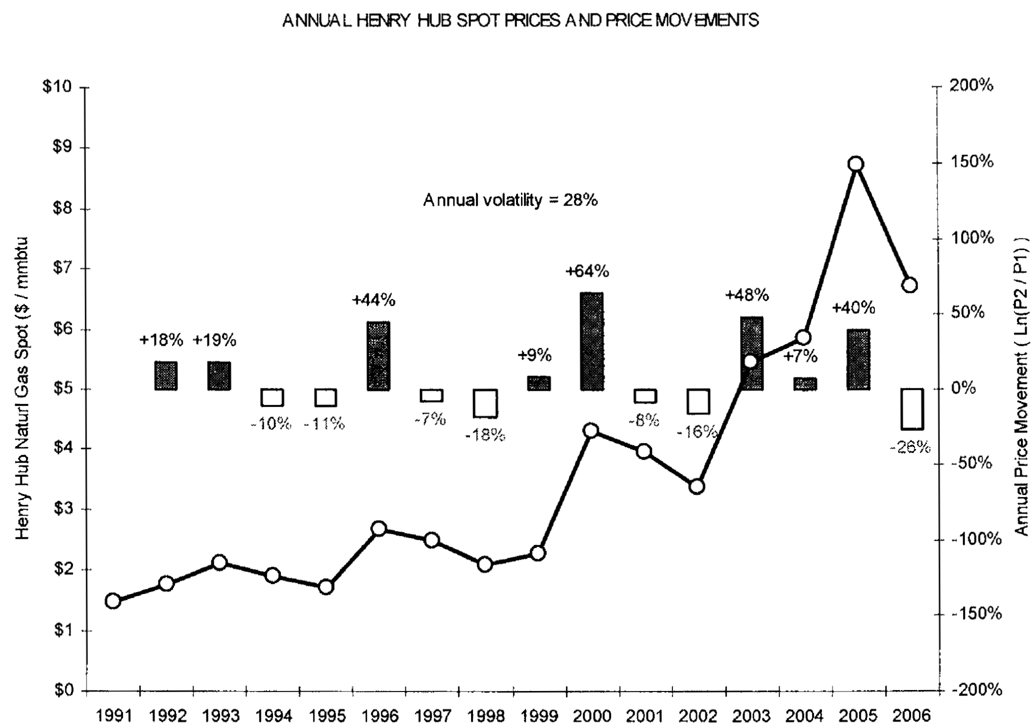
Figure 4 – Monthly Natural Gas Spot Prices 1/1/1991 – 1/31/2007



Q: Can you measure the volatility of the price changes over this period?

A: Yes. The statistical convention for measuring historical volatility is as a percentage change from period to period. The general convention is to calculate volatility using the natural logarithm of the ratio of the price in a given year to the previous year's price. As shown in Figure 5 below, the annual average Henry Hub spot prices (left vertical axis) for natural gas since 1991 are shown as a line graph. The annual price changes (right vertical axis) are shown as bars corresponding to price increases or price decreases. Although we recently think of natural gas prices as increasing (and there has been an increase overall since 1991), there is significant upward and downward volatility over this period. The price increased in eight of the fifteen years and decreased in the other seven. The annual volatility over this period is 28%.

Figure 5 – Annual Gas Prices and Volatility



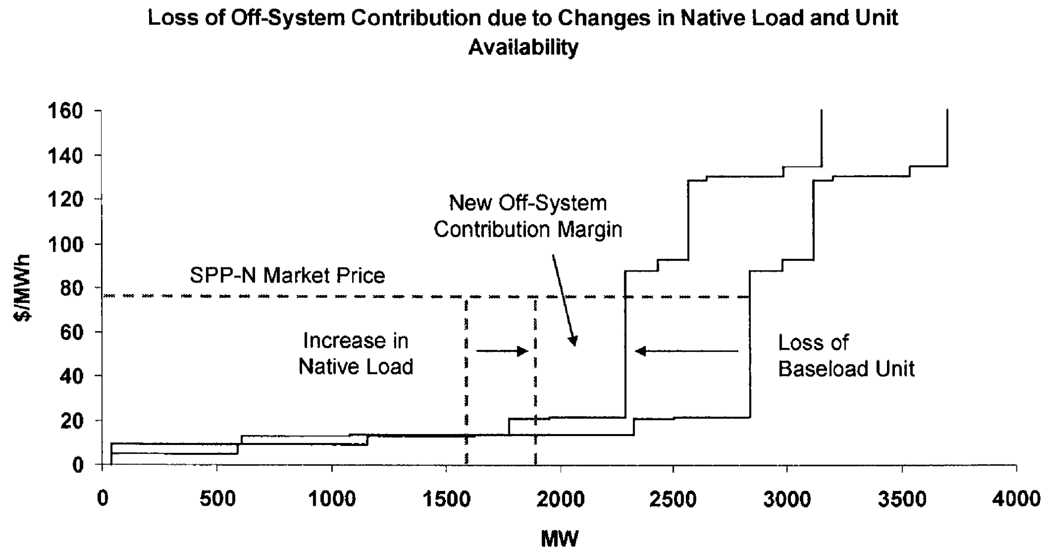
Q: Please explain the volatility impact on price and on the Off-System Contribution Margin from changes in the market heat rate.

A: Electricity market prices are the product of natural gas prices and the market heat rate in a given period. The market heat rate is simply the ratio relating gas prices to electricity prices, but is itself an uncertain variable. Even if there is no gas price volatility, changes in the supply/demand balance will result in different units being on the margin in different time periods and consequently electricity prices will fluctuate as the market heat rate changes. This uncertainty is driven by several underlying factors: coal and emission allowance prices, weather (relatively extreme temperatures elevate demand), fluctuations in economic activity and demographics, unit availability (particularly extended outages), and construction/retirement of generating units throughout SPP.

Q: What is the impact of variability in sales quantity on Off-System Contribution Margin?

A: As total off-system revenues are the product of the price realized times the quantity available for sale, variability in available sales quantity can also significantly affect Off-System Contribution Margin. The two biggest factors in the quantity available for sale are unit availability and KCPL's Native Load. A unit outage and/or an increase in Native Load can reduce the size of the Margin. Assuming a large baseload unit is unavailable because of planned maintenance or a forced outage, the supply curve shifts to the left, decreasing the area under the horizontal SPP-North market price line and to the right of the vertical KCPL Native Load line. Other higher-priced KCPL units are available, but are not economic to dispatch at that particular market price. Similarly, if the Native Load and firm wholesale sales volumes increase, then all other things equal, there will be a smaller amount of economic output available for off-system sale at market prices. These impacts are illustrated in Figure 6 below.

Figure 6 – Impact of Loss of Baseload Unit and Increase in Native Load



Q: Do past realized Off-System Contribution Margins provide a good prediction for the future?

A: In general, no. The Company's future Off-System Contribution Margins will depend on future electricity and gas prices, loads, fuel prices, and unit availability. The best current predictor of future commodity prices and the associated future Margins are visible forward market prices. That is not to say that actual results will not turn out to be different than the forecast – they likely will – but a forecast based on forward price data is the best that can be done.

Q: Please summarize your first conclusion.

A: As in the 2006 Rate Case, the underlying drivers of 2008 Off-System Contribution Margin are historically volatile. This historic volatility has continued in 2006 as shown in the next section of my testimony. As a result, the realized 2008 Margin will vary from a point forecast made in January of 2007 and this variability can be quantified in a probability distribution as shown in the third section of my testimony.

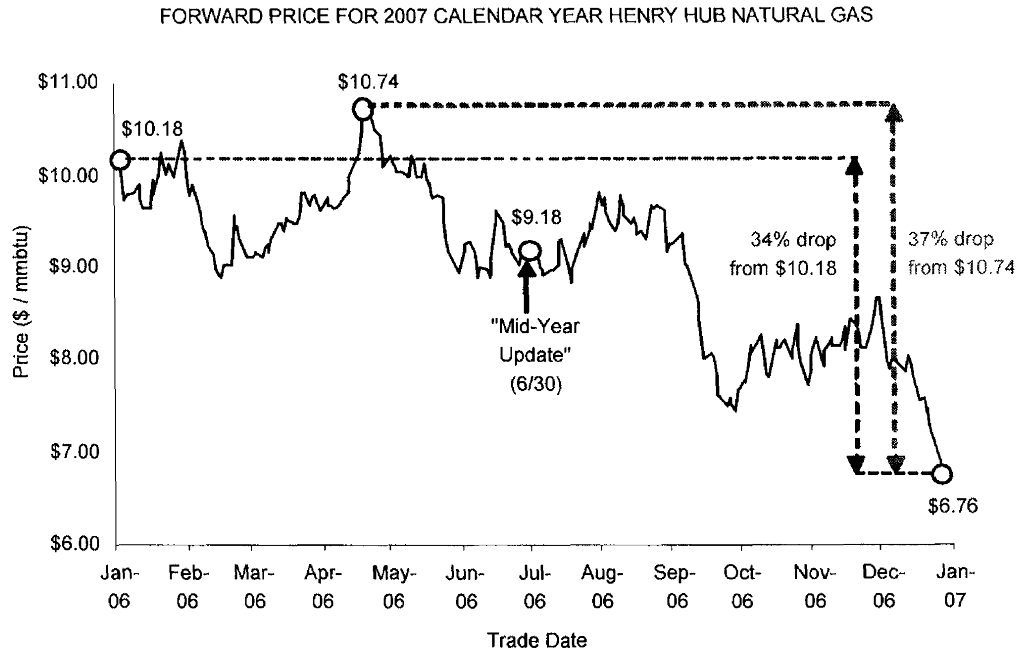
III. COMPARISON OF 2007 PROBABILITY DISTRIBUTIONS

Q: Please elaborate on your second conclusion.

A: The historical volatility in the underlying drivers of Off-System Contribution Margin continued throughout calendar year 2006. Both of the probabilistic analyses of Margin that NorthBridge conducted in the 2006 Rate Case (Direct and Rebuttal Testimony) were based on the state of the 2007 forward markets at a particular point in time. As the underlying markets changed, so did the distributions of Margin. In particular, the 2007 forward strip for natural gas on which these analyses were based has fallen significantly in the last six months of 2006. As shown in Figure 7 below, the 2007 strip first traded in 2006 at a price of $10.18/mmBtu[2]. The 2007 strip traded at $9.18/mmBtu as of my mid-year update at June 30, 2006 (i.e., as included in my Rebuttal Testimony), after reaching its highest point on April 19, 2006, when it traded at a price of $10.74/mmBtu. In the second half of 2006, the strip declined significantly to close at $6.76/mmBtu on the last trading day of 2006, down 34% from the beginning of the year and down 37% from the peak in April.

[2] The probabilistic analysis contained in my Direct Testimony in the 2006 Rate Case was based on data from KCPL, including forward gas and electricity prices as of November 22, 2005. The corresponding price for the 2007 Henry Hub forward strip on that date was $9.67/mmBtu.

Figure 7 – Henry Hub 2007 Strip January 2, 2006 to December 29, 2006.



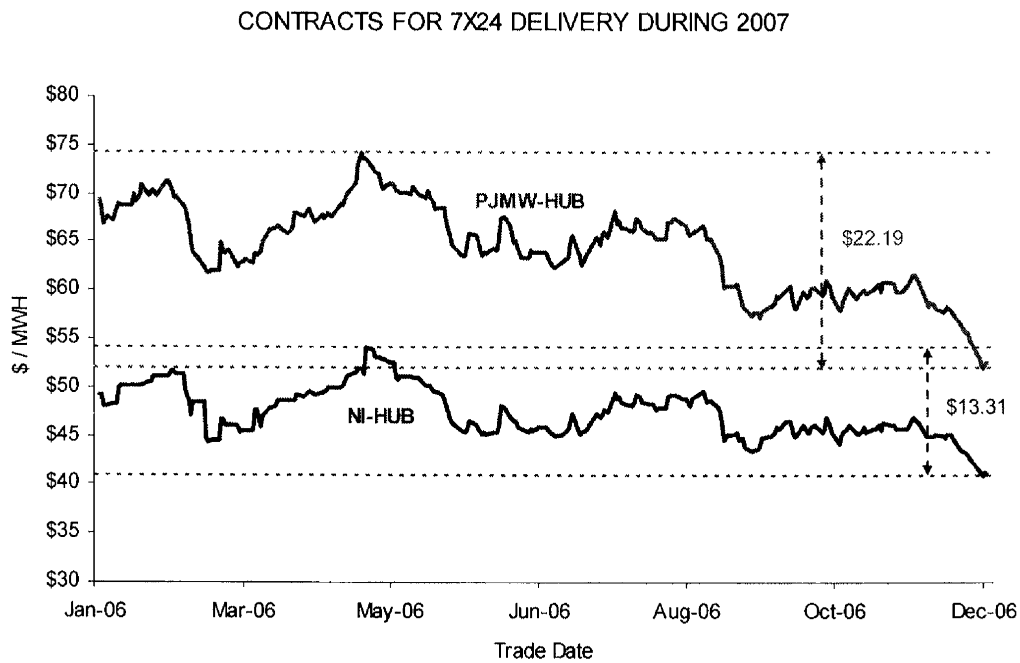
Q: **What has been the observed volatility in the forward markets for electricity over the same period of time?**

A: The forward market in SPP-North is currently a bilateral market in which equivalent forward strip prices for 2007 are not directly observable. However, similar price volatility in 2006 can be directly observed at other regional trading hubs, such as the Northern Illinois Hub ("NI-Hub") and the PJM Western Hub ("PJMW-Hub")[3]. NI-Hub is less gas-influenced than PJMW-Hub, as evidenced by the proportion of hours where the market heat rate is equal to or greater than that of an efficient gas generator. During 2006, market heat rates were in excess of 7,000 Btu/kwh in over

[3] The NI-Hub and the PJMW-Hub each offer buyers and sellers a trading point for a location-price-based energy market and a common price index that provides certainty about the price reference point. The hubs consist of pricing points from a large number of generation and load buses in particular geographic areas of PJM.

46% of the hours at PJMW-Hub. In contrast, market heat rates were below this level in 66% of the hours at NI-Hub. Both of these observable markets have seen significant declines in the around-the-clock ("ATC") forward prices for 2007 delivery, as can be seen in Figure 8 below.

Figure 8 – PJMW-Hub and NI-Hub 2007 7x24 Contracts



Both markets peaked in April 2006 within days of the peak in the 2007 Henry Hub gas strip, with PJMW-Hub declining $22.19/mwh from its high and NI-Hub declining $13.31/mwh from its high.

Q: What do you conclude from this data?

A: Natural gas, the most observable driver of Off-System Contribution Margin was volatile and its price declined significantly in the last six months of 2006. Although not directly observable, the electricity forward market in SPP-North was likely characterized by the same kind of volatility evident in observable market data during 2006 – in both gas markets and other regional power markets – including the downward movement in 2007 forward prices in the second half of 2006.

IV. PROBABILITY DISTRIBUTION OF 2008 OFF-SYSTEM CONTRIBUTION MARGIN

Q: Please elaborate on your third conclusion.

A: I prepared an estimate of the probability distribution of 2008 Off-System Contribution Margin using a simplified forecast and dispatch model. The results, as detailed in Schedule MMS-2 (Confidential), show a very broad probability distribution with a median value of **[redacted]** and ranging from **[redacted]** to **[redacted]** at the 5% and 95% confidence levels, respectively. This means there is a 90% likelihood that the Margin will be between **[redacted]** and **[redacted]**, a 5% likelihood that the Margin will be less than **[redacted]** and a 5% likelihood that the Margin will be greater than **[redacted]**. The 25th Percentile of this distribution as shown in Schedule MMS-3 (Confidential) is **[redacted]**. Again, this means there is a 25% likelihood that the Margin will be less than **[redacted]** and a corresponding 75% likelihood that the Margin will be greater than **[redacted]**.

Q: Please describe the methodology used to develop the distribution of 2008 Off-System Contribution Margin.

A: My methodology for 2008 was the same as that used in preparing the 2007 Off-System Contribution Margin distributions for the 2006 Rate Case. The methodology had five primary steps. First, I used the energy price, fuel price, and load forecasts and volatilities to develop 1000 equally-likely scenarios for each variable. I also constructed 1000 equally-likely forced outage scenarios for each generating unit in KCPL's supply portfolio. The scenarios incorporate the correlation between variables, such that if natural gas prices and oil prices are highly correlated, a high gas price scenario will correspond to a high oil price scenario. Second, for each of the 1000 scenarios I calculated a daily dispatch cost for each of KCPL's units. Sorting these dispatch costs from least to greatest, I developed the optimal dispatch order of units for each scenario. Third, I calculated the total available capacity for each unit, taking into account both planned outages and scenario-specific forced outages, as well as any long-term sales agreements and load obligations that could reduce the capacity available to serve KCPL's native load. Fourth, starting with the most economic unit, I compared each unit's dispatch costs and available capacity with the hourly market prices and native load, respectively. For all units with a dispatch cost less than the market price, the available capacity was assigned to serve first up to 100% of native load with any excess capacity assigned to off-system sales. Fifth, I calculated the hourly contribution margin by subtracting the dispatch cost from the hourly market price and multiplying by the available capacity. The 1000 scenarios of hourly contribution margin data were aggregated to daily, monthly and annual estimates. Finally, I estimated a distribution of 2008 Margin based on the characteristics of the 1000 equally-likely scenarios. A description of the key inputs to the analysis is set out in Schedule MMS-4 (Confidential).

Q: How is NorthBridge's current probabilistic analysis of 2008 Off-System Contribution Margin different from NorthBridge's updated June 30, 2006 analysis of 2007 Off-System Contribution Margin?

A: The June 30, 2006 update discussed in my Rebuttal Testimony in the 2006 Rate Case produced a 25th Percentile value of **[redacted]**. The current 2008 analysis described above was based on data supplied by KCPL as of December 5, 2006, and so reflects updated market data on gas and electricity forward prices. The current 2008 analysis also looks at a different calendar year (2008 instead of 2007), and so load forecasts, outage schedules and forecasts of other variables reflect changes between the two years.

Q: What are the key changes between the June 30, 2006 analysis for calendar year 2007 and the current analysis for calendar year 2008?

A: In summary, decreases in ATC energy prices and the energy available for off-system sale have significantly lowered Off-System Contribution Margin. The ATC energy price fell from $53.78/mwh for 2007 to $52.66/mwh for 2008[4]. The decrease in available off-system energy resulted from the increase in Baseload Planned Outages from 55,438 MW-Days to 71,905 MW-Days, and the increase in the Native Load from 17,956 GWH to 18,498 GWH. A more detailed description of these changes is contained in Schedule MMS-5 (Confidential).

[4] The ATC energy prices are calculated as of December 5, 2006 and do not reflect the additional decline in 2008 natural gas forward prices later in the month of December as shown in Figure 7 above.

Q: How is NorthBridge's current probabilistic analysis of 2008 Off-System Contribution Margin used in the Company's 2007 Rate Case?

A: As described generally in the Direct Testimony of KCPL witness Chris B. Giles and in greater detail in the Direct Testimony of KCPL witness Tim M. Rush, the Company proposes to set its ECA factors prior to the start of each calendar year by crediting Off-System Contribution Margin at the 25th Percentile of an updated probabilistic analysis for that year. The probabilistic analysis will be updated at least quarterly throughout the year. The Company's ECA methodology includes an annual true-up process at year-end. My current analysis of this probability distribution forecasts the 25th Percentile for 2008 at **[redacted]**, which will be used by the Company to disaggregate the current retail energy rates into two components: a base rate and an ECA rate.

Q: Does this conclude your testimony?

A: Yes.

BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the Application of Kansas City Power & Light Company to Modify Its Tariffs to Begin the Implementation of Its Regulatory Plan	)))	Docket No. 07-KCPE-_____-_____

AFFIDAVIT OF MICHAEL M. SCHNITZER

COMMONWEALTH OF MASSACHUSETTS)
) ss
COUNTY OF MIDDLESEX)

Michael M. Schnitzer, being first duly sworn on his oath, states:

1. My name is Michael M. Schnitzer. I work in Concord, Massachusetts, and I am employed by The NorthBridge Group, Inc. as a Director.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Kansas City Power & Light Company consisting of nineteen (19) pages and Schedules MMS-1 through MMS-5, all of which having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

Michael M. Schnitzer

Subscribed and sworn before me this 16th day of February 2007.

Notary Public

My commission expires: June 21, 2013

MICHAEL M. SCHNITZER **Director**

Michael Schnitzer is a co-founder and Director of The NorthBridge Group. He focuses on management consulting and works with clients in regulated industries to address strategy issues central to maximizing performance. Helping clients develop effective responses to increasingly deregulated markets is central to Mr. Schnitzer's work for electric and gas utilities. He has developed initiatives in marketing, pricing, regulatory relations and supply planning. He also has broad experience in utility reorganizations, having served as a financial advisor to secured parties in three utility bankruptcies and has developed and evaluated a wide array of restructuring proposals. Mr. Schnitzer's project assignments have included:

- Helped develop and analyze alternative restructuring plans, including resolution of such issues as residual vertical and horizontal market power, stranded costs, and ultimate organization of the competitive market for generation.

- Analyzed the financial opportunities afforded by restructuring – including leverage, sale/leaseback and splitting off generating assets – to develop strategies for improving competitiveness and increasing shareholder value.

- Analyzed and developed various rate plans designed to return stranded costs to utilities, including appropriate length of transition periods, true-ups, access charges, and the like.

- Assessed transmission capacity and helped develop economically efficient transmission tariffs, including policies for encouraging economic transmission expansions.

- Estimated the likely price of competitive new generation for cogenerators and IPPs as a basis for assisting utilities in planning their pricing, capacity additions, and marketing plans.

- Assessed pricing and shareholder value under alternative regulatory treatments, and formulated several proposals for rate case settlement.

- Analyzed rate levels and asset values under alternative financial structures and ratemaking treatments.

- Assessed short- and long-term opportunities in the wholesale electricity market and developed marketing plans and proposals for specific candidate buyers.

- Analyzed the economics of completing current utility construction programs and evaluated alternative ratemaking treatments of new generating capacity.

- Assessed regulatory policy issues associated with privatization of the electric supply industry in the United Kingdom, including policies to accomplish access to the transmission system.

- Analyzed the economics of municipal takeover of a portion of the franchise area versus continued service by a utility.

- Assisted in the development of acid rain compliance plans, including the merits of policies to require utilities to incorporate monetized environmental externalities in the resource planning process.
- Helped develop comprehensive cost recovery programs, including incentives, for utility-sponsored conservation and load management programs.

Mr. Schnitzer has testified before the public utility commissions of Arkansas, Delaware, Indiana, Maine, Maryland, Massachusetts, New Hampshire, New Mexico, New York, Ohio, Pennsylvania, Rhode Island, Texas, Vermont, and Wisconsin. He is a former adjunct research fellow at the Energy and Environmental Policy Center, John F. Kennedy School of Government, Harvard University.

Before joining NorthBridge, Mr. Schnitzer was a Managing Director at Putnam, Hayes & Bartlett, Inc., where he co-directed the firm's regulated industry practice. Prior to that he was a member of the executive staff of the Appalachian Mountain Club. His experience as assistant to the executive director included the development of financial models and organizational strategic plans, as well as the negotiation of multi-party real estate transactions and the settlement of environmental litigation.

Mr. Schnitzer received an A.B. in chemistry, with honors, from Harvard University, and an M.S. in management from the Sloan School, Massachusetts Institute of Technology.

SCHEDULES MMS-2 THROUGH MMS-5

THESE DOCUMENTS CONTAIN CONFIDENTIAL INFORMATION NOT AVAILABLE TO THE PUBLIC

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