BEFORE THE

PUBLIC SERVICE COMMISSION OF KENTUCKY

In the matter of:

APPLICATION OF KENTUCKY UTILITIES COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC RATES	)))	**CASE NO. 2012-00221**

In the matter of:

APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS RATES, A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY, APPROVAL OF OWNERSHIP OF GAS SERVICE LINES AND RISERS, AND A GAS LINE SURCHARGE	))))))))	**CASE NO. 2012-00222**

DIRECT TESTIMONY

AND EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF THE

KENTUCKY INDUSTRIAL UTILITY CONSUMERS

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

October, 2012

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TABLE OF CONTENTS

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DIRECT TESTIMONY OF RICHARD A. BAUDINO

I. QUALIFICATIONS AND SUMMARY

Q. Please state your name and business address.

A. My name is Richard A. Baudino. My business address is J. Kennedy and Associates, Inc. ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell, Georgia 30075.

Q. What is your occupation and by whom are you employed?

A. I am a consultant with Kennedy and Associates.

Q. Please describe your education and professional experience.

A. I received my Master of Arts degree with a major in Economics and a minor in Statistics from New Mexico State University in 1982. I also received my Bachelor

of Arts Degree with majors in Economics and English from New Mexico State in 1979.

I began my professional career with the New Mexico Public Service Commission Staff in October 1982 and was employed there as a Utility Economist. During my employment with the Staff, my responsibilities included the analysis of a broad range of issues in the ratemaking field. Areas in which I testified included cost of service, rate of return, rate design, revenue requirements, analysis of sale/leasebacks of generating plants, utility finance issues, and generating plant phase-ins.

In October 1989, I joined the utility consulting firm of Kennedy and Associates as a Senior Consultant where my duties and responsibilities covered substantially the same areas as those during my tenure with the New Mexico Public Service Commission Staff. I became Manager in July 1992 and was named Director of Consulting in January 1995. Currently, I am a consultant with Kennedy and Associates.

Exhibit ____(RAB-1) summarizes my expert testimony experience.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the Kentucky Industrial Utility Consumers ("KIUC").

Q. What is the purpose of your Direct Testimony?

A. The purpose of my direct testimony is to address the allowed return on equity for Louisville Gas and Electric Company ("LGE") and Kentucky Utilities ("KU"). Throughout the rest of my testimony I will refer to both LGE and KU as "Companies." I will also respond to the Direct Testimony of Dr. William Avera, witness for the Companies.

Q. Please summarize your Direct Testimony.

A. Based on my independent analysis in this case, I recommend that the Public Service Commission of Kentucky ("KPSC" or "Commission") adopt an allowed return on equity ("ROE") of 9.20% for the regulated electric operations of LGE and KU. My recommendation is based on the results of several Discounted Cash Flow ("DCF") analyses for a comparison group of electric utilities. The utilities in this group have bond ratings of A from either Standard and Poor's or Moody's. I also performed two Capital Asset Pricing Model Analyses but did not incorporate them into my recommendation. My review of all of the results from my DCF and CAPM analyses show that a 9.20% ROE for LGE and KU is quite reasonable in today's market.

KIUC witness Kollen presents the weighted cost of capital for the Companies in his Direct Testimony that incorporates my recommended 9.20% ROE. The weighted cost of capital for LGE is 6.81% and for KU is 6.65%. I have reviewed Mr. Kollen's recommended capital structure and weighted cost of capital and support his recommendations.

Turning to the Company's testimony, the Commission should reject the return on equity recommendation of 11.0% of Dr. William Avera, witness for the Companies. As I will explain in detail in Section IV of my Direct Testimony, Dr. Avera's approach greatly overstates the required return on equity for the Companies. More importantly, however, the results from Dr. Avera's quantitative analyses on his electric utility proxy group do not support his 11.0% ROE recommendation. Dr. Avera's recommended equity return significantly exceeds most of the ROE results for his Combination Utility proxy group. Dr. Avera's recommended ROE range of 10.3% - 11.7% is mainly supported by the ROE results from a group of unregulated non-utility companies whose investor required returns are higher than the required return for regulated electric companies like LGE and KU. This non-utility group completely fails to reflect the stable, lower-risk regulated utility operations of LGE and KU. Dr. Avera's recommended return on equity of 11.0% would also harm Kentucky ratepayers because it would result in excessive rate levels and, at the same time, provide investors an inflated return on equity.

II. REVIEW OF ECONOMIC AND FINANCIAL CONDITIONS

Q. Mr. Baudino, what has the trend been in long-term capital costs over the last few years?

A. Exhibit ___(RAB-2) presents a graphic depiction of the trend in interest rates from January 2000 through December 2011. The interest rates shown are for the 20-year U.S. Treasury Bond and the average public utility bond from the Mergent Bond Record. Exhibit ____(RAB-2) shows that the yields on long-term Treasury and utility bonds have declined since early 2000, although rates have been quite volatile. Yields trended downward from 2002 through 2006, with the 20-year Treasury bond yield declining from 5.69% to 4.78% at the end of December 2006. The yield on the average public utility bond also decreased significantly over that time, falling from 7.83% in March 2002 to 5.83% in December 2006, a decline of 200 basis points. Public utility bond yields fell far more than long-term Treasury yields over the last four years.

2007 saw a rise in bond yields, fueled in part by investors' concerns over turmoil and defaults associated with the sub-prime lending market. This accelerated in 2008, a year in which world financial markets experienced tumultuous changes and volatility not seen since the Great Depression. As noted in the SBBI 2009 Yearbook, both large and small company stocks declined around 37% for the year.[1] Investors, in a

1 *2009 Ibbotson SBBI Classic Yearbook,* Morningstar, page 11.

flight to quality and safety, also pulled their funds out of those corporate bonds that were perceived to be higher risk and invested in the safety of Treasury securities. The 2009 SBBI Yearbook reported that long-term Treasury Bonds returned 25.87% during 2008, while long-term corporate bonds returned 8.78%. Thus, bonds significantly outperformed stocks in 2008.

The stocks of electric utilities did not fare well during the financial market upheaval of 2008. The Dow Jones Utility Average was down from its opening level in January 2008 of 532.50 to 370.76 at the end of December, a decline of 30.4%. This decline was smaller than the decline in the overall stock market. Utility bond yields also increased significantly during the year, rising from 6.08% in January to a high of 7.80% in November. As investors flocked to the safety of Treasury securities, the yield spread between long-term Treasury securities and the index of public utility bonds widened from 1.73% in January to 3.69% in December, the highest spread during the entire period shown in Exhibit ___(RAB-2).

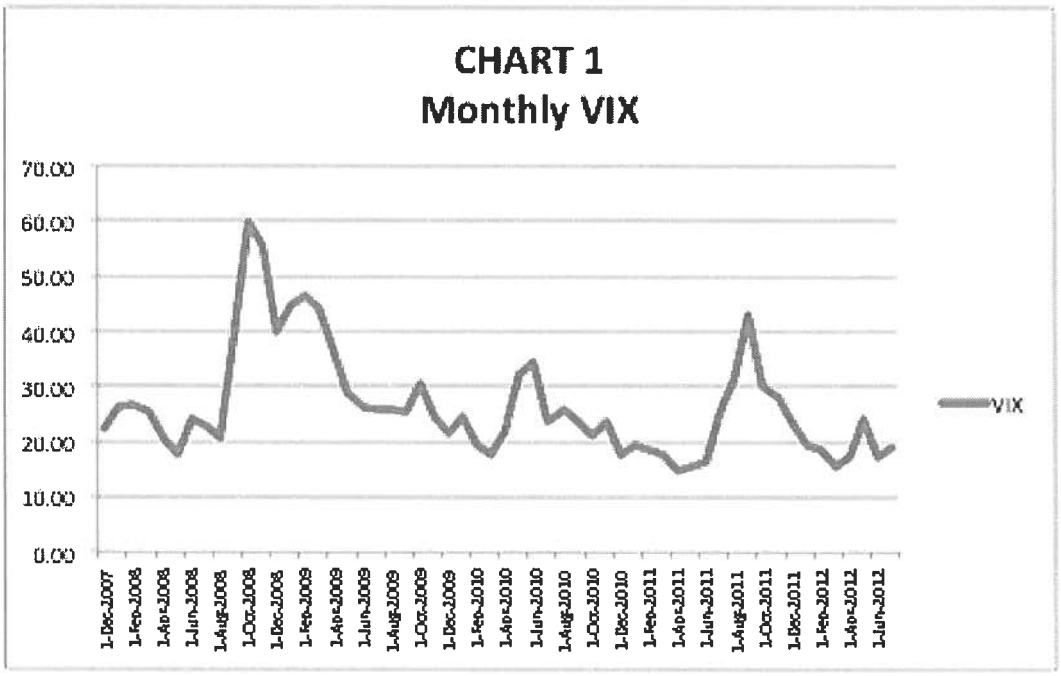
In 2009 and continuing through 2011, utility bond yields fell significantly from November 2008 levels, as did the spread between public utility bond yields and long-term Treasuries. The average utility bond yield in December 2011 was 4.47%, a decline of 333 basis points, or 3.33%, from November 2008. At the end of December the yield spread between utility bonds and the long-term Treasury bond declined substantially to 1.80%.

So far in 2012, bond yields have changed little from their December 2011 levels. As of September 14, the Moody's average public utility bond yield stood at 4.38%.

On June 20, 2012, the Federal Reserve issued Federal Open Market Committee press release indicating that it intended to extend what has been termed "Operation Twist". This refers to the Federal Reserve maturity extension program whereby the Federal Reserve redeems or sells shorter-term treasury securities and uses the proceeds to buy longer-term securities. By reducing the supply of longer-term Treasury securities, the prices of these securities will rise, putting downward pressure on long-term interest rates. The Fed hopes this accommodative monetary program will provide additional stimulus to the economy. Thus, it is reasonable to assume that long-term interest rates will remain low in the near future.

Q. Has stock market volatility changed since the financial crisis of 2008?

A. Yes, and it has declined significantly. The Chicago Board of Options Exchange ("CBOE") VIX index, a well-known measure of stock market volatility has declined significantly since October 2008. A chart of the VIX over the past five years is provided in Chart 1 below. At the end of October 2008, the VIX stood at 59.89. At the end of July 2012, the VIX has fallen to 18.93, indicating far less stock market volatility.



Q. Please compare current financial market conditions with the conditions that were present in LGE's and KU's last rate case.

A. When I submitted my testimony in April 2010 Case Nos. 2009-00548 and 2009-00549, I reported in that testimony that as of April 1, 2010 the average public utility bond was yielding 5.77%, 139 basis points higher than the yield as of September 14 this year. Since 2010, financial markets have recovered from the tumult of 2008 and interest rates are near historic lows. The Dow Jones Utility Average, which closed at 387.95 in April 2010, closed at 472.13 as of September 14, 2012, a rise of approximately 22%.

Current interest rates are significantly lower than interest rates in 2010. This supports a lower ROE recommendation in this case than my 9.7% recommendation

in the last LGE/KU rate cases. My analysis in the next section supports this conclusion.

Q. How does the investment community regard the electric utility industry as a whole?

A. In its August 24, 2012 report on the Electric Utility – East group of companies, Value Line noted that:

> Stocks in the Electric Utility Industry remain among the highest yielding of all sectors under our coverage. On average, the sector is currently yielding 4.1%, nearly two full percentage points above the Value Line Investment Survey median. Top-yielders within Issue 1 include, Pepco Holdings (5.5%), Exelon Corp. (5.5%), TECO Energy (5.0%), PPL Corp. (4.9%), and UIL Holdings (4.7%).
>
> **Conclusion**
>
> On a historical basis, Electric Utility stocks tend to outperform the broader market averages during times of economic slow down. Conversely, they tend to underperform during periods of economic expansion. Given recent trends within the markets, it would appear the industry is currently experiencing the latter. In either scenario, equities in this sector will likely remain a popular choice for investors seeking to add stability and consistent income to their portfolios.

Q. Briefly describe Louisville Gas and Electric Company and Kentucky Utilities.

A. Both LGE and KU are operated together by PPL Corporation, which acquired the Companies from E.ON AG on November 1, 2010. LGE and KU supply approximately 943,000 customers with electricity and 321,000 with natural gas service. Both Companies are operated as a single integrated system and are wholly-owned subsidiaries of LG&E and KU Energy, LLC ("LKE"). LKE, in turn, is wholly owned by PPL Corporation. The vast majority of generation for the Companies consists of coal-fired capacity (98% of electricity generated in 2011).

Both LGE and KU have common equity provided by LKE and both Companies issue first mortgage bonds and tax-exempt debt.

Q. How are the Companies viewed by the major bond rating agencies?

A. Standard and Poor's current first mortgage bond rating for LGE and KU is A-. Moody's currently assigns a first mortgage bond rating to the Companies of A2. Both of these ratings are solidly investment grade ratings.

In support of its current ratings for LGE and KU, Moody's noted the following ratings drivers for the Companies in its November 16, 2011 ratings reports:

- Regulatory environment provides for timely recovery of costs.
- Constructive outcome of most recent rate cases fortifies credit supportive regulatory environment.
- Elevated capital expenditure spending program due to environmental initiatives.
- Lack of fuel diversity relating to its electric generating portfolio.
- Healthy and stable financial metrics.
- PPL's acquisition strategy has reduced "family-wide" business risk.

In its May 8, 2012 report on KU, Standard and Poor's ("S&P) stated:

> KU's consolidated business risk profile, which we consider excellent, reflects the strengths of serving electric customers scattered throughout Kentucky, including those in Lexington. The utility's strengths include relatively predictable utility operations with steady cash flows, constructive cost recovery, and relatively low rates stemming from low-cost coal-fired generation. Although most of its plants burn coal, they meet current environmental requirements, and the significant amount of capital spending needed for environmental compliance through 2015 should be

recoverable through rates.

The financial risk profile for KU reflects that of PPL Corp. The consolidated financial profile, which we consider aggressive, reflects adjusted financial measures that are in line with the rating. We expect that financial measures will remain at current levels as the company incorporates full cost recovery of capital spending in operating cash flow.

S&P made similar comments about LGE in its May 8, 2012 report.

Q. Mr. Baudino, what is your conclusion regarding the financial health and overall risk of LGE and KU?

A. Both LGE and KU have solid, investment grade bond ratings. Both companies benefit from credit supportive rate decisions from the Kentucky Public Service Commission. The Environmental Cost Recovery ("ECR") clause enables the Companies to include new environmental costs in a timely manner. Likewise, the Demand Side Management ("DSM") clause provides for collection of DSM costs, including a return of and on capital investments in DSM. Although the Companies must invest in additional funds for environmental compliance, the ECR will mitigate the risk of recovery.

III. DETERMINATION OF FAIR RATE OF RETURN

Q. Please describe the methods you employed in estimating a fair rate of return for LGE and KU.

A. I employed a Discounted Cash Flow ("DCF") analysis for a group of comparison electric companies to estimate the cost of equity for the Companies' regulated electric operations. I also employed two Capital Asset Pricing Model ("CAPM") analyses using both historical and forward-looking data.

Q. What are the main guidelines to which you adhere in estimating the cost of equity for a firm?

A. Generally speaking, the estimated cost of equity should be comparable to the returns of other firms with similar risk structures and should be sufficient for the firm to attract capital. These are the basic standards set out by the United States Supreme Court in *Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944)* and *Bluefield W.W. & Improv. Co. v. Public Service Comm'n, 262 U.S. 679 (1922).*

From an economist's perspective, the notion of "opportunity cost" plays a vital role in estimating the return on equity. One measures the opportunity cost of an investment equal to what one would have obtained in the next best alternative. For example, let us suppose that an investor decides to purchase the stock of a publicly traded electric utility. That investor made the decision based on the expectation of dividend payments and perhaps some appreciation in the stock's value over time; however, that investor's opportunity cost is measured by what she or he could have

invested in as the next best alternative. That alternative could have been another utility stock, a utility bond, a mutual fund, a money market fund, or any other number of investment vehicles.

The key determinant in deciding whether to invest, however, is based on comparative levels of risk. Our hypothetical investor would not invest in a particular electric company stock if it offered a return lower than other investments of similar risk. The opportunity cost simply would not justify such an investment. Thus, the task for the rate of return analyst is to estimate a return that is equal to the return being offered by other risk-comparable firms.

Q. What are the major types of risk faced by utility companies?

A. In general, risk associated with the holding of common stock can be separated into three major categories: business risk, financial risk, and liquidity risk. Business risk refers to risks inherent in the operation of the business. Volatility of the firm's sales, long-term demand for its product(s), the amount of operating leverage, and quality of management are all factors that affect business risk. The quality of regulation at the state and federal levels also plays an important role in business risk for regulated utility companies.

Financial risk refers to the impact on a firm's future cash flows from the use of debt in the capital structure. Interest payments to bondholders represent a prior call on the firm's cash flows and must be met before income is available to the common

shareholders. Additional debt means additional variability in the firm's earnings, leading to additional risk.

Liquidity risk refers to the ability of an investor to quickly sell an investment without a substantial price concession. The easier it is for an investor to sell an investment for cash, the lower the liquidity risk will be. Stock markets, such as the New York and American Stock Exchanges, help ease liquidity risk substantially. Investors who own stocks that are traded in these markets know on a daily basis what the market prices of their investments are and that they can sell these investments fairly quickly. Many electric utility stocks are traded on the New York Stock Exchange and are considered liquid investments.

Q. Are there any indices available to investors that quantify the total risk of a company?

A. Bond and credit ratings are tools that investors use to assess the risk comparability of firms. Bond rating agencies such as Moody's and Standard and Poor's perform detailed analyses of factors that contribute to the risk of a particular investment. The end result of their analyses is a bond rating that reflects these risks. This information can then be used to select a comparison group for use in the Discounted Cash Flow model.

Discounted Cash Flow ("DCF") Model

Q. Please describe the basic DCF approach.

A. The basic DCF approach is rooted in valuation theory. It is based on the premise that the value of a financial asset is determined by its ability to generate future net cash flows. In the case of a common stock, those future cash flows take the form of dividends and appreciation in stock price. The value of the stock to investors is the discounted present value of future cash flows. The general equation then is:

$$V = \frac{R}{(1+r)} + \frac{R}{(1+r)^2} + \frac{R}{(1+r)^3} + \cdots \frac{R}{(1+r)^n}$$

Where: *V = asset value*
R = yearly cash flows
r = discount rate

This is no different from determining the value of any asset from an economic point of view; however, the commonly employed DCF model makes certain simplifying assumptions. One is that the stream of income from the equity share is assumed to be perpetual; that is, there is no salvage or residual value at the end of some maturity date (as is the case with a bond). Another important assumption is that financial markets are reasonably efficient; that is, they correctly evaluate the cash flows relative to the appropriate discount rate, thus rendering the stock price efficient relative to other alternatives. Finally, the model I employ also assumes a constant growth rate in dividends. The fundamental relationship employed in the DCF method is described by the formula:

$$k = {}^{D_1}/_{P_0} + g$$

Where: *D_1 = the next period dividend*

P_0 = *current stock price*
g = *expected growth rate*
k = *investor-required return*

Under the formula, it is apparent that "k" must reflect the investors' expected return. Use of the DCF method to determine an investor-required return is complicated by the need to express investors' expectations relative to dividends, earnings, and book value over an infinite time horizon. Financial theory suggests that stockholders purchase common stock on the assumption that there will be some change in the rate of dividend payments over time. We assume that the rate of growth in dividends is constant over the assumed time horizon, but the model could easily handle varying growth rates if we knew what they were. Finally, the relevant time frame is prospective rather than retrospective.

Q. What was your first step in conducting your DCF analysis for LGE and KU?

A. My first step was to construct a comparison group of companies with a risk profile that is reasonably similar to LGE and KU.

Q. Please describe your approach for selecting a comparison group of electric companies.

A. In this case, I chose to construct a comparison group of electric companies that were rated A by either S&P or Moody's. I also excluded any companies that had Aa/AA ratings from Moody's or S&P as investors would likely consider such companies less risky than LGE and KU.

From that group, I selected companies that had at least 50% of their revenues from electric operations and that had long-term earnings growth forecasts from Value Line and either Zacks Investment Research ("Zacks") or First Call/Thomson Financial. I will describe Zacks and First Call/Thomson Financial later in my testimony. From this group, I then eliminated companies that had recently cut or eliminated dividends, were recently or currently involved in merger activities, or had recent experience with significant earnings fluctuations. Companies that did not pass these screens are not appropriate candidates to which one can apply the DCF formula because of unrepresentative market prices (in terms of companies that are merger candidates) or non-constant growth in earnings or dividends. I also eliminated any companies that had recently been restructured. These screens eliminated CH Energy, Duke Energy, and Northeast Utilities from the comparison group.

I also eliminated Edison International from the group because Value Line noted that Edison's unregulated generating assets are being hurt by low power prices and more stringent environmental rules. The effect is that forecasted earnings growth for Edison over the next few years will be near zero, or even negative as forecasted by Thomson Financial. This significant near-term challenge for Edison International has rendered three to five year earnings growth forecasts of dubious value as proxies for a constant, long-term growth rate. Combined with Edison's 2.9% dividend yield, the DCF result would be far too low and would only serve to understate the result for the comparison group.

The screening process I just described resulted in the comparison group of companies listed in the table below.

TABLE 1
ELECTRIC UTILITY COMPARISON GROUP

		S&P	Moody's
1	ALLETE, Inc.	A-	A2
2	Alliant Energy Corp.	BBB+	A2/A3
3	Avista Corp.	A-	A3
4	Black Hills Corp.	BBB+	A3
5	Consolidated Edison	A-	A3/Baa1
6	Dominion Resources	A	Baa1
7	DTE Energy	A	A2
8	IDACORP, Inc	A-	A2
9	Pepco Holdings, Inc.	A-/BBB+	Baa1/Baa2
10	PG&E Corporation	BBB/BBB-	A3/Baa1
11	Portland General Electric	A-	A3
12	Southern Company	A	A2/A3
13	TECO Energy, Inc.	BBB+	A3
14	Westar Energy, Inc.	BBB+	A3
15	Wisconsin Energy Corporation	A-/BBB+	A2/A3
16	Xcel Energy Inc.	A-	A3

Q. What was your first step in determining the DCF return on equity for the comparison group?

A. I first determined the current dividend yield, D_1/P_0, from the basic equation. My general practice is to use six months as the most reasonable period over which to estimate the dividend yield.

Q. Which six-month period did you use and what were the results?

A. The six-month period I used covered the months from March through August 2012. I obtained historical prices and dividends from Yahoo! Finance. The annualized

dividend divided by the average monthly price represents the average dividend yield for each month in the period. The average dividend yield for the comparison group is 4.22%. These calculations are shown on page 3 of Exhibit ___(RAB-3).

Exhibit___(RAB-3) also presents monthly dividend yields for the comparison group. Note that the group yield has fallen from 4.28% in March to 4.12% in August.

Q. Having established the average dividend yield, how did you determine the investors' expected growth rate for the electric comparison group?

A. The investors' expected growth rate, in theory, correctly forecasts the constant rate of growth in dividends. The dividend growth rate is a function of earnings growth and the payout ratio, neither of which is known precisely for the future. We refer to a perpetual growth rate since the DCF model has no cut-off point. We must estimate the investors' expected growth rate because there is no way to know with absolute certainty what investors expect the growth rate to be in the short term, much less in perpetuity.

In this analysis, I relied on three major sources of analysts' forecasts for growth. These sources are Value Line, Zacks, and Thomson Financial.

Q. Please briefly describe Value Line, Zacks, and Thomson Financial.

A. Value Line is an investment survey that in its Standard Edition is published for approximately 1,700 companies, both regulated and unregulated. It is updated quarterly and probably represents the most comprehensive and widely used of all

investment information services. It provides both historical and forecasted information on a number of important data elements. Value Line neither participates in financial markets as a broker nor works for the utility industry in any capacity of which I am aware.

Zacks Investment Research is a highly regarded firm in the investment industry. Zacks gathers opinions from a variety of analysts on earnings growth forecasts for numerous firms including regulated electric utilities. The estimates of the analysts responding are combined to produce consensus estimates of earnings growth. Zacks consensus earnings growth estimates may be obtained from the company's web site.

Like Zacks, Thomson Financial also provides detailed investment research on numerous companies. Thomson also compiles and reports consensus analysts' forecasts of earnings growth. I also obtained these forecasts from Yahoo! Finance.

Q. Why did you rely on analysts' forecasts in your analysis?

A. Return on equity analysis is a forward-looking process. Five-year or ten-year historical growth rates may not accurately represent investor expectations for dividend growth. Analysts' forecasts for earnings and dividend growth provide better proxies for the expected growth component in the DCF model than historical growth rates. Analysts' forecasts are also widely available to investors and one can reasonably assume that they influence investor expectations.

Q. How did you utilize your data sources to estimate growth rates for the comparison group?

A. Exhibit____(RAB-4) presents the Value Line, Zacks, and Thomson Financial forecasted growth estimates. These earnings and dividend growth estimates for the comparison group are summarized on Columns (1) through (5) of Exhibit ____(RAB-4).

I also utilized the sustainable growth formula in estimating the expected growth rate. The sustainable growth method, also known as the retention ratio method, recognizes that the firm retains a portion of its earnings to fuel growth in dividends. These retained earnings, which are plowed back into the firm's asset base, are expected to earn a rate of return. This, in turn, generates growth in the firm's book value, market value, and dividends. The sustainable growth method is calculated using the following formula:

$$G = B * R$$

Where: G = *expected retention growth rate*
B = *the firm's expected retention ratio*
R = *the expected return*

In its proper form, this calculation is forward-looking. That is, the investors' expected retention ratio and return must be used in order to measure what investors anticipate will happen in the future.

The expected sustainable growth estimates for the comparison group are presented in Column (3) on page 1 of Exhibit ____(RAB-4). The data came from the Value Line forecasts for the comparison group, which are entitled "Retained to Common Eq" and cover the three-year forecast period of 2015 - 2017.

Q. How did you approach the calculation of earnings growth forecasts in this case?

A. For purposes of this case, I looked at two different methods for calculating the expected growth rates for my comparison group. For Method 1, I calculated the average of all the growth rates for the companies in my comparison group using Value Line, Zacks, and Thomson. For Method 2, I calculated the median growth rates for my comparison group. The median value represents the middle value in a data range and is not influenced by excessively high or low numbers in the data set. The median growth rate for each forecast provides additional valuable information regarding expected growth rates for the group.

The expected growth rates produced by these two methods range from 3.75% to 5.75%.

Q. How did you proceed to determine the DCF return of equity for the electric comparison group?

A. To estimate the expected dividend yield (D_1) for the group, the current dividend yield must be moved forward in time to account for dividend increases over the next twelve months. I estimated the expected dividend yield by multiplying the current dividend yield by one plus one-half the expected growth rate.

I then added the expected growth rates to the expected dividend yield. The calculations of the resulting DCF returns on equity for each method are presented on page 2 of Exhibit ____(RAB-4).

Q. Please explain how you calculated your DCF cost of equity estimates and summarize the results.

A. Page 2 of Exhibit ____(RAB-4) presents the DCF results utilizing the two different methods. Method 1 utilizes the average growth rates for the comparison group. I used the Value Line earnings and dividend growth forecasts and the consensus analysts' forecasts. The average DCF result is 9.15% and the midpoint of the range is 9.39%.

Method 2 employs the median growth rates from Value Line, Zacks, and Thomson. For the comparison group, the average DCF result is 9.11% and the midpoint of the results is 9.07%.

Capital Asset Pricing Model

Q. Briefly summarize the Capital Asset Pricing Model ("CAPM") approach.

A. The theory underlying the CAPM approach is that investors, through diversified portfolios, may combine assets to minimize the total risk of the portfolio. Diversification allows investors to diversify away all risks specific to a particular company and be left only with market risk that affects all companies. Thus, the CAPM theory identifies two types of risks for a security: company-specific risk and

market risk. Company-specific risk includes such events as strikes, management errors, marketing failures, lawsuits, and other events that are unique to a particular firm. Market risk includes inflation, business cycles, war, variations in interest rates, and changes in consumer confidence. Market risk tends to affect all stocks and cannot be diversified away. The idea behind the CAPM is that diversified investors are rewarded with returns based on market risk.

Within the CAPM framework, the expected return on a security is equal to the risk-free rate of return plus a risk premium that is proportional to the security's market, or non-diversifiable, risk. Beta is the factor that reflects the inherent market risk of a security and measures the volatility of a particular security relative to the overall market for securities. For example, a stock with a beta of 1.0 indicates that if the market rises by 15%, that stock will also rise by 15%. This stock moves in tandem with movements in the overall market. Stocks with a beta of 0.5 will only rise or fall 50% as much as the overall market. So with an increase in the market of 15%, this stock will only rise 7.5%. Stocks with betas greater than 1.0 will rise and fall more than the overall market. Thus, beta is the measure of the relative risk of individual securities vis-à-vis the market.

Based on the foregoing discussion, the equation for determining the return for a security in the CAPM framework is:

$$K = Rf + \beta(MRP)$$

Where: K = *Required Return on equity*

Rf = *Risk-free rate*
MRP = *Market risk premium*
β = *Beta*

This equation tells us about the risk/return relationship posited by the CAPM. Investors are risk averse and will only accept higher risk if they receive higher returns. These returns can be determined in relation to a stock's beta and the market risk premium. The general level of risk aversion in the economy determines the market risk premium. If the risk-free rate of return is 3.0% and the required return on the total market is 15%, then the risk premium is 12%. Any stock's required return can be determined by multiplying its beta by the market risk premium. Stocks with betas greater than 1.0 are considered riskier than the overall market and will have higher required returns. Conversely, stocks with betas less than 1.0 will have required returns lower than the market as a whole.

Q. In general, are there concerns regarding the use of the CAPM in estimating the return on equity?

A. Yes, there is some controversy surrounding the use of the CAPM.[2] There is evidence that beta is not the primary factor in determining the risk of a security. For example, Value Line's "Safety Rank" is a measure of total risk, not its calculated beta coefficient. Beta coefficients usually describe only a small amount of total investment risk. Finally, a considerable amount of judgment must be employed in

2 For a more complete discussion of some of the controversy surrounding the use of the CAPM, refer to *A Random Walk Down Wall Street* by Burton Malkiel, pp. 206 – 211, 2007 edition.

determining the risk-free rate and market return portions of the CAPM equation. It is very difficult for the analyst to ascertain the investor's expected market return since that return should contain all possible investment options available to the investor. My past experience with the CAPM indicates that it is prudent to use a wide variety of data in estimating returns. Of course, the range of results may also be wide, indicating the difficulty in obtaining a reliable estimate from the CAPM.

Q. Is the CAPM nonetheless a useful tool?

A. The CAPM is often presented in utility rate proceedings as one alternative method of estimating the investor required return on equity. And, in my opinion, it provides some useful supplemental evidence that may be considered by the analyst and the regulatory commission. However, the DCF is a superior tool in the cost of capital toolbox and I recommend that the Commission place primary reliance on it in this proceeding.

Q. Turning to the formula above, where did you start your analysis?

A. I started by calculating the market risk premium, which is the required return on the market as a whole less the risk free rate of return.

Q. How did you estimate the market return portion of the CAPM?

A. The first source I used was the Value Line Investment Survey for Windows for September 10, 2012. Value Line provides a summary statistical report detailing, among other things, forecasted growth in earnings and book value for the companies Value Line follows. I have presented these three growth rates and the average on

page 2 of Exhibit ____(RAB-5). The average growth rate is 12.32%. Combining this growth rate with the average expected dividend yield of the Value Line companies of 0.76% results in an expected market return of 13.08%. The detailed calculations are shown on page 1 Exhibit ____(RAB-5).

I also considered a supplemental check to this market estimate. Morningstar publishes a study of historical returns on the stock market in its *Ibbotson SBBI 2012 Classic Yearbook*. Some analysts employ this historical data to estimate the market risk premium of stocks over the risk-free rate. The assumption is that a risk premium calculated over a long period of time is reflective of investor expectations going forward. Exhibit ____(RAB-6) presents the calculation of the market return using the historical data.

Q. Please address the use of historical earned returns to estimate the market risk premium.

A. The use of historic earned returns on the S&P 500 to estimate the current market risk premium is rather suspect because it naively assumes that investors currently expect historic risk premiums to continue unchanged into the future regardless of present or forecasted economic conditions. Brigham, Shome, and Vinson noted the following with respect to the use of historic risk premiums calculated using the returns as reported by Ibbotson and Sinquefield (referred to in the quote as "I&S"):

> There are both conceptual and measurement problems with using I&S data for purposes of estimating the cost of capital. Conceptually, there is no compelling reason to think that investors expect the same relative returns that were earned in the past. Indeed, evidence presented in the following sections

> indicates that relative expected returns should, and do, vary significantly over time. Empirically, the measured historic premium is sensitive both to the choice of estimation horizon and to the end points. These choices are essentially arbitrary, yet can result in significant differences in the final outcome.[3]

In summary, the use of historic earned returns should be viewed with a great deal of caution. There is no real support for the proposition that an unchanging, mechanically applied historical risk premium is representative of current investor expectations and return requirements.

Q. How did you determine the risk free rate?

A. I used the average yields on the 20-year Treasury bond and five-year Treasury note over the six-month period from March through August 2012. The 20-year Treasury bond is often used by rate of return analysts as the risk-free rate, but it contains a significant amount of interest rate risk. The five-year Treasury note carries less interest rate risk than the 20-year bond and is more stable than three-month Treasury bills. Therefore, I have employed both of these securities as proxies for the risk-free rate of return. This approach provides a reasonable range over which the CAPM may be estimated.

Q. What is your estimate of the market risk premium?

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3 Brigham, E.F., Shome, D.K. and Vinson, S.R., "The Risk Premium Approach to Measuring a Utility's Cost of Equity," *Financial Management*, Spring 1985, pp. 33-45.

A. Exhibit ____(RAB-5), line 9 of page 1, presents my estimates of the market risk premium based on a DCF analysis applied to current market data. The market risk premium is 10.55% using the 20-year Treasury bond and 12.30% using the five-year Treasury bond.

Utilizing the historical Ibbotson data on market returns, the market risk premium ranges from 4.50% to 6.50%. This is shown on Exhibit ____(RAB-6).

Q. How did you determine the value for beta?

A. I obtained the betas for the companies in the electric company comparison group from most recent Value Line reports. The average of the Value Line betas for the comparison group is .70.

Q. Please summarize the CAPM results.

A. The CAPM results using the 20-year and five-year Treasury bond yields and Value Line market return data range from 9.36% to 9.89%. These results are shown on page 1 of Exhibit___(RAB-5).

The CAPM results using the historical Ibbotson data range from 5.67% to 7.07%. These results are shown on Exhibit ____(RAB-6).

Conclusions and Recommendations

Q. Please summarize the cost of equity you recommend the Commission adopt for LGE and KU.

A. I recommend that the Commission adopt the DCF model I developed and the cost of equity estimates for the comparison group of electric utility companies that I compiled. Based on the DCF results for the comparison group of companies I constructed, my recommended ROE range is 9.07% to 9.39%. For purposes of this case, I recommend that the Commission adopt a 9.20% return on equity for the Companies in this proceeding. This recommendation represents the approximate midpoint of the range of results for my DCF analyses and is slightly higher than the DCF results averaging all growth rates (9.15%). I offer this recommendation to the Commission as a just and reasonable estimate of investor return on equity requirements for financially strong, A rated utility companies such as LGE and KU.

Q. Will you address the Company's capital structure?

A. No. Mr. Kollen, witness for KIUC, will address the Companies' capital structures in detail. Mr. Kollen is recommending equity ratios of 53.70% for KU and 55.64% for LGE, which are consistent with the Companies' requested equity ratios. I have reviewed Mr. Kollen's adjustments and recommendations regarding capital structure for the Companies in this case, find his recommendations consistent with my recommended ROE, and I support his recommended capital structures and cost of debt for LGE and KU.

Q. Mr. Baudino, how do the equity ratios for the companies in your comparison group compare to the equity ratios that you and Mr. Kollen support in this proceeding for LGE and KU?

A. Table 2 shows the 2011 long-term debt and equity percentages for the companies in my comparison group. I obtained these numbers from the Value Line reports I used in my ROE analyses. The average equity ratio for the comparison group is 49.9%, which is lower than the percentages Mr. Kollen supports in his testimony for LGE and KU.

TABLE 2
COMPARISON GROUP 2011 CAPITAL STRUCTURES

		Long-Term Debt %	Equity %
1	ALLETE, Inc.	44.3%	55.7%
2	Alliant Energy Corp.	45.7%	54.3%
3	Avista Corp.	51.4%	48.6%
4	Black Hills Corp.	51.4%	48.6%
5	Consolidated Edison	46.5%	53.5%
6	Dominion Resources	59.8%	40.2%
7	DTE Energy	50.6%	49.4%
8	IDACORP, Inc	45.6%	54.4%
9	Pepco Holdings, Inc.	49.1%	50.9%
10	PG&E Corporation	48.8%	51.2%
11	Portland General Electric	49.6%	50.4%
12	Southern Company	50.0%	50.0%
13	TECO Energy, Inc.	54.2%	45.8%
14	Westar Energy, Inc.	49.5%	50.5%
15	Wisconsin Energy Corporation	53.6%	46.4%
16	Xcel Energy Inc.	51.1%	48.9%
	Average	50.1%	49.9%

Source: Value Line Investment Survey

IV. RESPONSE TO LGE AND KU TESTIMONY

Q. Have you reviewed the Direct Testimony of Dr. William Avera?

A. Yes.

Q. Please summarize your conclusions with respect to Dr. Avera's testimony and return on equity recommendation.

A. First, Dr. Avera's recommended 11.0% return on equity is grossly overstated and fails to reasonably track the majority of the average results from his Combination Utility Proxy Group analyses, which range from 9.0% to 10.2%. As I shall demonstrate later in my testimony, the so-called midpoint results of his DCF analysis are inflated due to the inclusion of unreasonably high ROE values that should have been excluded from Dr. Avera's analysis. Furthermore, the Combination Utility Proxy Group CAPM results that exceed the upper end of this range are fatally flawed and should be rejected for reasons that I will explain later in my testimony.

Second, Dr. Avera made questionable adjustments to the results of his DCF analysis by excluding individual company DCF results that he considered to be either too high or too low. His subjective analysis is skewed toward including DCF results that are still excessive, resulting in an overstatement of the average adjusted results from his Combination Utility Proxy Group.

Third, Dr. Avera failed to include forecasted dividend growth in his DCF analyses. Failing to include this important information overstated his DCF results.

Fourth, Dr. Avera overstated the Market Risk Premium in his CAPM analysis because of a faulty approach to estimating the market return portion of the CAPM. My CAPM results suggest lower expected returns.

Fifth, Dr. Avera's use of forecasted interest rates in his CAPM and risk premium calculations is inappropriate and merely serves to inflate the results of his analyses.

Sixth, Dr. Avera included a size adjustment to his CAPM formulations that is incorrect and inappropriate. This size adjustment resulted in a significant overstatement of his adjusted CAPM results.

Seventh, Dr. Avera's expected earnings approach is inappropriate and should be rejected by the Commission.

Eighth, Dr. Avera's adjustment for flotation costs is inappropriate and should be rejected.

Dr. Avera's ROE Range and Recommendation

Q. Please summarize the results of Dr. Avera's ROE analyses.

A. Dr. Avera used four methods to estimate the cost of equity for LGE and KU: the DCF model, the CAPM, the risk premium model, and an expected earning approach. He used two groups of companies to estimate the cost of equity for the DCF model, one

composed of regulated electric utilities ("Combination Utility Proxy Group") and another using unregulated companies ("Non-Utility Proxy Group"), which completely excluded utility operations. The results from his various methods are as follows:

Utility Proxy Group:

DCF Average – 9.0% to 10.2%
DCF Midpoint - 9.2% - 11.9%
CAPM with Current Bond Yield - 10.6% - 11.4%
CAPM with Projected Bond Yield – 11.0% - 11.8%
Utility Risk Premium – 10.3% - 11.3%
Expected earnings – 10.4% - 10.6%

Non-Utility Proxy Group:

DCF Average – 10.9% - 13.2%
DCF Midpoint - 10.9% - 12.6%

Dr. Avera also recommended a 20 basis point adjustment for flotation costs.

Based on these results, Dr. Avera recommended a range for LGE's and KU's cost of equity of 10.1% - 11.5%. After including a 20 basis point flotation cost adjustment, Dr. Avera's recommended ROE range is 10.3% - 11.7%. Finally, Dr. Avera recommended a cost of equity of 11.0% for the Companies.

Q. In your opinion, do the results of Dr. Avera's various analyses support his recommended 11.0% ROE for LGE and KU?

A. No, I do not. The bulk of Dr. Avera's results suggest a much lower ROE, more in the range of 9.0% - 10.2% if the average DCF results for the Combination Utility Proxy Group are used. Only the Non-Utility Proxy Group DCF results generally support an ROE above 11.0%. It is important to note once again that although Dr. Avera's

DCF midpoint analyses contain results of 11.0% and above, these results are deeply flawed and cannot be relied upon by the Commission in determining the appropriate ROE for the Companies. I will address Dr. Avera's DCF midpoint analyses later in my testimony.

Q. Is it appropriate to use a group of unregulated companies to estimate a fair return on equity for regulated electric companies such as LGE and KU?

A. Absolutely not. Dr. Avera's use of unregulated non-utility companies to estimate a fair rate of return for the Companies is completely inappropriate and should be rejected by the Commission.

LGE and KU have protected markets, e.g. service territories, enjoy full recovery of prudently incurred costs, and may increase their rates to cover increases in costs. Generally speaking, non-utility companies simply do not have these options and must compete with other firms for sales and for customers. Obviously, the non-utility companies have higher overall risk structures than low-risk electric companies like LGE and KU and will have higher required returns from their shareholders. It is not at all surprising that Dr. Avera's ROE results for his Non-Utility Proxy Group were substantially higher than the results for his Combination Utility Proxy Group. Given the higher business risk for the non-utility group of companies, this is exactly the result that would have been expected. However, these results do not form any kind of reasonable basis to estimate the investor required ROE for the Companies. Quite the contrary, the returns from the non-utility proxy group are a good measure of returns that are, by definition, substantially in excess of those to be expected in the

regulated utility segment.

Q. Are the DCF returns for the Non-Utility Proxy Group comparable to the DCF returns for Dr. Avera's Utility Proxy Group?

A. No. The DCF results for the Non-Utility Proxy Group are presented in Dr. Avera's Exhibit WEA-4. It is instructive to note that DCF returns are uniformly higher for this group of companies than one would expect for regulated electric utilities. For example, the DCF results for Kellogg range from 10.8% to 12.3% and the results for McCormick & Co. range from 10.8% to 20.4%. Dr. Avera attempted to eliminate what he considered to be excessively high DCF results from the DCF averages for the Non-Utility Proxy Group, but he still included returns ranging from 12.0% to 15.9%, returns that are clearly excessive when applied to lower risk electric utilities such as LGE and KU.

In my opinion, Exhibit WEA-4 merely underscores the conclusion that DCF results for the Non-Utility Proxy Group have no bearing whatsoever on investor expected returns for regulated electric companies.

Q. On page 27 of his LGE Direct Testimony[4], Dr. Avera presented a table that compared various risk indicators between his Combination Utility and Non-Utility proxy groups. Please comment on this comparison of risk indices.

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4 A similar table appears on page 26 of Dr. Avera's KU Direct Testimony.

A. It is interesting to note that even though the risk indicators from S&P and Value Line suggest that Dr. Avera's non-utility proxy group may even be slightly less risky than the combination utility proxy group, investors have spoken in the marketplace with higher required ROEs for the Non-Utility proxy group. Obviously, the risk indicators presented by Dr. Avera do not capture all of the risk and return differences in the minds of investors when they assess their required returns on common stock for regulated utilities and unregulated non-utility companies.

Q. Do you have any concluding remarks for this section of your response to Dr. Avera?

A. Yes. In my subsequent response to Dr. Avera's DCF analyses, I will confine my remarks to the results from his Combination Utility Proxy Group. I will not further address the Non-Utility Proxy Group because I have already explained why the Commission should reject the use of this group in estimating the cost of equity for LGE and KU.

DCF Analyses

Q. Please summarize Dr. Avera's approach to the DCF model and its results.

A. Dr. Avera utilized the constant growth form of the DCF model to estimate the fair return on equity for a group of what he considered to be comparable risk utility companies, which he referred to as the Combination Utility Proxy Group. The criteria

he used to select companies to include in this group are discussed and enumerated on page 22 of his LGE Direct Testimony[5]. He employed analysts' earnings growth forecasts from Value Line, Thomson Reuters, and Zacks to estimate the growth component of the DCF model.

Dr. Avera adjusted the results of his DCF analyses by eliminating what he considered to be high and low outliers from the group average DCF results. Dr. Avera discussed the criteria he used for making these adjustments on pages 37 through 41 of his LGE Direct Testimony[6]. He presented the results of his Combination Utility Proxy Group DCF estimates in Exhibit WEA-2, page 3 of 3. The average results ranged from 9.0% to 10.2%. Dr. Avera also presented "midpoint" ROE results, which ranged from 9.2% to 11.9%.

Q. Did Dr. Avera include unreasonably high DCF results in his adjusted DCF calculations for the Utility Proxy Group?

A. Yes. Exhibit WEA-2 shows that Dr. Avera included DCF results that ranged from 14.1% to 15.2%. These results are clearly outside the range of investor required returns for electric utility companies. For example, according to Dr. Avera's Exhibit WEA-7, page 3 of 4, the average allowed ROEs for utilities since 2002 ranged from 10.22% (2011) to 11.16% (2002) and allowed Commission returns have been

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5 See also page 21 of Dr. Avera's KU Direct Testimony.

6 See also pp. 36 - 40 of Dr. Avera's KU Direct Testimony.

trending downward since 2002. There is no sound reason for including ROEs above 14% in Dr. Avera's DCF analyses and, therefore, their inclusion merely serves to inflate the ROE results presented in Exhibit WEA-2.

Excluding the extreme DCF results I mentioned earlier lowers Dr. Avera's Utility Proxy Group results as shown in Table 3.

TABLE 3

AVERA COMBINATION UTILITY PROXY GROUP
MODIFIED DCF RESULTS

	Company	Earnings Growth V Line	Earnings Growth IBES	Earnings Growth Zacks	br+sv Growth
1	ALLETE	11.0%	9.5%	9.5%	8.6%
2	Alliant Energy	10.7%	10.5%	10.4%	9.0%
3	Ameren Corp.	4.6%	2.8%	9.1%	7.8%
4	Avista Corp.	10.1%	8.6%	9.3%	8.5%
5	Black Hills Corp.	11.5%	10.5%	10.5%	7.5%
6	DTE Energy Co.	9.4%	8.7%	8.8%	8.2%
7	Empire District Elec	11.0%	15.2%	NA	8.0%
8	Exelon Corp.	2.5%	-4.7%	5.5%	9.2%
9	Northwestern Corp.	9.3%	9.3%	9.3%	8.6%
10	PG&E Corp.	8.7%	5.7%	8.8%	9.5%
11	PPL Corp.	10.2%	4.3%	NA	11.0%
12	Pub Sv Enterprise Grp	4.7%	6.3%	6.7%	10.7%
13	SCANA Corp.	7.9%	11.1%	8.4%	9.6%
14	Sempra Energy	8.4%	10.9%	10.9%	9.9%
15	TECO Energy	14.1%	9.2%	8.8%	10.4%
16	UIL Holdings	8.1%	9.2%	9.1%	7.5%
	Average	9.7%	9.7%	9.4%	9.0%

Please note that the DCF values that were excluded are shown in rectangular boxes in Table 3. Table 3 was taken from page 3 of Exhibit WEA-2 and modified to exclude the 14.1% and 15.2% results I mentioned earlier. Excluding these

implausible DCF calculations from Dr. Avera's analysis results in a range of 9.0 % - 9.7%, which is close to my recommended 9.2% ROE for LGE and KU.

Including unreasonably high values also unduly influenced the so-called midpoint DCF results reported by Dr. Avera in Exhibit WEA-2, page 3 of 3. For example, Dr. Avera shows a DCF midpoint result of 11.9% using the IBES growth rate. The problem here is that this 11.9% result is the average of the 15.2% ROE result for Empire District and the 8.7% result for DTE Energy. The anomalous 15.2% ROE is solely responsible for the 11.9% midpoint number and makes it unusable for evaluating the investor required return on equity for an A rated electric utility company. This is also the case for the Value Line midpoint of 11.0%, which is determined using TECO's ROE result of 14.1%. I strongly recommend that the Commission reject Dr. Avera's DCF midpoint calculations presented on page 3 of Exhibit WEA-2.

Q. Did Dr. Avera consider dividend growth forecasts in his DCF analysis?

A. No. Dr. Avera failed to include dividend growth forecasts in his analysis.

On page 32 of his LGE Direct Testimony, Dr. Avera opined that dividend growth rates "are not likely to provide a meaningful guide to investors' current growth expectations."

Q. Should Dr. Avera have included dividend growth forecasts in his DCF analyses?

A. Yes. Dr. Avera erred in failing to include dividend growth forecasts from Value Line in his DCF analyses. With respect to regulated utility companies, dividend growth

provides the primary source of cash flow to the investor. It is certainly the case that earnings growth fuels dividend growth and should be considered in estimating the ROE using the DCF model. However, Value Line's dividend growth forecasts are widely available to investors and can reasonably be assumed to influence their expectations with respect to growth. I weighted earnings growth 75% and dividend growth 25% in my growth calculations, so I agree to some extent with Dr. Avera that earnings growth is the primary factor considered by investors. But it should not be considered the only factor.

Q. What are the average and median dividend growth rates for Dr. Avera's Combination Utility Proxy Group?

A. The average and median dividend growth rate forecasts are shown below in Table 4.

TABLE 4
AVERA UTILITY PROXY GROUP
VALUE LINE DIVIDEND GROWTH FORECASTS

Company	Value Line Div. Growth
ALLETE, Inc.	3.00%
Alliant Energy Corp.	5.50%
Ameren Corp.	2.50%
Avista Corp.	6.50%
Black Hills Corp.	2.00%
DTE Energy	4.00%
Empire District	2.00%
Exelon Corp.	0.00%
Northwestern Corp.	4.50%
PG&E Corporation	2.00%
PPL Corp.	3.50%
Public Service Enterprise Crp.	2.00%
SCANA	2.00%
Sempra Energy	9.00%
TECO Energy	3.50%
UIL Holdings	0.00%
Average	3.25%
Median	2.75%

Source: 2012 Value Line Reports

Please refer to Exhibit ___(RAB-7), which shows the average and median earnings growth rates for the Utility Proxy Group used by Dr. Avera. Please note that Ameren, Exelon, and PPL Corp. had negative growth rates that I omitted from the calculation of the group average growth rates. Excluding negative values, the average earnings growth forecasts for this group range from 4.3% to 5.1% and the median growth rates range from 4.2% to 5.0%. Dr. Avera's exclusion of forecasted dividend growth serves to overstate the DCF ROE for the companies. Lower near term dividend growth rates must be factored into the analyst's overall assessment of

investor-required returns. Ignoring lower near term dividend growth as Dr. Avera did will result in an overstatement of the ROE for LGE and KU.

Using the average earnings growth rates for Value Line, IBES and Zacks shown on Exhibit___(RAB-7) and averaging the Combination Utility Proxy Group dividend growth rate results in an average forecasted growth rate of 4.43%. The DCF ROE result using the average of these four growth rates is:

4.7% * (1 + (0.5 * 4.43%) + 4.43% = 9.23%

This result nearly matches my 9.2% recommended ROE for the Companies.

Capital Asset Pricing Model

Q. Please present your conclusions regarding the results of Dr. Avera's CAPM analysis.

A. I disagree with Dr. Avera's formulation of the CAPM and in particular with his estimate of the expected market return. Dr. Avera estimated the market return portion of the CAPM by estimating the current market return for dividend paying stocks in the S&P 500. This limited his "market" return to only 382 companies.

The market return portion of the CAPM should represent the most comprehensive estimate of the total return for all investment alternatives, not just a small subset of publicly traded dividend paying stocks. In practice, of course, finding such an

estimate is difficult and is one of the more thorny problems in estimating an accurate ROE when using the CAPM. If one limits the market return to stocks, then there are more comprehensive measures of the stock market available, such as the Value Line Investment Survey Plus Edition that I used in my CAPM analysis. Value Line's projected earnings growth used a sample of 2,377 stocks and its book value growth estimate used 1541 stocks. These are much broader samples than Dr. Avera's limited sample of dividend paying stocks from the S&P 500.

Moreover, the company betas that Dr. Avera used from Value Line were not calculated based on his limited sample of 382 dividend-paying stocks. Instead, Value Line calculates its beta coefficients using the New York Stock Exchange Composite Index, a much broader measure of market returns than Dr. Avera employed. Simply put, Dr. Avera's betas do not match the "market" he used to calculate the expected market return. This alone invalidates his CAPM analyses and results.

The forward-looking CAPM results I present in Exhibit ___(RAB-5) using a broader market index suggest much lower required rates of return than Dr. Avera recommends in his testimony.

Q. On page 47 of his LGE Direct Testimony, Dr. Avera explained that he incorporated a size adjustment of 78 basis points to his CAPM results, which

increased the CAPM cost of equity to 11.4%[7]. Is this size adjustment appropriate?

A. No. The data that Dr. Avera relied upon to make this adjustment came from the *Ibbotson SBBI 2012 Valuation Yearbook* ("2012 Yearbook") published by Morningstar. The group of companies from which Dr. Avera took the 78 basis point adjustment contains many unregulated companies and the group. Table 7-5 of the 2012 Yearbook indicates that the beta for the second decile group of companies used by Dr. Avera is 1.04[8]. The beta for this group of companies is greatly in excess of my utility comparison group beta of 0.70 and Dr. Avera's Combination Utility Proxy Group beta of 0.74. There is no evidence to suggest that this size premium applies to regulated utility companies, which on average are quite different from the group of companies included in the Morningstar research on size premiums. I recommend that the Commission reject Dr. Avera's size premium in the CAPM ROE.

Q. Dr. Avera also recommended using forecasted interest rates in the formulation of the CAPM. Do you agree with using forecasted interest rates?

A. No. I recommend that the Commission reject the use of forecasted Treasury and utility bond yields. Current interest rates embody all of the relevant market data and expectations of investors, including expectations of changing future interest rates. The forecasted interest rates used by Dr. Avera are speculative and may or may not come to

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7 See also page 46 of Dr. Avera's KU Direct Testimony.

8 See page 89, *Ibbotson SBBI 2012 Valuation Yearbook,* Morningstar.

pass. Current interest rates present tangible market evidence of investor return requirements today, and these are the interest rates that should be used in the CAPM. And to the extent that investors give these forecasted interest rates any weight at all, they are already incorporated in current securities prices.

Risk Premium

Q. Please summarize Dr. Avera's risk premium approach.

A. Dr. Avera developed an historical risk premium using Commission-allowed returns for regulated utility companies and average public utility bond yields from 1974 through 2011. He also used regression analysis to estimate the value of the inverse relationship between interest rates and risk premiums during that period. On page 53 of his LGE Direct Testimony, Dr. Avera calculated the risk premium return on equity to be 10.3% using a BBB public utility bond yield as of May 2012. Dr. Avera also used a forecasted bond yield of 6.74% and, as he explained on page 67, calculated a risk premium ROE of 11.3%.

Q. Please respond to Dr. Avera's risk premium analysis.

A. First, the bond yield plus risk premium approach is a commonly used method to estimate the cost of equity, but it is imprecise and can only provide very general guidance on the current authorized ROE for a regulated electric utility. Risk premiums can change substantially over time and with varying risk perceptions of investors. As such, this approach is a "blunt instrument", if you will, for estimating the ROE in regulated proceedings. In my view, a properly formulated DCF model

using current stock prices and growth forecasts is far more reliable and accurate than the bond yield plus risk premium approach, which relies on an historical risk premium analysis over a certain period of time.

Second, for the reasons I stated in the CAPM subsection of my testimony, it is inappropriate and incorrect to use forecasted interest rates in the risk premium approach. Current interest rates are the valid ones to use and are far more reliable than forecasted interest rates, which will likely be incorrect and subject to change depending on both current and future economic events. Thus, I recommend that the KPSC reject the 11.3% risk premium ROE presented by Dr. Avera.

Q. Did you find any problems with the way in which Dr. Avera calculated the risk premium ROE in this case?

A. Yes. On page 53 of his LGE Direct Testimony, Dr. Avera explained that he applied his risk premium of 5.28% to the average yield on BBB utility bonds of 4.97%.[9] However, Exhibit WEA-7 shows that Dr. Avera used the average yield on public utility bonds to calculate his risk premium, not the yield on BBB-rated utility bonds. This is a significant mismatch because the yield on BBB utility bonds is significantly higher than the yield on the average utility bond according to Moody's Credit Trends. As I stated in Section II, the average public utility bond yield as of September 14, 2012 was 4.38%. The Baa utility bond yield was 5.02%, which is 64 basis points

9 Dr. Avera used the same approach in his KU Direct Testimony with the same result.

higher. Likewise, Exhibit WEA-7, page 1 of 4 shows that the May 2012 average utility bond yield was 4.36%, which is 61 basis points lower than the BBB bond yield.

Given that LGE and KU are A rated utilities, the correct approach would be to use the average public utility bond yield of 4.36% and add to that the adjusted equity risk premium of 5.28%. The resulting risk premium ROE would be 9.64%. Dr. Avera's calculated result of 10.3% is simply incorrect and should be rejected.

Expected Earning Approach

Q. Please comment on Dr. Avera's expected earning approach.

A. Dr. Avera's expected earnings approach should be rejected by the Commission.

All Dr. Avera did in this analysis was report Value Line's forecasted returns on book value over the 3-year period of 2015 - 2017. He did not use any market-based model such as the DCF or CAPM. Forecasted earned returns on book equity may have nothing whatsoever to do with investors' required returns in the marketplace. For example, if earned returns on book equity exceed the market-based DCF return on equity, then investors may expect a company to earn more on book equity than the market-based required rate of return. Instead, I recommend that the Commission utilize a range of returns generated by the DCF model in setting LGE's and KU's cost of equity in this case.

Q. On page 56 of his LGE Direct Testimony, Dr. Avera testified that he used adjustment factors to convert year-end common equity return to average values[10]. Is it appropriate to make such an adjustment?

A. No, it is not. The projected returns on common equity used by Dr. Avera already represent an average expected return over Value Line's three-year forecast period. The adjustment proposed by Dr. Avera is appropriate for yearly historical values reported by Value Line since these values are indeed year-end. However, no such concern should exist for a three-year forecast period. Dr. Avera's year-end adjustment should be rejected.

Flotation Costs

Q. On page 63 of his LGE Direct Testimony, Dr. Avera recommended a 20 basis point adjustment to recognize flotation costs. Should the Commission add a flotation cost adjustment to the cost of equity for LGE and KU?

A. No. I recommend that the Commission reject Dr. Avera's proposed flotation cost adjustment.

First, it is inappropriate to use flotation cost percentages from studies of other companies to estimate a flotation cost adjustment for the Companies. Dr. Avera failed to provide any specific information on flotation costs incurred by PPL Corporation on

10 Dr. Avera used this same adjustment in his KU Direct Testimony.

behalf of either LGE or KU. Thus, the 20 basis point adjustment he proposes is not tied to any actual flotation cost incurred by the Company, either now or in the past.

Second, in my opinion it is likely that flotation costs are already accounted for in current stock prices and that adding an adjustment for flotation costs amounts to double counting. A DCF model using current stock prices should already account for investor expectations regarding the collection of flotation costs. Multiplying the dividend yield by a 4% flotation cost adjustment, for example, essentially assumes that the current stock price is wrong and that it must be adjusted downward to increase the dividend yield and the resulting cost of equity. I do not believe that this is an appropriate assumption. Current stock prices most likely already account for flotation costs, to the extent that such costs are even accounted for by investors.

Other ROE Considerations

Q. Please summarize the some of the main considerations Dr. Avera mentioned in arriving at his recommended 11.0% ROE.

A. On page 75 of his LGE Direct Testimony and page 74 of his KU Direct Testimony, Dr. Avera summarized several factors he considered in arriving at his 11.0% ROE. These included potential exposures faced by the Companies and the economic requirements necessary to maintain access to capital even under adverse circumstances. Dr. Avera specifically cited the following:

- Capital market expectations.
- Potential exposures faced by the Companies.

- Economic requirements necessary to maintain financial integrity and support additional capital investment under adverse circumstances.

Q. Do these considerations, in connection with Dr. Avera's quantitative analyses, support a ROE of 11.0% for the Companies?

A. No. First, it is important to note that, with appropriate adjustments, I have demonstrated that the majority of Dr. Avera's DCF results indicate a ROE around 9.0% - 9.70%. Even his risk premium analysis with a correction using the average public utility bond yield indicates a cost of equity of 9.6%. My own DCF cost of capital analyses do not support anything above a ROE of 9.4%. In short, the current market data in this low interest rate environment indicate that investor required returns for low risk electric utilities such as LGE and KU are about 9.2%. An 11.0% ROE simply cannot be justified on the basis of current financial market evidence.

Second, the risks and concerns enumerated by Dr. Avera have all been taken into account by S&P and Moody's, which currently rate the Companies' senior debt as A- and A2, respectively. These are strong ratings with solid financial support, Dr. Avera's concerns notwithstanding.

Third, Dr. Avera's recommendation fails to consider the balance of interests between ratepayers and shareholders. Without a doubt, investors would be extremely happy with a ROE of 11.0% on an investment like LGE or KU. However, the flip side of that coin is that Kentucky ratepayers would have to shoulder a burdensome increase

in rates to support this ROE, compared to the 9.2% I recommend. I suggest to the Commission that my recommended 9.2% ROE does balance the interests of ratepayers and shareholders. My analysis is based on current financial data for regulated electric utilities that justify my recommendation. Contrast this with Dr. Avera's recommendation, which is mainly supported by the use of a Non-Utility Proxy Group. Dr. Avera essentially abandoned the results from the Combination Utility Proxy Group in making his recommendation.

Q. Does this complete your testimony?

A. Yes.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In The Matter Of:	:	
	:	**Case No. 2012-002221**
Application Of Kentucky Utilities Company For An Adjustment Of Its Electric Rates	:	
	:	
	:	
In The Matter Of:	:	
	:	
Application Of Louisville Gas And Electric Company For An Adjustment Of Its Electric And Gas Rates, A Certificate Of Public Convenience And Necessity, Approval Of Ownership Of Gas Service Lines And Risers, And A Gas Line Surcharge	:	**Case No. 2012-00222**

AFFIDAVIT OF RICHARD A. BAUDINO

STATE OF NORTH CAROLINA)
COUNTY OF FORSYTH)

Richard A. Baudino being first duly sworn, deposes and states that:

1. He is a consultant with J. Kennedy & Associates, Inc.;

2. He is the witness who sponsors the accompanying testimony entitled "Direct Testimony and Exhibits of Richard A. Baudino;"

3. Said testimony was prepared by him and under his direction and supervision;

4. If inquiries were made as to the facts and schedules in said testimony he would respond as therein set forth; and

5. The aforesaid testimony and schedules are true and correct to the best of his knowledge, information and belief.

Richard A. Baudino

Richard A. Baudino

STATE OF NORTH CAROLINA
COUNTY OF FORSYTH

Subscribed and sworn to or affirmed before me this 2nd day of October, 2012, by Richard A. Baudino.

Richard H. Reich
Notary Public
Forsyth County, NC
My Commission Expires Feb. 11, 2017

Notary Public Richard H. Reich
1001 W. Fourth Street
Winston-Salem, NC 27101

My commission expires 02/11/2017.

BEFORE THE

PUBLIC SERVICE COMMISSION OF KENTUCKY

In the matter of:

APPLICATION OF KENTUCKY UTILITIES COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC RATES	)))	**CASE NO. 2012-00221**

In the matter of:

APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS RATES, A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY, APPROVAL OF OWNERSHIP OF GAS SERVICE LINES AND RISERS, AND A GAS LINE SURCHARGE	))))))))	**CASE NO. 2012-00222**

EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF THE

KENTUCKY INDUSTRIAL UTILITY CONSUMERS

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

October 2012

RESUME OF RICHARD A. BAUDINO

EDUCATION

New Mexico State University, M.A.
Major in Economics
Minor in Statistics

New Mexico State University, B.A.
Economics
English

Twenty seven years of experience in utility ratemaking. Broad based experience in revenue requirement analysis, cost of capital, utility financing, phase-ins, auditing and rate design. Has designed revenue requirement and rate design analysis programs.

REGULATORY TESTIMONY

Preparation and presentation of expert testimony in the areas of:

Cost of Capital for Electric, Gas and Water Companies
Electric, Gas, and Water Utility Cost Allocation and Rate Design
Revenue Requirements
Gas and Electric industry restructuring and competition
Fuel cost auditing
Ratemaking Treatment of Generating Plant Sale/Leasebacks

RESUME OF RICHARD A. BAUDINO

EXPERIENCE

1989 to Present: **Kennedy and Associates: Consultant** - Responsible for consulting assignments in the area of revenue requirements, rate design, cost of capital, economic analysis of generation alternatives, gas industry restructuring and competition.

1982 to 1989: **New Mexico Public Service Commission Staff: Utility Economist** - Responsible for preparation of analysis and expert testimony in the areas of rate of return, cost allocation, rate design, finance, phase-in of electric generating plants, and sale/leaseback transactions.

CLIENTS SERVED

Regulatory Commissions

Louisiana Public Service Commission
Georgia Public Service Commission
New Mexico Public Service Commission

Other Clients and Client Groups

Ad Hoc Committee for a Competitive Electric Supply System
Air Products and Chemicals, Inc.
Arkansas Electric Energy Consumers
Arkansas Gas Consumers
AK Steel
Armco Steel Company, L.P.
Assn. of Business Advocating Tariff Equity
CF&I Steel, L.P.
Climax Molybdenum Company
General Electric Company
Industrial Energy Consumers
Kentucky Industrial Utility Consumers
Lexington-Fayette Urban County Government
Large Electric Consumers Organization
Newport Steel
Northwest Arkansas Gas Consumers
Maryland Energy Group
Occidental Chemical
PSI Industrial Group
Large Power Intervenors (Minnesota)
Tyson Foods
West Virginia Energy Users Group
The Commercial Group
Wisconsin Industrial Energy Group
South Florida Hospital and Health Care Assn.
PP&L Industrial Customer Alliance
Philadelphia Area Industrial Energy Users Gp.
West Penn Power Intervenors
Duquesne Industrial Intervenors
Met-Ed Industrial Users Gp.
Penelec Industrial Customer Alliance
Penn Power Users Group
Columbia Industrial Intervenors
U.S. Steel & Univ. of Pittsburg Medical Ctr.
Multiple Intervenors
Maine Office of Public Advocate
Missouri Office of Public Counsel
University of Massachusetts - Amherst

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
3/83	1780	NM	New Mexico Public Service Commission	Boles Water Co.	Rate design, rate of return.
10/83	1803, 1817	NM	New Mexico Public Service Commission	Southwestern Electric Coop	Rate design.
11/84	1833	NM	New Mexico Public Service Commission	El Paso Electric Co.	Service contract approval, rate design, performance standards for Palo Verde nuclear generating system
1983	1835	NM	New Mexico Public Service Commission	Public Service Co. of NM	Rate design.
1984	1848	NM	New Mexico Public Service Commission	Sangre de Cristo Water Co.	Rate design.
02/85	1906	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
09/85	1907	NM	New Mexico Public Service Commission	Jornada Water Co.	Rate of return.
11/85	1957	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
04/86	2009	NM	New Mexico Public Service Commission	El Paso Electric Co.	Phase-in plan, treatment of sale/leaseback expense.
06/86	2032	NM	New Mexico Public Service Commission	El Paso Electric Co.	Sale/leaseback approval.
09/86	2033	NM	New Mexico Public Service Commission	El Paso Electric Co.	Order to show cause, PVNGS audit.
02/87	2074	NM	New Mexico Public Service Commission	El Paso Electric Co.	Diversification.
05/87	2089	NM	New Mexico Public Service Commission	El Paso Electric Co.	Fuel factor adjustment.
08/87	2092	NM	New Mexico Public Service Commission	El Paso Electric Co.	Rate design.
10/87	2146	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Financial effects of restructuring, reorganization.
07/88	2162	NM	New Mexico Public Service Commission	El Paso Electric Co.	Revenue requirements, rate design, rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
01/89	2194	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Economic development.
1/89	2253	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Financing.
08/89	2259	NM	New Mexico Public Service Commission	Homestead Water Co.	Rate of return, rate design.
10/89	2262	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Rate of return.
09/89	2269	NM	New Mexico Public Service Commission	Ruidoso Natural Gas Co.	Rate of return, expense from affiliated interest.
12/89	89-208-TF	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Rider M-33.
01/90	U-17282	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
09/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Cost of equity.
09/90	90-004-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Cost of equity, transportation rate.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
04/91	91-037-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Transportation rates.
12/91	91-410-EL-AIR	OH	Air Products & Chemicals, Inc., Armco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Cost of equity.
05/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Cost of equity, rate of return.
09/92	92-032-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost of equity, rate of return, cost-of-service.
09/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost of equity, rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
09/92	92-009-U	AR	Tyson Foods	General Waterworks	Cost allocation, rate design.
01/93	92-346	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Cost allocation.
01/93	39498	IN	PSI Industrial Group	PSI Energy	Refund allocation.
01/93	U-10105	MI	Association of Businesses Advocating Tariff Equality (ABATE)	Michigan Consolidated Gas Co.	Return on equity.
04/93	92-1464-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Return on equity.
09/93	93-189-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Transportation service terms and conditions.
09/93	93-081-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost-of-service, transportation rates, rate supplements; return on equity; revenue requirements.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Historical reviews; evaluation of economic studies.
03/94	10320	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Trimble County CWIP revenue refund.
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Evaluation of the cost of equity, capital structure, and rate of return.
5/94	R-00942993	PA	PG&W Industrial Intervenors	Pennsylvania Gas & Water Co.	Analysis of recovery of transition costs.
5/94	R-00943001	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Evaluation of cost allocation, rate design, rate plan, and carrying charge proposals.

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
7/94	R-00942986	PA	Armco, Inc., West Penn Power Industrial Intervenors	West Penn Power Co.	Return on equity and rate of return.
7/94	94-0035-E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Return on equity and rate of return.
8/94	8652	MD	Westvaco Corp.	Potomac Edison Co.	Return on equity and rate of return.
9/94	930357-C	AR	West Central Arkansas Gas Consumers	Arkansas Oklahoma Gas Corp.	Evaluation of transportation service.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Return on equity.
9/94	8629	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Transition costs.
11/94	94-175-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Cost-of-service, rate design, rate of return.
3/95	RP94-343-000	FERC	Arkansas Gas Consumers	NorAm Gas Transmission	Rate of return.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Return on equity.
6/95	U-10755	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Revenue requirements.
7/95	8697	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost allocation and rate design.
8/95	95-254-TF U-2811	AR	Tyson Foods, Inc.	Southwest Arkansas Electric Cooperative	Refund allocation.
10/95	ER95-1042 -000	FERC	Louisiana Public Service Commission	Systems Energy Resources, Inc.	Return on Equity.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Investigation into Electric Power Competition.
5/96	96-030-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Revenue requirements, rate of return and cost of service.

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Electric Co., Potomac Electric Power Co. and Constellation Energy Corp.	Return on Equity.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Return on equity, rate of return.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
1/97	RP96-199-000	FERC	The Industrial Gas Users Conference	Mississippi River Transmission Corp.	Revenue requirements, rate of return and cost of service.
3/97	96-420-U	AR	West Central Arkansas Gas Corp.	Arkansas Oklahoma Gas Corp.	Revenue requirements, rate of return, cost of service and rate design.
7/97	U-11220	MI	Association of Business Advocating Tariff Equity	Michigan Gas Co. and Southeastern Michigan Gas Co.	Transportation Balancing Provisions
7/97	R-00973944	PA	Pennsylvania American Water Large Users Group	Pennsylvania-American Water Co.	Rate of return, cost of service, revenue requirements.
3/98	8390-U	GA	Georgia Natural Gas Group and the Georgia Textile Manufacturers Assoc.	Atlanta Gas Light	Rate of return, restructuring issues, unbundling, rate design issues.
7/98	R-00984280	PA	PG Energy, Inc.	PGE Industrial Intervenors	Cost allocation.
8/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric Co.	Return on equity, rate of return.
10/98	U-23327	LA	Louisiana Public Service Commission	SWEPCO, CSW and AEP	Analysis of proposed merger.
12/98	98-577	ME	Maine Office of the Public Advocate	Maine Public Service Co.	Return on equity, rate of return.
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity, rate of return.

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co	Return on equity.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Return on equity.
4/99	R-984554	PA	T. W. Phillips Users Group	T. W. Phillips Gas and Oil Co.	Allocation of purchased gas costs.
6/99	R-0099462	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Balancing charges.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States,Inc.	Cost of debt.
10/99	R-00994782	PA	Peoples Industrial Intervenors	Peoples Natural Gas Co.	Restructuring issues.
10/99	R-00994781	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Restructuring, balancing charges, rate flexing, alternate fuel.
01/00	R-00994786	PA	UGI Industrial Intervenors	UGI Utilities, Inc.	Universal service costs, balancing, penalty charges, capacity assignment.
01/00	8829	MD	Maryland Industrial Gr. & United States	Baltimore Gas & Electric Co.	Revenue requirements, cost allocation, rate design.
02/00	R-00994788	PA	Penn Fuel Transportation	PFG Gas, Inc., and	Tariff charges, balancing provisions.
05/00	U-17735	LA	Louisiana Public Service Comm.	Louisiana Electric Cooperative	Rate restructuring.
07/00	2000-080	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric Co.	Cost allocation.
07/00	U-21453 LA U-20925 (SC), U-22092 (SC) (Subdocket E)		Louisiana Public Service Comm.	Southwestern Electric Power Co.	Stranded cost analysis.
09/00	R-00005654	PA	Philadelphia Industrial And Commercial Gas Users Group.	Philadelphia Gas Works	Interim relief analysis.
10/00	U-21453 LA U-20925 (SC), U-22092 (SC) (Subdocket B)		Louisiana Public Service Comm.	Entergy Gulf States, Inc.	Restructuring, Business Separation Plan.

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
11/00	R-00005277 (Rebuttal)	PA	Penn Fuel Transportation Customers	PFG Gas, Inc. and North Penn Gas Co.	Cost allocation issues.
12/00	U-24993	LA	Louisiana Public Service Comm.	Entergy Gulf States, Inc.	Return on equity.
03/01	U-22092	LA	Louisiana Public Service Comm.	Entergy Gulf States, Inc.	Stranded cost analysis.
04/01	U-21453 LA U-20925 (SC), U-22092 (SC) (Subdocket B) (Addressing Contested Issues)		Louisiana Public Service Comm.	Entergy Gulf States, Inc.	Restructuring issues.
04/01	R-00006042	PA	Philadelphia Industrial and Commercial Gas Users Group	Philadelphia Gas Works	Revenue requirements, cost allocation and tariff issues.
11/01	U-25687	LA	Louisiana Public Service Comm.	Entergy Gulf States, Inc.	Return on equity.
03/02	14311-U	GA	Georgia Public Service Commission	Atlanta Gas Light	Capital structure.
08/02	2002-00145	KY	Kentucky Industrial Utility Customers	Columbia Gas of Kentucky	Revenue requirements.
09/02	M-00021612	PA	Philadelphia Industrial And Commercial Gas Users Group	Philadelphia Gas Works	Transportation rates, terms, and conditions.
01/03	2002-00169	KY	Kentucky Industrial Utility Customers	Kentucky Power	Return on equity.
02/03	02S-594E	CO	Cripple Creek & Victor Gold Mining Company	Aquila Networks – WPC	Return on equity.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
10/03	CV020495AB	GA	The Landings Assn., Inc.	Utilities Inc. of GA	Revenue requirement & overcharge refund
03/04	2003-00433	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric	Return on equity, Cost allocation & rate design

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
03/04	2003-00434	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Return on equity
4/04	04S-035E	CO	Cripple Creek & Victor Gold Mining Company, Goodrich Corp., Holcim (U.S.) Inc., and The Trane Co.	Aquila Networks – WPC	Return on equity.
9/04	U-23327, Subdocket B	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Fuel cost review
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on Equity
06/05	050045-EI	FL	South Florida Hospital and HealthCare Assoc.	Florida Power & Light Co.	Return on equity
08/05	9036	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Revenue requirement, cost allocation, rate design, Tariff issues.
01/06	2005-0034	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity.
03/06	05-1278-E-PC-PW-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Return on equity.
04/06	U-25116	LA	Louisiana Public Service Commission	Entergy Louisiana, LLC	Transmission Issues
07/06	U-23327	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on equity, Service quality
08/06	ER-2006-0314	MO	Missouri Office of the Public Counsel	Kansas City Power & Light Co.	Return on equity, Weighted cost of capital
08/06	06S-234EG	CO	CF&I Steel, L.P. & Climax Molybdenum	Public Service Company of Colorado	Return on equity, Weighted cost of capital
01/07	06-0960-E-42T	WV	West Virginia Energy Users Group	Monongahela Power & Potomac Edison	Return on Equity
01/07	43112		AK Steel, Inc.	Vectren South, Inc.	Cost allocation, rate design
05/07	2006-661		Maine Office of the Public Advocate	Bangor Hydro-Electric	Return on equity, weighted cost of capital.
09/07	07-07-01		Connecticut Industrial Energy Consumers	Connecticut Light & Power	Return on equity, weighted cost of capital

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
10/07	05-UR-103		Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Return on equity
11/07	29797		Louisiana Public Service Commission	Cleco Power :LLC & Southwestern Elec. Power	Lignite Pricing, support of settlement
01/08	07-551-EL-AIR		Ohio Energy Group	Ohio Edison, Cleveland Electric, Toledo Edison	Return on equity
03/08	07-0585, 07-0585, 07-0587, 07-0588, 07-0589, 07-0590, (consol.)	IL	The Commercial Group	Ameren	Cost allocation, rate design
04/08	07-0566	IL	The Commercial Group	Commonwealth Edison	Cost allocation, rate design
06/08	R-2008-2011621	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Cost and revenue allocation, Tariff issues
07/08	R-2008-2028394	PA	Philadelphia Area Industrial Energy users Group	PECO Energy	Cost and revenue allocation, Tariff issues
07/08	R-2008-2039634	PA	PPL Gas Large Users Gp.	PPL Gas	Retainage, LUFG Pct.
08/08	6680-UR-116	WI	Wisconsin Industrial Energy Group	Wisconsin P&L	Cost of Equity
08/08	6690-UR-119	WI	Wisconsin Industrial Energy Group	Wisconsin PS	Cost of Equity
09/08	ER-2008-0318	MO	The Commercial Group	AmerenUE	Cost and revenue allocation
10/08	R-2008-2029325	PA	U.S. Steel & Univ. of Pittsburgh Med. Ctr.	Equitable Gas Co.	Cost and revenue allocation
10/08	08-G-0609	NY	Multiple Intervenors	Niagara Mohawk Power	Cost and Revenue allocation

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

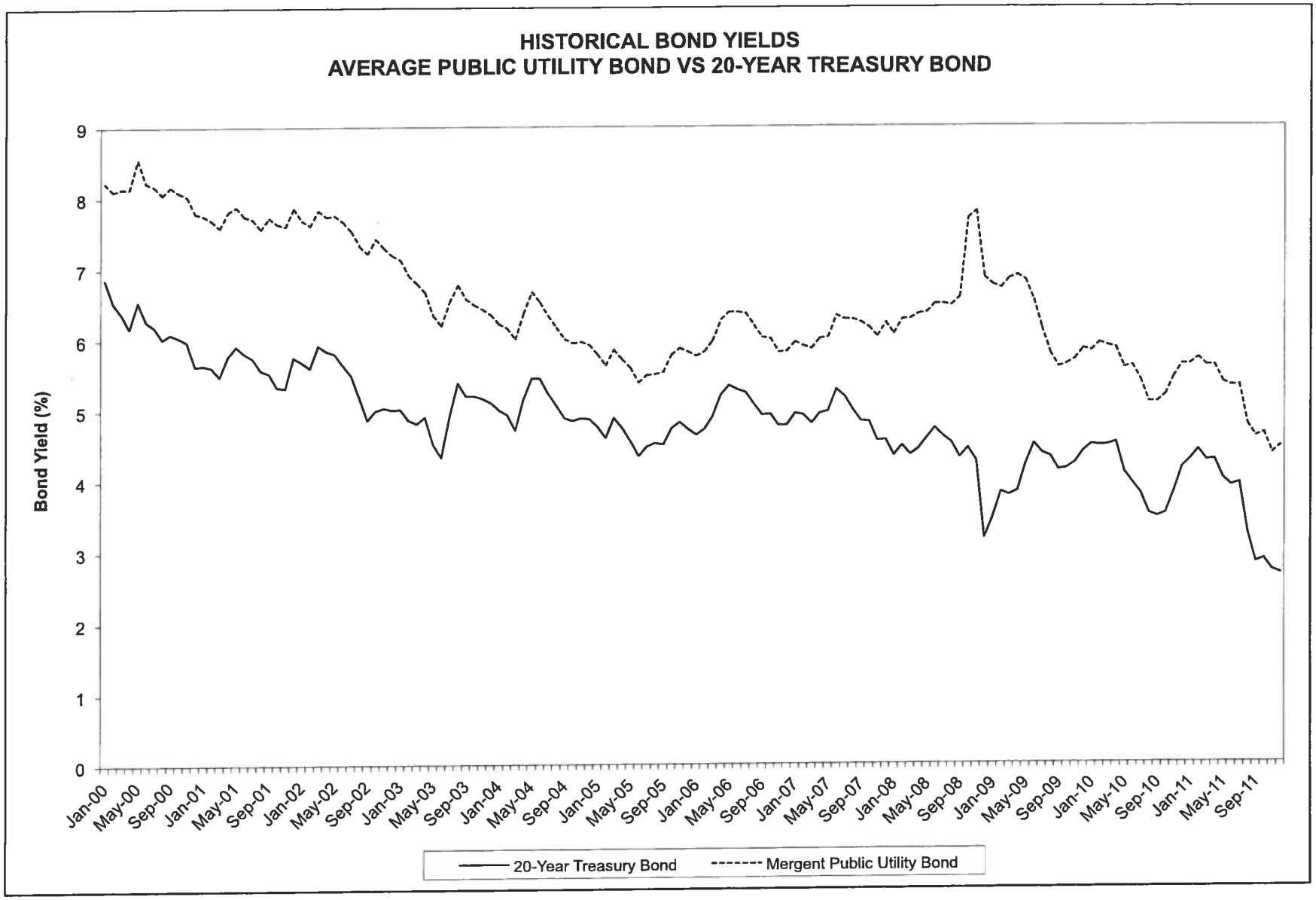
Date	Case	Jurisdict.	Party	Utility	Subject
12/08	27800-U	GA	Georgia Public Service Commission	Georgia Power Company	CWIP/AFUDC issues, Review financial projections
03/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Capital Structure
04/09	E002/GR-08-1065		The Commercial Group	Northern States Power	Cost and revenue allocation and rate design
05/09	08-0532		The Commercial Group	Commonwealth Edison	Cost and revenue allocation
07/09	080677-EI		South Florida Hospital and Health Care Assn.	Florida Power & Light	Cost of equity, capital structure, Cost of short-term debt
07/09	U-30975	LA	Louisiana PSC	Cleco LLC, Southwestern Public Service Co.	Lignite mine purchase
10/09	4220-UR-116	WI	Wisconsin Industrial Energy Group	Northern States Power	Class cost of service, rate design
10/09	M-2009-2123945	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Smart Meter Plan cost allocation
10/09	M-2009-2123944	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Company	Smart Meter Plan cost allocation
10/09	M-2009-2123951	PA	West Penn Power Industrial Intervenors	West Penn Power	Smart Meter Plan cost allocation
11/09	M-2009-2123948	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Smart Meter Plan cost allocation
11/09	M-2009-2123950	PA	Met-Ed Industrial Users Gp. Penelec Industrial Customer Alliance, Penn Power Users Group	Metropolitan Edison, Pennsylvania Electric Co., Pennsylvania Power Co.	Smart Meter Plan cost allocation
03/10	09-1352-E-42T	WV	West Virginia Energy Users Gp.	Monongahela Power, Potomac Edison	Return on equity, rate of return
03/10	E015/GR-09-1151	MN	Large Power Intervenors	Minnesota Power	Return on equity, rate of return
04/10	2009-00459	KY	Kentucky Industrial Utility Consumers	Kentucky Power	Return on equity

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
04/10	2009-00548 2009-00549	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity
05/10	10-0261-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co./ Wheeling Power Co.	EE/DR Cost Recovery, Allocation, & Rate Design
05/10	R-2009-2149262	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Class cost of service & cost allocation
06/10	2010-00036	KY	Lexington-Fayette Urban County Government	Kentucky American Water Company	Return on equity, rate of return, revenue requirements
06/10	R-2010-2161694	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Rate design, cost allocation
07/10	R-2010-2161575	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Return on equity
07/10	R-2010-2161592	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Cost and revenue allocation
07/10	9230	MD	Maryland Energy Group	Baltimore Gas and Electric	Electric and gas cost and revenue allocation; return on equity
09/10	10-70	MA	University of Massachusetts-Amherst	Western Massachusetts Electric Co.	Cost allocation and rate design
10/10	R-2010-2179522	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Cost and revenue allocation, rate design
11/10	P-2010-2158084	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Transmission rate design
11/10	10-0699-E-42T	WV	West Virginia Energy Users Group	Appalachian Power Co. & Wheeling Power Co.	Return on equity, rate of Return
11/10	10-0467	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation and rate design
04/11	R-2010-2214415	PA	Central Pen Gas Large Users Group	UGI Central Penn Gas, Inc.	Tariff issues, revenue allocation
07/11	R-2011-2239263	PA	Philadelphia Area Energy Users Group	PECO Energy	Retainage rate
08/11	R-2011-2232243	PA	AK Steel	Pennsylvania-American Water Compay	Rate Design
08/11	11AL-151G	CO	Climax Molybdenum	PS of Colorado	Cost allocation
09/11	11-G-0280	NY	Multiple Intervenors	Corning Natural Gas Co.	Cost and revenue allocation

Expert Testimony Appearances
of
Richard A. Baudino
As of September 2012

Date	Case	Jurisdict.	Party	Utility	Subject
10/11	4220-UR-117	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
02/12	11AL-947E	CO	Climax Molybdenum, CF&I Steel	Public Svc. Of Colorado	Return on equity, wtd. cost of capital
07/12	120015-EI	FL	South Florida Hospitals and Health Care Assn.	Florida Power and Light Co,	Return on equity, wtd. cost of capital
07/12	12-0613-E-PC	WV	West Virginia Energy Users Gp.	Allegheny Power Company	Special rate proposal for Century Aluminum
07/12	R-2012-2290597	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities Corp.	Cost allocation
09/12	05-UR-106	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Class cost of service, cost and revenue allocation, rate design
09/12	2012-00221 2012-00222	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity


HISTORICAL BOND YIELDS
AVERAGE PUBLIC UTILITY BOND VS 20-YEAR TREASURY BOND
Bond Yield (%)
0
1
2
3
4
5
6
7
8
9
Jan-00
May-00
Sep-00
Jan-01
May-01
Sep-01
Jan-02
May-02
Sep-02
Jan-03
May-03
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May-08
Sep-08
Jan-09
May-09
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Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
20-Year Treasury Bond
Mergent Public Utility Bond

LOUISVILLE GAS AND ELECTRIC / KENTUCKY UTILITIES
COMPARISON GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Aug-12	Jul-12	Jun-12	May-12	Apr-12	Mar-12
ALLETE	High Price ($)	42.070	42.560	41.990	41.630	41.820	42.320
	Low Price ($)	40.330	40.400	38.610	38.030	39.860	40.750
	Avg. Price ($)	41.200	41.480	40.300	39.830	40.840	41.535
	Dividend ($)	0.460	0.460	0.460	0.460	0.460	0.460
	Mo. Avg. Div.	4.47%	4.44%	4.57%	4.62%	4.51%	4.43%
	6 mos. Avg.	4.50%					
Alliant Energy	High Price ($)	47.500	47.650	46.000	45.670	45.380	43.760
	Low Price ($)	44.080	45.180	43.150	43.000	42.000	42.100
	Avg. Price ($)	45.790	46.415	44.575	44.335	43.690	42.930
	Dividend ($)	0.450	0.450	0.450	0.450	0.450	0.450
	Mo. Avg. Div.	3.93%	3.88%	4.04%	4.06%	4.12%	4.19%
	6 mos. Avg.	4.04%					
Avista	High Price ($)	28.050	27.960	27.070	26.700	26.530	25.820
	Low Price ($)	25.240	26.600	25.140	24.950	24.950	24.490
	Avg. Price ($)	26.645	27.280	26.105	25.825	25.740	25.155
	Dividend ($)	0.290	0.290	0.290	0.290	0.290	0.290
	Mo. Avg. Div.	4.35%	4.25%	4.44%	4.49%	4.51%	4.61%
	6 mos. Avg.	4.44%					
Black Hills	High Price ($)	34.850	33.050	33.430	33.680	34.310	34.390
	Low Price ($)	30.410	30.290	31.610	31.320	32.100	32.180
	Avg. Price ($)	32.630	31.670	32.520	32.500	33.205	33.285
	Dividend ($)	0.370	0.370	0.370	0.370	0.370	0.370
	Mo. Avg. Div.	4.54%	4.67%	4.55%	4.55%	4.46%	4.45%
	6 mos. Avg.	4.54%					
Consolidated Edison	High Price ($)	65.980	65.350	63.640	60.650	59.500	59.500
	Low Price ($)	60.410	61.590	59.970	58.350	57.010	56.990
	Avg. Price ($)	63.195	63.470	61.805	59.500	58.255	58.245
	Dividend ($)	0.605	0.605	0.605	0.605	0.605	0.605
	Mo. Avg. Div.	3.83%	3.81%	3.92%	4.07%	4.15%	4.15%
	6 mos. Avg.	3.99%					
Dominion Resources	High Price ($)	55.620	55.170	54.690	52.740	52.240	51.470
	Low Price ($)	52.290	52.600	51.280	51.570	49.870	50.130
	Avg. Price ($)	53.955	53.885	52.985	52.155	51.055	50.800
	Dividend ($)	0.528	0.528	0.528	0.528	0.528	0.528
	Mo. Avg. Div.	3.91%	3.92%	3.99%	4.05%	4.14%	4.16%
	6 mos. Avg.	4.03%					

LOUISVILLE GAS AND ELECTRIC / KENTUCKY UTILITIES
COMPARISON GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Aug-12	Jul-12	Jun-12	May-12	Apr-12	Mar-12
DTE Energy	High Price ($)	62.560	62.220	60.250	57.380	56.780	56.520
	Low Price ($)	58.220	58.600	56.180	54.950	53.700	53.590
	Avg. Price ($)	60.390	60.410	58.215	56.165	55.240	55.055
	Dividend ($)	0.588	0.588	0.588	0.588	0.588	0.588
	Mo. Avg. Div.	3.89%	3.89%	4.04%	4.19%	4.26%	4.27%
	6 mos. Avg.	4.09%					
IDACORP	High Price ($)	43.090	43.640	42.220	41.030	41.550	41.570
	Low Price ($)	41.000	41.690	38.840	38.170	39.000	39.660
	Avg. Price ($)	42.045	42.665	40.530	39.600	40.275	40.615
	Dividend ($)	0.330	0.330	0.330	0.330	0.330	0.330
	Mo. Avg. Div.	3.14%	3.09%	3.26%	3.33%	3.28%	3.25%
	6 mos. Avg.	3.23%					
Pepco	High Price ($)	20.300	20.200	19.630	19.190	18.980	19.740
	Low Price ($)	19.120	19.140	18.880	18.470	18.140	18.630
	Avg. Price ($)	19.710	19.670	19.255	18.830	18.560	19.185
	Dividend ($)	0.270	0.270	0.270	0.270	0.270	0.270
	Mo. Avg. Div.	5.48%	5.49%	5.61%	5.74%	5.82%	5.63%
	6 mos. Avg.	5.63%					
PG&E	High Price ($)	47.030	46.540	45.560	44.940	44.210	43.960
	Low Price ($)	43.220	44.170	43.290	43.250	41.880	41.240
	Avg. Price ($)	45.125	45.355	44.425	44.095	43.045	42.600
	Dividend ($)	0.455	0.455	0.455	0.455	0.455	0.455
	Mo. Avg. Div.	4.03%	4.01%	4.10%	4.13%	4.23%	4.27%
	6 mos. Avg.	4.13%					
Portland General	High Price ($)	27.920	27.610	26.940	26.030	25.860	25.470
	Low Price ($)	26.780	26.570	24.750	24.260	24.250	24.290
	Avg. Price ($)	27.350	27.090	25.845	25.145	25.055	24.880
	Dividend ($)	0.270	0.270	0.270	0.265	0.265	0.265
	Mo. Avg. Div.	3.95%	3.99%	4.18%	4.22%	4.23%	4.26%
	6 mos. Avg.	4.14%					
Southern Co.	High Price ($)	48.570	48.590	48.450	46.300	46.000	45.500
	Low Price ($)	45.100	46.250	45.620	44.950	44.220	43.710
	Avg. Price ($)	46.835	47.420	47.035	45.625	45.110	44.605
	Dividend ($)	0.490	0.490	0.490	0.490	0.473	0.473
	Mo. Avg. Div.	4.18%	4.13%	4.17%	4.30%	4.19%	4.24%
	6 mos. Avg.	4.20%					

LOUISVILLE GAS AND ELECTRIC / KENTUCKY UTILITIES
COMPARISON GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Aug-12	Jul-12	Jun-12	May-12	Apr-12	Mar-12
TECO Energy	High Price ($)	18.640	18.450	18.330	18.170	18.060	18.110
	Low Price ($)	17.320	17.600	17.100	17.180	16.900	17.350
	Avg. Price ($)	17.980	18.025	17.715	17.675	17.480	17.730
	Dividend ($)	0.220	0.220	0.220	0.220	0.220	0.220
	Mo. Avg. Div.	4.89%	4.88%	4.97%	4.98%	5.03%	4.96%
	6 mos. Avg.	4.95%					
Westar Energy	High Price ($)	33.040	31.020	30.170	28.960	28.740	28.190
	Low Price ($)	28.960	29.900	28.230	27.350	26.800	27.120
	Avg. Price ($)	31.000	30.460	29.200	28.155	27.770	27.655
	Dividend ($)	0.330	0.330	0.330	0.330	0.330	0.330
	Mo. Avg. Div.	4.26%	4.33%	4.52%	4.69%	4.75%	4.77%
	6 mos. Avg.	4.55%					
Wisconsin Energy	High Price ($)	41.480	41.310	40.000	37.970	36.840	35.350
	Low Price ($)	37.920	39.610	37.460	36.140	34.540	33.720
	Avg. Price ($)	39.700	40.460	38.730	37.055	35.690	34.535
	Dividend ($)	0.300	0.300	0.300	0.300	0.300	0.300
	Mo. Avg. Div.	3.02%	2.97%	3.10%	3.24%	3.36%	3.47%
	6 mos. Avg.	3.19%					
Xcel	High Price ($)	29.920	29.700	29.120	28.120	27.130	27.250
	Low Price ($)	27.630	28.340	27.620	26.750	25.890	25.920
	Avg. Price ($)	28.775	29.020	28.370	27.435	26.510	26.585
	Dividend ($)	0.270	0.270	0.270	0.260	0.260	0.260
	Mo. Avg. Div.	3.75%	3.72%	3.81%	3.79%	3.92%	3.91%
	6 mos. Avg.	3.82%					
Average Dividend Yield	4.22%						
Monthly Group Average		4.12%	4.08%	4.18%	4.25%	4.28%	4.28%

Source: Yahoo! Finance

LOUISVILLE GAS AND ELECTRIC / KENTUCKY UTILITIES
COMPARISON GROUP
DCF Growth Rate Analysis

Company	(1) Value Line DPS	(2) Value Line EPS	(3) Value Line B x R	(4) Zacks	(5) Thomson
ALLETE, Inc.	3.00%	9.00%	4.50%	5.00%	5.00%
Alliant Energy Corp.	5.50%	6.50%	4.00%	6.15%	6.30%
Avista Corp.	6.50%	5.50%	3.50%	4.67%	4.00%
Black Hills Corp.	2.00%	7.00%	3.00%	6.00%	6.00%
Consolidated Edison	1.00%	4.00%	4.00%	3.39%	3.02%
Dominion Resources	6.00%	5.00%	4.50%	5.03%	5.50%
DTE Energy	4.00%	5.00%	4.00%	4.93%	4.59%
IDACORP, Inc	8.00%	2.00%	4.00%	5.00%	4.00%
Pepco Holdings, Inc.	1.00%	7.00%	2.50%	3.83%	4.50%
PG&E Corporation	2.00%	4.50%	5.00%	2.60%	0.04%
Portland General Electric	3.50%	5.50%	4.00%	4.13%	3.57%
Southern Company	4.00%	5.00%	4.00%	5.06%	5.38%
TECO Energy, Inc.	3.50%	6.50%	5.00%	3.30%	2.66%
Westar Energy, Inc.	3.00%	6.50%	3.50%	6.09%	4.80%
Wisconsin Energy Corporation	13.50%	6.50%	5.00%	5.53%	6.05%
Xcel Energy Inc.	5.00%	6.00%	3.50%	4.86%	5.08%
Averages excluding negative values	4.47%	5.72%	4.00%	4.72%	4.41%
Median Values	3.75%	5.75%	4.00%	4.97%	4.70%

Sources: Zack's and Thomson Earnings Reports, retrieved September 14, 2012
Value Line Investment Survey, August 3, August 24, and September 21, 2012

RETURN ON EQUITY CALCULATION
LOUISVILLE GAS AND ELECTRIC / KENTUCKY UTILITIES

	(1) Value Line Dividend Gr.	(2) Value Line Earnings Gr.	(3) Zack's Earning Gr.	(4) Thomson Earning Gr.	(5) Average of All Gr. Rates
Method 1:					
Dividend Yield	4.22%	4.22%	4.22%	4.22%	4.22%
Growth Rate	4.47%	5.72%	4.72%	4.41%	4.83%
Expected Div. Yield	4.31%	4.34%	4.32%	4.31%	4.32%
DCF Return on Equity	***8.78%***	***10.06%***	***9.04%***	***8.72%***	***9.15%***
Midpoint of Results					***9.39%***
Method 2:					
Dividend Yield	4.22%	4.22%	4.22%	4.22%	4.22%
Median Growth Rate	3.75%	5.75%	4.97%	4.70%	4.79%
Expected Div. Yield	4.30%	4.34%	4.32%	4.32%	4.32%
DCF Return on Equity	***8.05%***	***10.09%***	***9.29%***	***9.02%***	***9.11%***
Midpoint of Results					***9.07%***

LOUISVILLE GAS AND ELECTRIC / KENTUCKY UTILITIES
Capital Asset Pricing Model Analysis
Comparison Group

20-Year Treasury Bond, Value Line Beta

Line No.		Value Line
1	Market Required Return Estimate	
2	Expected Dividend Yield	0.76%
3	Expected Growth	12.32%
4	Required Return	13.08%
5	Risk-free Rate of Return, 20-Year Treasury Bond	
6	Average of Last Six Months	2.54%
8	Risk Premium	
9	@ 6 Month Average RFR (Line 4 minus Line 6)	10.55%
10	Comparison Group Beta	0.70
11	Comparison Group Beta * Risk Premium	
12	@ 6 Month Average RFR (Line 10 * Line 9)	7.35%
13	CAPM Return on Equity	
14	@ 6 Month Average RFR (Line 12 plus Line 6)	9.89%

LOUISVILLE GAS AND ELECTRIC / KENTUCKY UTILITIES

1	Market Required Return Estimate	
2	Expected Dividend Yield	0.76%
3	Expected Growth	12.32%
4	Required Return	13.08%
5	Risk-free Rate of Return, 5-Year Treasury Bond	
6	Average of Last Six Months	0.79%
8	Risk Premium	
9	@ 6 Month Average RFR (Line 4 minus Line 6)	12.30%
10	Comparison Group Beta	0.70
11	Comparison Group Beta * Risk Premium	
12	@ 6 Month Average RFR (Line 9 * Line 10)	8.57%
13	CAPM Return on Equity	
14	@ 6 Month Average RFR (Line 12 plus Line 6)	9.36%

LOUISVILLE GAS AND ELECTRIC / KENTUCKY UTILITIES
Capital Asset Pricing Model Analysis
Comparison Group

Supporting Data for CAPM Analyses

20 Year Treasury Bond Data

	Avg. Yield
March-12	2.94%
April-12	2.82%
May-12	2.53%
June-12	2.31%
July-12	2.22%
August-12	2.40%
6 month average	2.54%

5 Year Treasury Bond Data

	Avg. Yield
March-12	1.02%
April-12	0.89%
May-12	0.76%
June-12	0.71%
July-12	0.62%
August-12	0.71%
6 month average	0.79%

Value Line Market Growth Rate Data:

Forecasted Data:	
Earnings	14.84%
Book Value	9.80%
Average	12.32%

Source: Value Line Investment Survey for Windows, September 10, 2012

Comparison Group Betas:	Value Line
ALLETE, Inc.	0.70
Alliant Energy Corp.	0.70
Avista Corp.	0.70
Black Hills Corp.	0.85
Consolidated Edison	0.60
Dominion Resources	0.65
DTE Energy	0.75
IDACORP, Inc	0.70
Pepco Holdings, Inc.	0.75
PG&E Corporation	0.55
Portland General Electric	0.75
Southern Company	0.55
TECO Energy, Inc.	0.85
Westar Energy, Inc.	0.75
Wisconsin Energy Corporation	0.65
Xcel Energy Inc.	0.65
Average	0.70

Exhibit ____ (RAB-6)

LOUISVILLE GAS AND ELECTRIC / KENTUCKY UTILITIES
Capital Asset Pricing Model Analysis
Historic Market Premium

	Geometric Mean	Arithmetic Mean
Long-Term Annual Return on Stocks	9.80%	11.80%
Long-Term Annual Income Return on Long-Term Government Bonds	5.30%	5.30%
Historical Market Risk Premium	4.50%	6.50%
Comparison Group Beta, Value Line	0.70	0.70
Beta * Market Premium	3.14%	4.53%
Current 20-Year Treasury Bond Yield	2.54%	2.54%
CAPM Cost of Equity, Value Line Beta	**5.67%**	**7.07%**

Source: *Ibbotson SBBI 2012 Classic Yearbook,* Morningstar
Note: Income return calculated by subtracting 0.4% capital appreciation from total return of 5.7%.

Exhibit___(RAB-7)

AVERA EARNINGS GROWTH RATES

	Earnings Growth			br+sv
Company	V Line	IBES	Zacks	Growth
ALLETE	6.5%	5.0%	5.0%	4.1%
Alliant Energy	6.5%	6.4%	6.2%	4.8%
Ameren Corp.	-0.5%	-2.3%	4.0%	2.7%
Avista Corp.	5.5%	4.0%	4.7%	3.9%
Black Hills Corp.	7.0%	6.0%	6.0%	3.0%
DTE Energy Co.	5.0%	4.3%	4.4%	3.8%
Empire District Elec	6.0%	10.2%	NA	3.1%
Exelon Corp.	-3.0%	-10.2%	0.0%	3.7%
Northwestern Corp.	5.0%	5.0%	5.0%	4.3%
PG&E Corp.	4.5%	1.5%	4.6%	5.3%
PPL Corp.	5.0%	-1.0%	NA	5.7%
Pub Sv Enterprise Grp	0.0%	1.7%	2.0%	6.0%
SCANA Corp.	3.5%	6.7%	4.0%	5.2%
Sempra Energy	4.5%	7.1%	7.0%	6.0%
TECO Energy	9.0%	4.1%	3.7%	5.3%
UIL Holdings	3.0%	4.1%	4.0%	2.5%
Average excluding negatives	5.1%	5.1%	4.3%	4.3%
Median	5.0%	4.2%	4.5%	4.2%

Source: Exhibit WEA-2, page 2 of 3

Average dividend growth rate from Table 4 of Baudino Direct Testimony	3.25%
Average of V/Line dividend and earnings, IBES, and Zacks average growth rates	4.43%