**BEFORE THE**

**PUBLIC SERVICE COMMISSION OF KENTUCKY**

**IN THE MATTER OF:**

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|---|---|---|
| **THE APPLICATION OF KENTUCKY-AMERICAN WATER COMPANY FOR AN ADJUSTMENT OF RATES ON AND AFTER MARCH 28, 2010** | **)** **)** **)** | **CASE NO. 2010-00036** |

# DIRECT TESTIMONY

# AND EXHIBITS

# OF

# RICHARD A. BAUDINO

**ON BEHALF OF**

**LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT**

**J. KENNEDY AND ASSOCIATES, INC.**
**ROSWELL, GEORGIA**

**June 2010**

**BEFORE THE**

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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 Lexington-Fayette Urban County Government ("LFUCG").

**Q. What is the purpose of your Direct Testimony?**

A. The purpose of my direct testimony is (1) to address the allowed return on equity and overall cost of capital for Kentucky American Water Company ("KAWC" or "Company") and (2) address certain revenue requirement issues in the Company's filing. I will also respond to KAWC witness James Vander Weide and his recommended return on equity.

**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 9.50% for KAWC. My recommendation is based on the results of several Discounted Cash Flow ("DCF") analyses for two comparison groups of utilities, one composed of regulated water utilities and one composed of regulated natural gas distribution utilities. 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 9.50% ROE for a low-risk water utility such as KAWC is reasonable in today's marketplace for stock investment.

Turning to the Company's testimony, the Commission should reject the recommended return on equity range of 10.8% - 12.10% of Dr. Vander Weide. I explain in Section IV of my testimony how Dr. Vander Weide's approaches to estimating the ROE for KAWC greatly overstate the ROE results KAWC. In particular:

- Dr. Vander Weide failed to consider lower dividend growth forecasts for his water and gas utility proxy groups.
- Dr. Vander Weide's sole reliance on earnings growth forecasts inflated his Discounted Cash Flow model results.
- Dr. Vander Weide's risk premium results are overstated.
- Although I did not use the Capital Asset Pricing Model as a basis for my recommended ROE, the CAPM results provide further evidence that Dr. Vander Weide's ROE range is greatly overstated.
- Dr. Vander Weide's recommended range significantly exceeds the ROEs that have been allowed for other subsidiaries of American Water Works.

## 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 2009. 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 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. And 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, 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 2009 was 5.86%, a decline of almost 200 basis points from November 2008. At the end of December the yield spread between utility bonds and the long-term Treasury bond declined substantially to 1.46%. This is much closer to the historical spread.

So far in 2010, interest rates and bond yields have been relatively consistent with the levels seen at the end of 2009. On May 28, 2010, the average public utility bond yield was 5.68%, according to Moody's Credit Trends. And for the week ending May 28, 2010 the 20-year Treasury yield was 3.99%, according to the June 1, 2010 H.15 release from the Federal Reserve. This yield represents a decline from the Treasury Bond yield in December 2009, which was 4.40%.

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

A. In an article dated January 25, 2010, Standard and Poor's ("S&P") reported that it was forecasting "generally stable credit quality in 2010 for U.S. investor-owned water utility sector." S&P also noted that "[r]ated U.S. investor-owned water utilities continue to demonstrate above-average access to debt financing and to maintain adequate liquidity." S&P reported significant debt issuance by American Water Works ($250 million), Aqua Pennsylvania ($75 million), and United Water New Jersey ($65 million), as well as an equity issuance of 1 million common shares by York Water Company. Finally, S&P noted that there was little reluctance on the part of lenders to provide financing under revolving credit agreements despite the generally weakened condition of financial institutions and other lenders.

The Value Line Investment Survey noted in its recent report on the Water Utility Industry that although there seems to be a more favorable regulatory landscape in place for water utilities, "the group still faces a stiff headwind looking ahead." Value Line cited concerns relating to new financing required for significant

infrastructure investments as well as potential increases in ongoing maintenance costs. The majority of the water utility stocks "lack appreciation potential for both the coming six to 12 months as well as the next 3 to 5 years."

**Q. Briefly describe Kentucky American Water Company.**

A. KAWC is a subsidiary of American Water, the largest investor owned water company in the United States. KAWC provides water service to approximately 118,800 customers and sewer service to approximately 700 customers in twelve communities in Kentucky. KAWC uses American Water Capital Corp. ("AWCC") to place its long- and short-term debt issues. AWCC consolidates the financings of American Water Works' operating subsidiaries into larger debt issues in order to attract lower debt cost than if the subsidiaries offered their own issuances individually.

**Q. What are the debt and credit ratings of KAWC and American Water Works?**

A. KAWC does not have its own debt and credit ratings. American Water Works is currently rated BBB+ by S&P and Baa2 by Moody's. Both of these credit ratings are solidly in the investment grade category.

**Q. Mr. Baudino, are you aware of any American Water Works financial presentations that discuss the financial health and overall risks of the Company?**

A. Yes. I downloaded a presentation from American Water's web site entitled "Institutional Investor Meetings May 2010" that discussed, among other things,

American Water's strategic outlook and direction, its historical earnings, total shareholder return, and its regulated businesses. On page 18 of this presentation, American Water noted the following about its regulated businesses:

- Largely residential customers base promotes consistent operating results.
- Geographic presence hedges both weather and regulatory risk.
- Scale enables multiple growth opportunities across service areas.

American Water also noted that it has access to necessary capital markets, in which it raised $242 million in primary equity in June 2009 and over $830 million of debt issued in 2009 and 2010. I have included relevant pages from this presentation in Exhibit ___(RAB-3).

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

A. KAWC is a low-risk water distribution utility that draws additional financial and operating strength from its large parent company American Water. American Water's credit ratings are solidly in the investment grade rating category. In addition, KAWC is completing and putting into rate base its water supply and treatment project that the KPSC approved in Case No. 2007-134. KAWC estimated that the final cost of this project will be $163.9 million. Completion of this very large project will enable the Company to generate significant additional cash flow and, other things being equal, somewhat relieve its ongoing financing requirements. This, in turn, will serve to lower the overall risk of KAWC.

## III. DETERMINATION OF FAIR RATE OF RETURN

**Q. Please describe the methods you employed in estimating a fair rate of return for KAWC.**

A. I employed a Discounted Cash Flow ("DCF") analysis for two groups of comparison companies to estimate the cost of equity for KAWC's regulated water distribution operations. I also employed two Capital Asset Pricing Model ("CAPM") analyses using both historical and forward-looking data, although I did not use them to formulate my recommendation in this case.

**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 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 utility 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.

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

A. Bond 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.

**<u>Discounted Cash Flow ("DCF") Model</u>**

**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:

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

*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:

$$k = \frac{D_1}{P_0} + g$$

*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 KAWC?**

A. Since KAWC is an operating subsidiary of American Water, it does not have its own publicly traded common stock and so its DCF ROE cannot be directly estimated. Therefore, it is necessary to estimate a DCF ROE for the Company using a comparison group of companies.

**Q. How did you approach the comparison group of companies in this proceeding?**

A. In this case, I chose to use the two comparison groups of companies used by Dr. Vander Weide in his Direct Testimony.

The first group is a group of publicly traded water utilities included in the Value Line Investment Survey. This comparison group ranges from very large investor-owned companies like American Water and Aqua Water to much smaller companies. My

review of the Value Line reports for these companies indicated that this group of companies can be used as one reasonable basis to estimate the cost of equity for KAWC.

The second group of companies consisted of natural gas companies that, according to Dr. Vander Weide, were engaged in the natural gas distribution business. For purposes of this case, I believe it is reasonable to use a comparison group of natural gas distribution companies for guidance in estimating the ROE for KAWC.

**Q. Did you accept all of the constituent companies in Dr. Vander Weide's water utility group?**

A. No. I omitted Artesian because Value Line's expanded edition did not include a report for that company. I also omitted Southwest Water because since Dr. Vander Weide filed his testimony that company has agreed to a buyout by a group of private investors.

**Q. Do you accept all of the constituent companies in Dr. Vander Weide's natural gas group?**

A. No. Dr. Vander Weide constructed his natural gas proxy group from companies that were included in Value Line's distribution group and diversified gas company group. Value Line's group of diversified gas companies includes companies that are significantly involved in businesses other than the regulated natural gas distribution business. For the group of companies shown on Dr. Vader Weide's Exhibit ___(JVW-1), Schedule 2, the diversified gas companies are Energen Corp., EQT

Corp., MDU Resources, ONEOK Inc., and Questar Corp. According to the June 2010 issue of AUS Utility Reports, these companies have the following percentage of their revenues coming from gas operations:

| | |
|---|---|
| Energen Corp. | 43% |
| EQT Corp. | 91% |
| MDU Resources | 5% |
| ONEOK, Inc. | 17% |
| Questar Corp. | 28% |

It should be noted that EQT's businesses include significant exploration and production activities, as well as natural gas gathering, transmission and storage. It is not considered a natural gas distribution company.

These diversified gas companies should not be included in a gas distribution proxy group. Their businesses are diverse, unregulated, and tend to be more risky. As such, they are poor proxies for the low-risk water distribution operation of KAWC.

**Q. How did you approach the construction of an appropriate group of natural gas distribution companies?**

A. I began with the group of gas companies used by Dr. Vander Weide and excluded the diversified gas companies listed above. I then selected additional gas distribution companies from Value Line's Natural Gas Distribution group that had 5-year earnings and dividend growth forecasts from Value Line. This selection process eliminated a number of smaller gas distributors that are covered in Value Lines' expanded edition. I also excluded UGI Corp. because a minority of its revenues

comes from gas distribution operations. This resulted in the following gas distribution comparison group:

AGL Resources
Atmos Energy
LaClede Group
New Jersey Resources
Nicor Inc.
NiSource, Inc.
Northwest Natural Gas
Piedmont Natural Gas
South Jersey Industries
Southwest Gas
WGL Holdings

This gas distribution comparison group is far more appropriate in terms of estimating the ROE for KAWC than the natural gas company group used by Dr. Vander Weide.

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

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. Why is that your general practice?**

A. A six-month period smoothes out price fluctuations and provides a representative "average" stock price for determining the dividend yield. This is especially important now considering the recent volatility in the stock market.

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

A. The six-month period I used covered the months from December 2009 through May 2010. 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 water company comparison group is 3.47%. These calculations are shown on Exhibit ___(RAB-4).

The average dividend yield for the gas distribution company comparison group is 4.29%. The calculations are shown in Exhibit ___(RAB-6).

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

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 arbitrary 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 is published for approximately 7,000 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.

According to Zacks' website, Zacks "was formed in 1978 to compile, analyze, and distribute investment research to both institutional and individual investors." Zacks gathers opinions from a variety of analysts on earnings growth forecasts for numerous firms including regulated utilities. The estimates of the analysts responding are combined to produce consensus average and median estimates of earnings growth.

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. Exhibits____(RAB-5) and ___(RAB-7) present the Value Line, Zacks, and Thomson Financial forecasted growth estimates for the two comparison groups. These earnings and dividend growth estimates for the comparison group are summarized on Columns (1) through (5).

It should be noted that the Value Line reported forecasted dividend and earnings growth rates for American Water were unrepresentative due to a lack of three years of historical dividend and earnings per share data. Therefore, I calculated Value Line's forecasted dividend and earnings per share growth rates using 2009 data as the base year, then calculated a 5-year compound growth rate using Value Line's forecasted dividend and earnings per share for the 2013 – 2015 time frame.

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. Value Line also includes the forecasted retention growth rate in its individual company reports and these growth rates are shown in Column (3) of Exhibits ___(RAB-5) and ___(RAB-7).

**Q. How did you calculate the expected growth rates for the water utility comparison group?**

A. I calculated the expected growth rates for the group by using both the average and the mean values for each source of the forecasted growth rates. These calculations are shown on page 1 of Exhibit ___(RAB-5). I excluded any negative values from the average growth rate calculations since long-term negative growth is inconsistent with expected positive growth for regulated utilities and because including negative growth rates would inappropriately reduce the average for the group.

The median growth rate is an important measure of central tendency and is not influenced by excessively high or low (or negative) growth rates. Given the wide dispersion of expected growth rates for the water utility comparison group, the median is an especially important value to consider in the DCF analysis at this time.

**Q. Mr. Baudino, do you have concerns with respect to the expected growth rate data shown in Exhibit ___(RAB-5)?**

A. Yes, I do.

First, there are no Value Line or Zack's forecasts available for the smaller water utilities in the group. These companies include Connecticut Water, Middlesex Water, Pennichuck Corp., SJW, and York Water. I conclude from this that forecasting earnings and dividend growth for these smaller companies is a rather uncertain task at this point in time.

Second, there are several unsustainably high Thomson earnings forecasts shown in Colums (5) for American Water Works, Connecticut Water, and SJW. These forecasts merely serve to inflate the average growth rate for the group and are totally out of line with the other average growth rates and with recent historical growth rates in dividends, earnings, and book value. I have shown these historical numbers for the smaller water companies in Exhibit ___(RAB-5).

Because of these concerns, considerably more judgment will be required to estimate the investor required return for the water utility comparison group at point this time.

**Q. How did you approach the calculation of earnings growth forecasts for the gas distribution company group?**

A. For the gas distribution company comparison group, I looked at three different methods for calculating the expected growth rates.

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. I excluded negative values because they are inconsistent with the assumption of constant positive growth in the DCF formula.

For Method 2, I calculated the median growth rates for my comparison group. As is the case with the water utility comparison group, the median growth rate for each forecast provides additional valuable information regarding expected growth rates.

For Method 3, I omitted double-digit growth rates and growth rates that were near zero (less than 1%) from the calculation of the averages. This is similar to omitting the high and low values from the calculation. These calculations are shown on page 1 of Exhibit ____(RAB-7).

**Q. Why did you eliminate high and low growth rate forecasts in Method 3?**

A. With respect to growth rates near zero, it is reasonable to conclude that investors expect positive long-term earnings and dividend growth over time. Including growth rates of 1% or less may understate expected growth for the comparison group. Regarding double-digit growth rates, it is highly unlikely that investors would expect

such high growth rates over the long run for water utilities. Indeed, at this time all of the growth forecasts are in the single digits and reflect the more conservative, less risky financial profile of a regulated gas distribution industry. In fact in this proceeding, my application of Method 3 increased the average dividend growth rate for the group, but did not affect the other average growth rate calculations for the group.

**Q. How did you proceed to determine the DCF return of equity for the two comparison groups?**

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 should note that for Method 3 for the gas distribution comparison group, I excluded the dividend yields for companies whose growth rates were excluded from each respective source.

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 Exhibits ____(RAB-5) and ___(RAB-7).

**Q. Please explain how you calculated your DCF cost of equity estimates for the water utility comparison group.**

A. Page 2 of Exhibit ___(RAB-5) presents the DCF results using the average and

median group growth rates. I calculated both the average results for the group and the midpoint, which is the average of the high and low estimate. The group results ranged from 9.34% to 10.07%.

I should note that for the water utilities than did not have Value Line or Zack's dividend and earnings growth estimates, I applied the average growth rate for the group. Given the much lower recent historical 5-year growth rates for these companies, it is reasonable and even generous to assume that forecasted growth for these smaller companies will be on a par with the average of the other companies.

**Q. Please explain how you calculated your DCF cost of equity estimates for the gas utility comparison group.**

A. Page 2 of Exhibit ____(RAB-7) presents the DCF results utilizing the three 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 8.60% and the midpoint of the range is 8.43%.

Method 2 employs the median growth rates from Value Line, Zacks, and Thomson. For the comparison group, the average DCF result is 8.25% and the midpoint of the results is 8.13%

Method 3 employs the growth rates for the group excluding double digit growth forecasts and forecasts less than or equal to 1.0%. For the comparison group, the average of the DCF results is 8.73% and the midpoint of the results is 8.69%.

**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*
$\beta$ = *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. As briefly discussed earlier, 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 determining the risk-free rate and market return portions of the CAPM equation. The analyst's application of judgment can significantly influence the results obtained from the CAPM. 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 it 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. 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.

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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. 229 – 239, 1999 edition.

**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 May 28, 2010. Value Line provides a summary statistical report detailing, among other things, forecasted growth in dividends, earnings, and book value for the nearly 7,000 companies Value Line follows in its expanded edition. For purposes of this case I used the forecasted growth in book value and earnings and have presented these two growth rates and the average on page 2 of Exhibit ____(RAB-8). This is because many of the companies in Value Line's expanded edition do not pay dividend and have no current dividend yield. The average of the book value and earnings growth rate forecasts is 10.74%. Combining this growth rate with the average expected dividend yield of the Value Line companies of 0.65% results in an expected market return of 11.39%. The detailed calculations are shown on page 1 Exhibit ____(RAB-8).

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 2010 Valuation 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-9) 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,

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.

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 November 2009 through April 2010. 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. How did you determine the value for beta?**

A. I obtained the betas for the companies in the water utility comparison group from most recent Value Line reports. The average of the Value Line betas for the water utility group is .72.

**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 8.89% to 9.46%.

The CAPM results using the historical Ibbotson data range from 7.83% to 9.21%. These results are shown on Exhibit ____(RAB-9).

**Conclusions and Recommendations**

**Q. Please summarize the cost of equity results from the analyses you performed.**

A. The cost of equity results from my DCF and CAPM analyses are as follows:

| | |
|---|---|
| DCF, water utility comparison group: | 9.34% - 10.07% |
| DCF, gas distribution company comparison group: | 8.12% - 8.73% |
| CAPM, Value Line companies | 8.89% - 9.46% |
| CAPM, historical returns | 7.83% - 9.21% |

**Q. What is your recommendation with respect to the investor required rate of return for KAWC?**

A. Based on my DCF analyses, I recommend a ROE range of 9.0% - 10.0%. My recommended allowed return on equity for KAWC in this proceeding 9.50%.

In my opinion, my recommended ROE range is supported by the various DCF analyses I have presented. The upper end of the range is supported by the high end of the DCF results for the water utility group. The low end of my recommended range is supported by the upper end of the ROE results for the gas utility comparison group. Those results are shown in Exhibit ___(RAB-7) and are associated with Value Line and Zack's earnings growth forecasts, which are 8.9% - 9.2%.

In conclusion, a 9.50% allowed ROE is fair, even generous, for a low-risk water utility such as KAWC.

**Q. Did you review KAWC's proposed capital structure and cost of debt?**

A. Yes. I reviewed the Company's proposed capital structure and cost of debt and have accepted them. The following table presents my recommended overall cost of capital for KAWC.

**TABLE 1**

**KENTUCKY AMERICAN WATER COMPANY**
**WEIGHTED COST OF CAPITAL**

| | Percentage | Cost | Wtd. Cost |
|---|---|---|---|
| Long-term Debt | 52.06% | 6.41% | 3.34% |
| Short-term Debt | 2.32% | 2.09% | 0.05% |
| Preferred Stock | 1.65% | 7.75% | 0.13% |
| Common Equity | 43.97% | 9.50% | 4.18% |
| Total | 100.00% | | 7.69% |

## IV. RESPONSE TO KAWC ROE TESTIMONY

**Q. Have you reviewed the Direct Testimony of Dr. Vander Weide?**

A. Yes.

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

A. My conclusions regarding Dr. Vander Weide's testimony and return on equity recommendations are as follows.

First, Dr. Vander Weide's natural gas distribution group contains highly diversified companies that do not have regulated gas distribution as their primary business. Including these companies tended to inflate his DCF results. Further, these diversified companies are very poor proxies for KAWC's lower-risk regulated water distribution business.

Second, Dr. Vander Weide failed to include forecasted dividend growth in his DCF analyses. Failing to include this important information led to a significant overstatement of all of his DCF results.

Third, Dr. Vander Weide inappropriately used a quarterly DCF model. Dr. Vander Weide's use of quarterly compounding overstated his DCF results.

Fourth, Dr. Vander Weide's risk premium results are overstated and should be rejected.

Fifth, Dr. Vander Weide's consideration of an adjustment for flotation costs is inappropriate and should be rejected.

**General Comments on KAWC Recommended ROE Range and Cost of Equity**

**Q. Mr. Baudino, please provide your conclusions with respect to Dr. Vander Weide's proposed ROE range and the Company's requested cost of equity of 11.5%.**

A. Both Dr. Vander Weide's proposed ROE range and KAWC's requested 11.5% cost of equity are grossly overstated and would result in excessive rates to Kentucky customers and inflated returns to American Water shareholders.

The remainder of my testimony will explain how Dr. Vander Weide's various ROE analyses render cost of equity results that are completely out of line with investor expected returns for KAWC's low risk water operations. At this point, however, it would be helpful to provide the Commission with recent allowed returns in American Water's other regulated jurisdictions. The Company provided this information in response to LFUCG Data Request 1, number 7. I calculated the average of all the recent allowed returns from the data provided by the Company.

**TABLE 2**

**AMERICAN WATER ALLOWED RETURNS**

| | |
|---|---|
| Arizona-American Water Company | 9.90% |
| California-American Water Company | 10.20% |
| Hawaii-American Water Company | 10.60% |
| Illinois American Water Company | 10.38% |
| Indiana American Water Company | 10.00% |
| Iowa American Water Company | 10.40% |
| Long Island American Water Company | 9.50% |
| Maryland-American Water Company | 10.75% |
| Missouri American Water Company | 10.00% |
| New Jersey-American Water Company | 10.30% |
| New Mexico-American Water Company | 10.25% |
| Ohio-American Water Company | 10.88% |
| Pennsylvania American Water Company | 10.80% |
| Tennessee-American Water Company | 10.20% |
| Virginia American Water Company | 10.50% |
| West Virginia American Water Company | 10.00% |
| Average ROE Award | 10.29% |

Table 2 shows that the allowed returns in American Water's other jurisdictions ranged from 9.50% to 10.88%, with an average across all jurisdictions of 10.29%. This table clearly shows how much of an outlier Dr. Vander Weide's recommended ROE range is and how excessive the Company's requested ROE of 11.5% is.

**Response to Vander Weide DCF Analyses**

**Q. Please summarize Dr. Vander Weide's approach to the DCF model and its results.**

A. Dr. Vander Weide employed two comparison groups of companies to estimate the cost of equity for KAWC. One group consisted of publicly traded water utilities and the other was comprised of natural gas companies. Dr. Vander Weide confined his growth rate analysis to earnings forecasts from IBES for the gas company group. For the water

utility group he used either IBES or Value Line earnings growth forecasts. He also utilized quarterly compounding in his DCF calculations. Dr. Vander Weide did not consider forecasted dividend growth for either group of companies.

**Q. Please address the two proxy groups used by Dr. Vander Weide.**

A. I addressed the shortcomings and problems with the water utility and gas utility groups used by Dr. Vander Weide previously in my testimony. At this point, it would be appropriate to point out that the diversified gas companies included in his gas company group have some of the highest ROEs:

| | |
|---|---|
| EQT Corp. | 14.2% |
| MDU Resources | 17.6% |
| ONEOK | 14.1% |

Clearly, the results for these companies are totally out of line with returns expected for low-risk water utilities. Dr. Vander Weide even eliminated the highest and lowest results on Exhibit ___(JVW-1), Schedule 2, both of which were returns from the diversified gas companies. But overall, including these diversified gas companies significantly raised his DCF results.

I also noted that there are excessive ROEs in Dr. Vander Weide's water company group as well.

| | |
|---|---|
| American Water Works | 14.7% |
| California Water | 13.3% |
| Connecticut Water | 13.6% |
| Middlesex Water | 13.0% |
| SJW Corp. | 13.6% |

Based on my DCF and CAPM analyses, as well as the recent allowed ROEs for American Water subsidiaries that I presented earlier, ROE results in the 13% - 15% range are clear outliers and are in no way indicative of returns expected by investors. Once again, these returns inflate Dr. Vander Weide's ROE recommendation.

**Q. Should Dr. Vander Weide have included dividend growth forecasts in his DCF analyses?**

A. Yes. Dr. Vander Weide erred in failing to include available 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 agree that earnings growth is the primary factor considered by investors, but it should not be considered the only factor, particularly if near-term dividend growth is expected to be less than longer-term earnings growth.

**Q. Do Value Line's dividend growth forecasts suggest that near-term dividend growth will be less than forecasted earnings growth?**

A. Yes, and this is the case for both the water utility and gas distribution utility comparison groups. Exhibit ___(RAB-5), page 1 of 2, shows that both historical and expected dividend growth rates are lower than forecasted earnings growth for the water company group. This is also the case of the gas distribution group, whose growth rates are presented on Exhibit ___(RAB-7), page 1 of 2.

As I mentioned earlier in my testimony, lower near-term dividend growth rates must be considered and incorporated in the DCF analysis. Although earnings growth forecasts are currently higher, the lower dividend growth rates expected over the next few years will be incorporated into investors' expected return for the water and gas utilities in my comparison groups. Relying on earnings growth rates alone, as Dr. Vander Weide has done, will overstate investors' required returns and lead to an inflated DCF cost of equity recommendation.

**Q. On page 14, Dr. Vander Weide rejects the annual DCF model and recommends that the Commission accept a quarterly DCF calculation. Is a quarterly version of the DCF model appropriate for determining the allowed ROE for regulated utility companies?**

A. No. The quarterly DCF model proposed by Dr. Vander Weide is unnecessary, overcompensates investors, and results in excessive costs for ratepayers.

I agree that dividends are paid quarterly and that investors have the ability to reinvest those dividends. This means that through quarterly compounding, if a utility company is allowed a 10% return on equity then investors will realize slightly more than a 10%

return due to the reinvestment effect. However, this effect does not need to be added to the annual model that uses the 1 + 0.5 times growth adjustment that I used in my DCF calculations. Including quarterly compounding in the DCF calculation would basically compensate investors twice for the reinvestment effect.

Further, quarterly compounding is likely already accounted for in a company's stock price since investors know that dividends are paid quarterly and that they may reinvest those cash flows. Adding an incremental return for quarterly compounding merely serves to inappropriately and unnecessarily enhance the expected return on equity.

**Q. Beginning on page 20 of his Direct Testimony, Dr. Vander Weide discussed his inclusion of a flotation cost adjustment in his DCF analyses. Do you agree with a flotation cost adjustment?**

A. No, I do not. I recommend that the Commission reject a flotation cost adjustment in setting the cost of equity for KAWC.

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, if any, regarding the collection of flotation costs. Multiplying the dividend yield by a 3% 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.

**Risk Premium Model**

**Q. Please present your conclusions regarding the results of Dr. Vander Weide's ex-ante risk premium analyses.**

A. Dr. Vander Weide's ex-ante risk premium results are overstated and cannot be relied upon for setting KAWC's allowed ROE in this case. His results are overstated due to:

1. Use of a "forecasted" A-rated bond yield.
2. Sole use of forecasted earnings growth to calculate the DCF return for the gas group.
3. Inclusion of flotation costs.
4. Use of quarterly compounding in his DCF calculation.

I have already discussed items 2 through 4 previously in my testimony and they apply to the manner in which Dr. Vander Weide calculated the DCF return for his comparable group of gas distribution utilities. Dr. Vander Weide did not consider lower dividend growth in calculating the DCF return for his comparable gas company group. This omission likely overstates the expected DCF return for the group. And the inclusion of flotation costs and quarterly compounding further inflates his group DCF results. Taken together, all three of these problems overstate the risk premium he used in his analysis.

**Q. How does the use of a forecasted A-rated bond yield overstate the risk premium return on equity?**

A. Dr. Vander Weide added 50 basis points to the current A-rated bond yield to approximate a forecasted A-rated bond yield at the end of 2010. This is an incorrect approach to calculating a risk premium cost of equity. Current, observable bond yields should be used for any risk premium analysis. Current bond yields reflect all relevant current market information, including expectations about future interest rates. If investors really expected A-rated utility bonds to be 50 basis points higher than they are now, they likely would have already adjusted the current bond yield to avoid or minimize capital losses in the future. Dr. Vander Weide's 50-basis point adjustment to current A-rated bond yields should be rejected.

**Q. What are your conclusions with respect to Dr. Vander Weide's ex-post risk premium approach?**

A. First, it is risky to assume that investors require an unchanging risk premium based on long-term historical returns of stocks over bonds. Changing economic conditions will likely affect investors' risk premium requirement. What investors require today may be quite different from a long-term historical risk premium.

Second, Dr. Vander Weide calculated an historical risk premium using the S&P 500 stock portfolio, but failed to adjust this risk premium for risk premium expectations for utility companies. Investor expected risk premiums for water utility stocks over bonds are likely much lower than the expected risk premium for unregulated companies in the

S&P 500. Using the S&P 500 risk premium overstated the risk premium ROE for a low-risk water company such as KAWC.

Third, Dr. Vander Weide's use of S&P utilities to calculate the expected risk premium ROE for KAWC is also inappropriate. Low-risk water companies are likely to have a lower expected return on equity than the S&P Utilities. And there is no support whatsoever for Dr. Vander Weide's assumption of page 33, lines 11 through 13, of his Direct Testimony that water utilities today "face risks that are somewhere in between the average risk of the S&P Utilities and the S&P 500 over the years 1937 to 2009." If anything, water distribution companies face lower risks than the S&P Utilities. Thus, even the risk premium using the S&P Utilities will overstate the risk premium ROE for regulated water companies.

Fourth, Dr. Vander Weide's ex-post risk premium results are overstated by 50 basis points due to his inappropriate use of a "forecasted" A-rated bond. Subtracting 50 basis points from his 10.5% result using the S&P Utilities risk premium renders a risk premium ROE of 10.0%, excluding flotation costs.

**CAPM Analysis**

**Q. On page 42 of his Direct Testimony, Dr. Vander Weide cited a number of studies in support of his proposition that the CAPM underestimates required returns for securities with betas less than 1.0. On page 44, he concludes that the CAPM**

**should be given little or no weight because the average beta for his proxy group is less than 1.0. Please address Dr. Vander Weide's testimony in this area.**

A. Although Dr. Vander Weide cited a number of studies on page 42, the problem is that there is no evidence that the CAPM bias he alleges has any applicability to regulated utility companies. Regulated water utilities have low betas because they are low in risk. Thus, the average water utility group beta from my group, 0.72, reflects the lower risk of regulated water distribution operations vis-à-vis the unregulated market. Dr. Vander Weide failed to show any downward CAPM bias related to water utility betas.

**Q. On page 41 of his Direct Testimony, Dr. Vander Weide suggested the addition of a size premium to his CAPM results to account for the small market capitalization of water companies. Do you agree with the inclusion of a size premium?**

A. No. It is true that the Ibbotson Valuation Yearbooks for 2009 and 2010 discuss size premiums, but they do not evaluate if any such size premium is applicable to regulated utilities generally, or to regulated water companies specifically. Thus, the size premiums shown on Table 4, page 41 of Dr. Vander Weide's Direct Testimony may have no relevance whatsoever for lower-risk regulated water utilities.

## V. REVENUE REQUIREMENT ADJUSTMENTS

**Q. Mr. Baudino, do you have revenue requirement adjustments to recommend to the Commission?**

A. Yes, I have certain revenue requirement adjustments to recommend to the Commission based on my review of KAWC's filing. I should note that my revenue requirement review for purposes of this case was limited to a few issues and my testimony should not be construed as agreeing with any other aspect of the Company's filing that I did not address. LFUCG reserves the right to include other revenue requirement adjustments that may be proposed by other parties in this proceeding.

***Service Company Labor Costs***

**Q. Please summarize the first revenue requirement adjustment that you propose.**

A. I recommend that the labor-related costs charged to KAWC from American Water Works Service Company ("AWWSC") be reduced by $2.145 million.

**Q. Why should the AWWSC labor-related costs be reduced in this proceeding?**

A. KAWC has not shown that the labor costs charged from AWWSC have been prudently incurred.

**Q. Please explain.**

A. This issue was addressed in the Direct Testimony of Mr. Michael Miler, witness for KAWC. Beginning on page 21 of this testimony, Mr. Miler attempted to justify the increase in service company labor costs in this case and presented an analysis in Exhibit MAM-7 that compared AWWSC labor-related costs included in the Company's filing with the labor costs that KAWC would have incurred had it incurred the labor costs itself as a stand-alone company. In Column 14 of Exhibit MAM-7, Mr. Miler's analysis showed that the combined KAWC and AWWSC labor-related costs in the filing, $21.67 million, are $2.146 million greater than the labor-related costs would have been incurred had the AWWSC reorganizations and restructuring not taken place. In other words, Mr. Miler's analysis demonstrates that if nothing had changed at KAWC since 2001, labor-related costs would have been $2.146 million lower than the amount that the Company is asking for in this case.

**Q. Did Mr. Miler include adjustments that showed additional benefits?**

A. Yes, but in my opinion the four adjustments he included have nothing to do with increased labor costs and would likely have been undertaken by American Water Works and its service company anyway. These adjustments are explained on pages 24 and 25 of Mr. Miler's testimony and include:

- Establishment of the National Procurement Center in 2003.
- Increased customer base of 17,784 since 2001 that would have added employees.
- Capitalization of certain software costs billed through AWWC that would have been captured as capital costs if KAWC had paid for them locally.
- Savings from using AWCC for cash management and financing activities.

These activities provide no justification for the higher labor costs incurred from AWWSC and should have been undertaken by the service company and American Water anyway to efficiently lower costs. KAWC and AWWSC have failed to justify the significant increase in labor-related costs to KAWC.

**Q. Could the $2.146 million of higher labor costs be even greater than shown by Mr. Miler?**

A. Yes. Mr. Miler explained that he used certain labor cost inflation factors in his analysis, but did not include any offsetting productivity increases, which would have lowered KAWC's "would-have-been" labor costs even more. Please refer to Table 3 below, which was taken from the Bureau of Labor Statistics web site and shows the yearly increases in productivity as measured by output per hour for non-farm businesses.

**TABLE 3**

**Major Sector Productivity and Costs Index**
**Original Data Value**

| | |
|---|---|
| **Series Id:** | PRS85006092 |
| **Duration:** | % change quarter ago, at annual rate |
| **Measure:** | Output Per Hour |
| **Sector:** | Nonfarm Business |
| **Years:** | 2000 to 2010 |

| Year | Qtr1 | Qtr2 | Qtr3 | Qtr4 | Annual |
|---|---|---|---|---|---|
| **2000** | -1.5 | 9.4 | 0.1 | 4.0 | 3.4 |
| **2001** | -1.3 | 7.4 | 2.5 | 5.8 | 2.9 |
| **2002** | 8.8 | 0.5 | 3.8 | -0.3 | 4.6 |
| **2003** | 3.7 | 5.3 | 9.7 | 1.5 | 3.7 |
| **2004** | 0.9 | 3.7 | 0.7 | 0.8 | 2.8 |
| **2005** | 4.0 | -0.9 | 3.0 | -0.1 | 1.7 |
| **2006** | 2.7 | 0.3 | -1.9 | 2.9 | 1.0 |
| **2007** | 0.9 | 2.2 | 5.7 | 2.9 | 1.8 |
| **2008** | -0.5 | 3.0 | 1.1 | 2.2 | 2.0 |
| **2009** | 0.9 | 7.6 | 7.8 | 6.3 | 3.7 |
| **2010** | 2.8 | | | | |

Productivity increases serve to offset increases in labor costs because workers are more productive over time, meaning that more work can be done in the same amount of time or that the same amount of work can be done in less time or with fewer people. Mr. Miler's analysis did not include any productivity offset that would have reduced KAWC's stand-alone labor costs. This makes is highly likely that Mr. Miler's analysis overstates KAWC's would-have-been labor costs and understates the labor cost difference of $2.146 million in Exhibit MAM-7.

Therefore, I recommend that the Commission disallow a minimum of $2.146 million of AWWSC labor costs from KAWC's revenue requirement in this case.

***Labor Capitalization Ratio***

**Q. What labor capitalization ratio did KAWC use in its forecasted test year?**

A. The Company used a labor capitalization rate of 17.34% as described by KAWC witness Miller in her Direct Testimony.

**Q. Is there evidence that the Company's forecasted labor capitalization ratio is too low?**

A. Yes. In response to the Staff's Second Data Request, No. 13, the Company provided its historical actual and budgeted capitalization ratios for the last 5 years. These ratios are provided below:

| | Actual | Budget |
|---|---|---|
| 2005 | 15.54% | 12.98% |
| 2006 | 18.84% | 19.00% |
| 2007 | 21.34% | 18.06% |
| 2008 | 23.35% | 18.12% |
| 2009 | 19.64% | 19.96% |

In its Third Set of Information Requests, No. 4, Staff noted that the 5-year actual average capitalization ratio for the Company is 19.472%. Again, this compares to KAWC's requested ratio of 17.34%.

What this means for the Company's revenue requirement is that a lower capitalization rate will mean higher labor costs in operating expenses and lower labor costs capitalized to rate base. If the Company were to continue to actually capitalize its labor expenses at the higher historical level, KAWC would overcollect its revenue

requirement because the amount of labor dollars in operating expenses would be lower than what would be allowed under the 17.34% requested capitalization ratio.

**Q. Did KAWC provide adequate justification for using the lower 17.34% labor capitalization ratio?**

A. No. In my opinion the Company has not justified using a budgeted labor capitalization ratio that is significantly below its historical experience.

**Q. Should the Company's labor expenses reflect a higher capitalization ratio for the future test year?**

A. Yes. I recommend that the Commission allow labor dollars in operating expenses consistent with a higher labor capitalization ratio that the Company has historically experienced.

In Staff's Third Set of Information Requests, No. 4, Staff requested the impact on the Company's revenue requirement from revising the capitalization rate from 17.624% to 18.742%. The Company responded that this revision would result in a reduction to revenue requirements of $0.211 million. I have included the Company's response to this information request in Exhibit ___(RAB-10).

My concern is that there may have been a typographical error in the Staff's Information request because the 18.742% revised capitalization ratio does not appear to be tied to the historical 5-year average, which is 19.472%. Thus, the $0.211 revenue requirement reduction presented by the Company is likely understated.

At a minimum, then, I recommend that the Commission reduce the Company's labor expenses by at least $0.211 million and require the Company to recalculate the revenue requirement reduction of increasing the labor capitalization ratio to the historical average of 19.472%.

**Q. Does this complete your testimony?**

A. Yes.

**BEFORE THE**

**PUBLIC SERVICE COMMISSION OF KENTUCKY**

**IN THE MATTER OF:**

| | | |
|---|---|---|
| **THE APPLICATION OF KENTUCKY-AMERICAN WATER COMPANY FOR AN ADJUSTMENT OF RATES ON AND AFTER MARCH 28, 2010** | **)** **)** **)** | **CASE NO. 2010-00036** |

# EXHIBITS

# OF

# RICHARD A. BAUDINO

**ON BEHALF OF**

**LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT**

**J. KENNEDY AND ASSOCIATES, INC.**
**ROSWELL, GEORGIA**

**June 2010**

# 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 Industrial 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

**Expert Testimony Appearances**
**of**
**Richard A. Baudino**
**As of June 2010**

| 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. |
| 09/84 | 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. |
| 10/88 | 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 June 2010**

| 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 June 2010**

| 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**
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**As of June 2010**

| 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**
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**Richard A. Baudino**
**As of June 2010**

| 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**
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**As of June 2010**

| 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 U-20925 (SC), U-22092 (SC) (Subdocket E) | LA | 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 U-20925 (SC), U-22092 (SC) (Subdocket B) | LA | Louisiana Public Service Comm. | Entergy Gulf States, Inc. | Restructuring, Business Separation Plan. |

**Expert Testimony Appearances**
**of**
**Richard A. Baudino**
**As of June 2010**

| 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<br>U-20925 (SC),<br>U-22092 (SC)<br>(Subdocket B)<br>(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**
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**Richard A. Baudino**
**As of June 2010**

| 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 HeallthCare 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 June 2010**

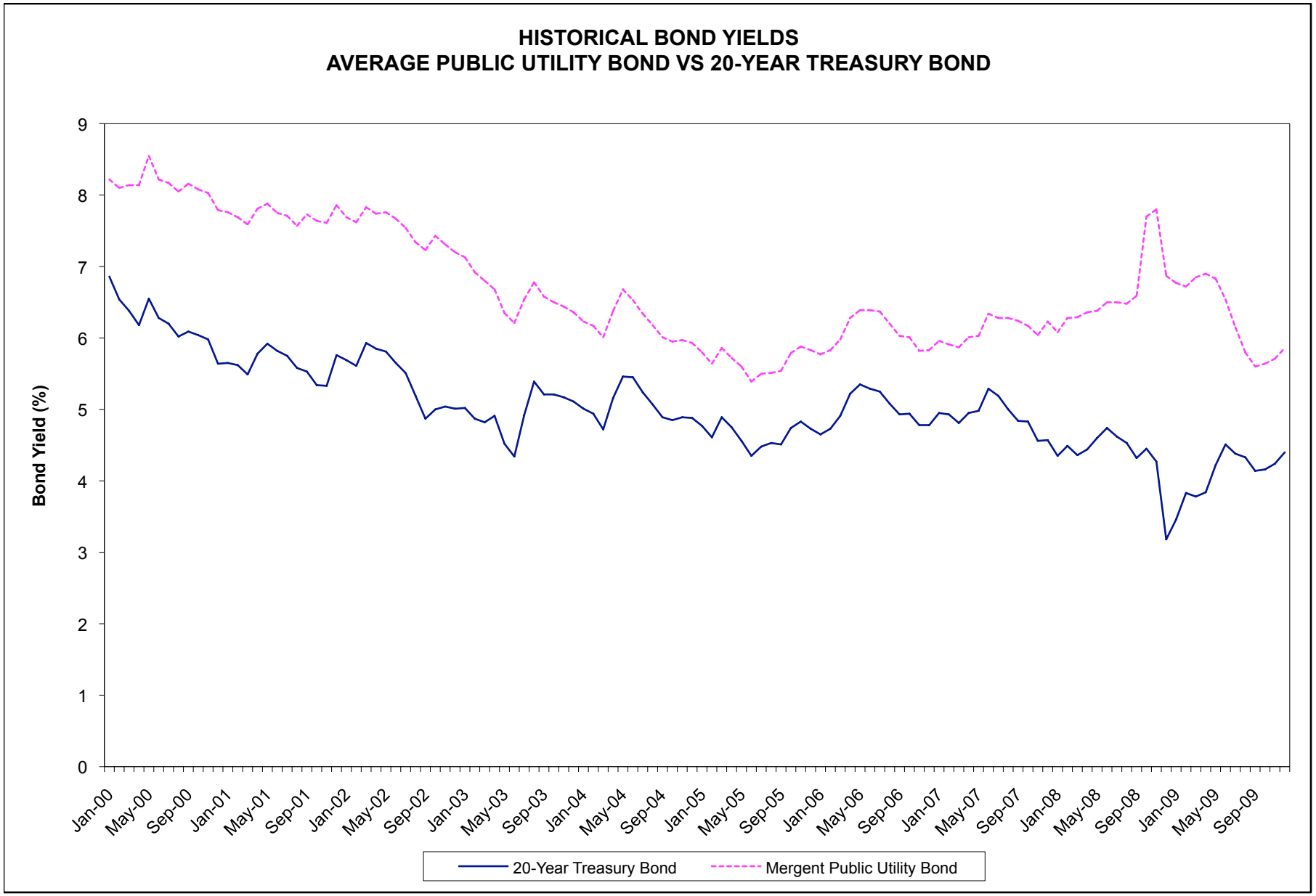
| Date | Case | Jurisdict. | Party | Utility | Subject |
|---|---|---|---|---|---|
| 10/07 | 05-UR-103 | | Wisconsin Industrial Energy Group, Inc. | Wisconsin Electric Power Co. | Return on equity |
| 11/07 | 29797 | | Louisiana Public Service Commission | Cleco Power :LLC & Southwestern Elec. Power | 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 June 2010**

| 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 |
| 10/009 | 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 June 2010**

| Date | Case | Jurisdict. | Party | Utility | Subject |
|---|---|---|---|---|---|
| 04/10 | 2009-00548<br>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 |


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
Sep-03
Jan-04
May-04
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Jan-05
May-05
Sep-05
Jan-06
May-06
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Jan-08
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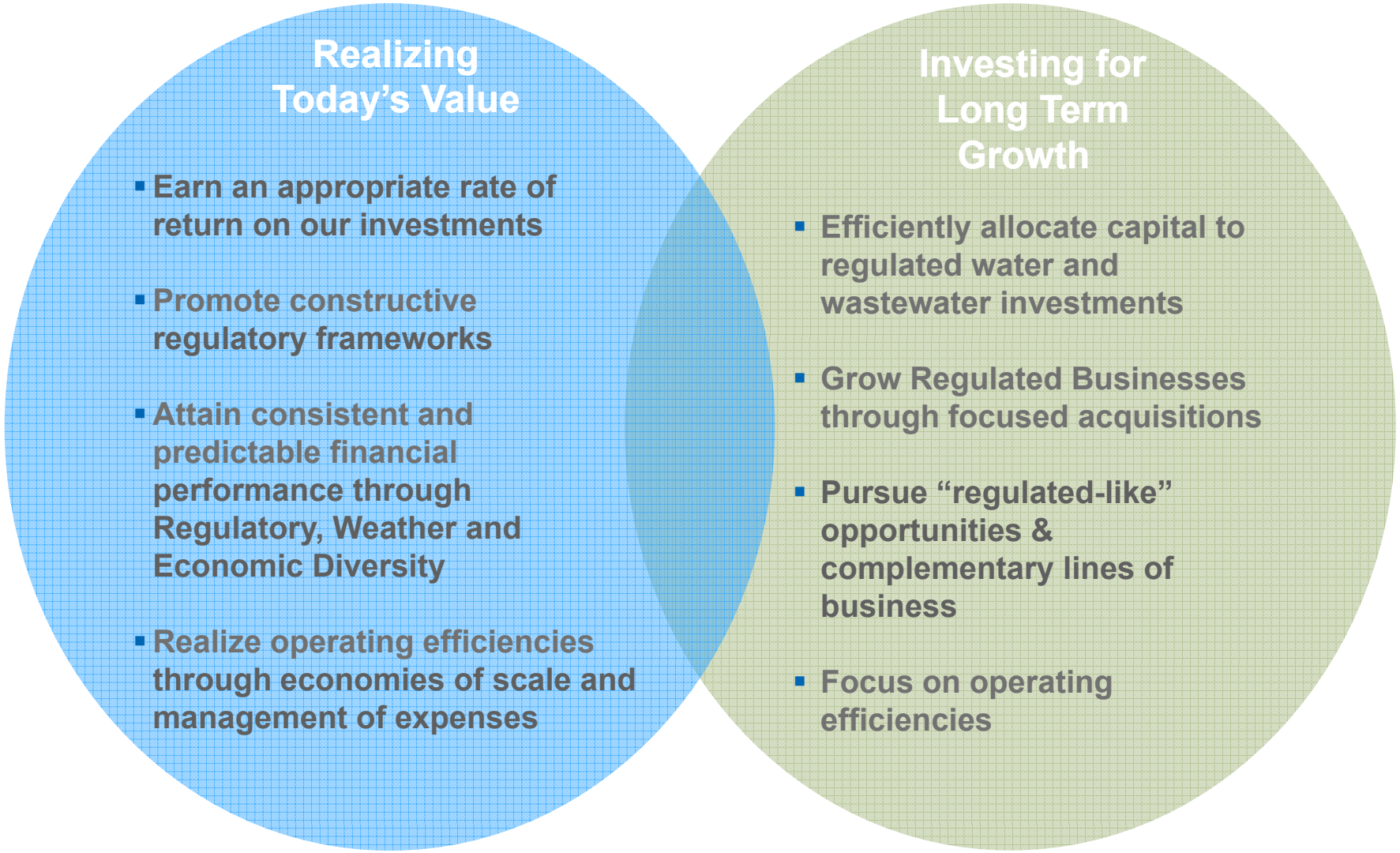
Jan-09
May-09
Sep-09
20-Year Treasury Bond
Mergent Public Utility Bond

**Exhibit ____(RAB-3)**

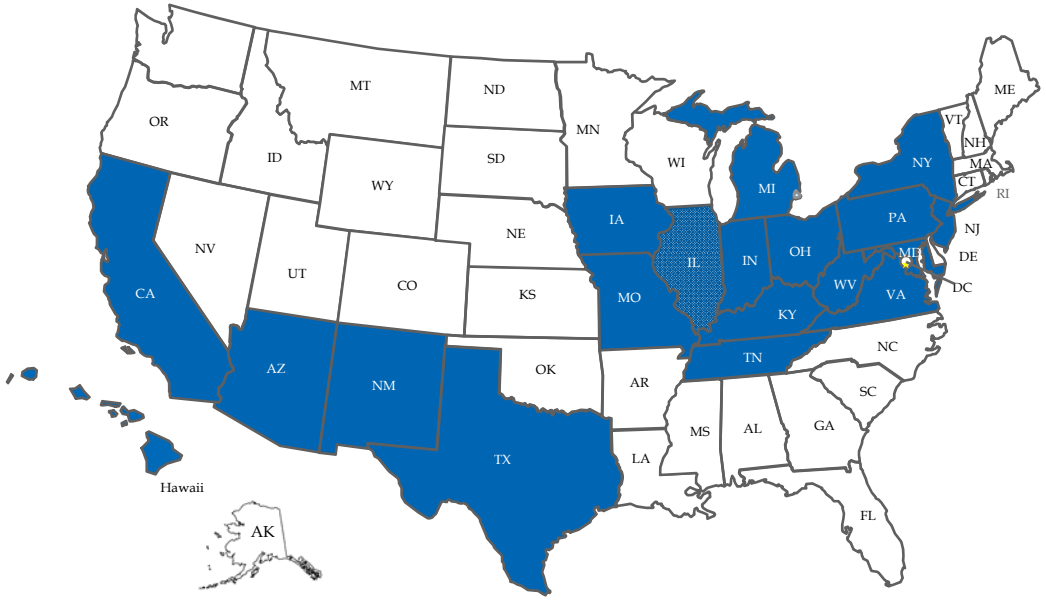
AMERICAN WATER

# Institutional Investor Meetings
# May 2010

# Our Strategic Direction



# American Water's Regulated Presence




- Largely residential customer base promotes consistent operating results
- Geographic presence hedges both weather and regulatory risk
- Scale enables multiple growth opportunities across service areas

| State | Customers Served | % of Total | 2009 Revenues ($ mm) | % of Total | Rate Base Approved per Last Rate Case | Date of Last Rate Case |
|---|---|---|---|---|---|---|
| New Jersey | 644,273 | 19.3% | $560.3 | 25.4% | 1,697,048 | 12/8/2008 |
| Pennsylvania | 652,277 | 19.6% | 459.8 | 20.8% | 1,840,166 | 11/7/2009 |
| Missouri | 457,496 | 13.7% | 203.8 | 9.2% | 740,075 | 11/28/2008 |
| Illinois | 308,476 | 9.3% | 197.4 | 8.9% | 607,357 | 4/23/2010 |
| Indiana | 283,088 | 8.5% | 157.4 | 7.1% | 655,933 | 4/30/2010 |
| California | 171,854 | 5.2% | 142.7 | 6.5% | 290,930 | 7/9/2009 |
| West Virginia | 172,006 | 5.2% | 120.2 | 5.5% | 414,693 | 3/26/2009 |
| Various | 641,459 | 19.2% | 365.7 | 16.6% | 998,148 | |
| Total Regulated Business | 3,330,929 | 100% | $2,207.3 | 100% | 7,244,350 | |

*Note: Numbers may not total due to rounding.*

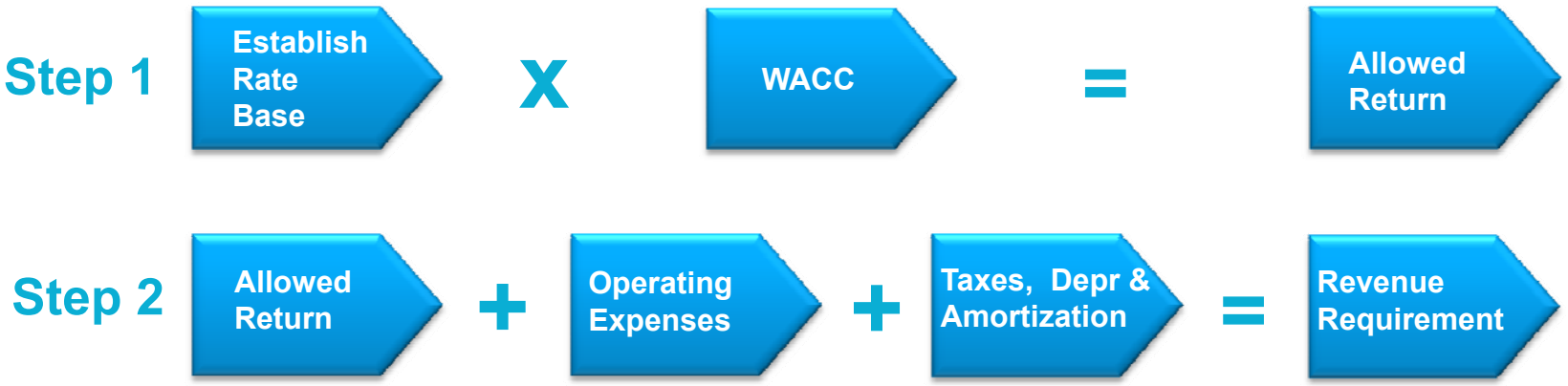
May 2010

# Rate Case Summary- 2009 Through May 3, 2010

| | Docket / Case Number | Date Filed | Amount Filed | ROE Requested | Effective Date for new rates | ROE Granted | Amount Granted |
|---|---|---|---|---|---|---|---|
| West Virginia | 08-0900-W-42T | 5/30/2008 | $14.8 | 11.75% | 3/26/2009 | 10.00% | $5.2 |
| New Mexico | 08-00134-UT | 6/30/2008 | $2.2 | 11.75% | 5/20/2009 | 10.25% | $1.4 |
| AWWM (NJ) | WR08080550 | 8/1/2008 | $3.0 | 11.50% | 5/21/2009 | 10.30% | $1.6 |
| California (ROE) | A 08-05-003 | 5/1/2008 | $2.8 | 11.50% | 5/6/2009 | 10.20% | $0.1 |
| Kentucky | 2008-00427 | 10/31/2008 | $18.5 | 11.50% | 6/1/2009 | 10.00% | $10.3 |
| Michigan | N/A | 6/22/2009 | $0.2 | 10.50% | 7/1/2009 | 10.50% | $0.2 |
| Calif (Monterey Water) | A 08-01-027 | 1/30/2008 | $35.3 | 11.50% | 5/11/2009 | 10.20% | $12.1 |
| California (Monterey WW) | A 08-01-023 | 1/30/2008 | $1.8 | 11.50% | 7/9/2009 | 10.20% | $1.7 |
| California (Gen Office) | A 08-01-024 | 1/30/2008 | $6.4 | 11.50% | 5/11/2009 | 10.20% | $2.2 |
| Maryland | 9187 | 4/30/2009 | $0.8 | 11.75% | 9/10/2009 | 10.75% | $0.6 |
| Iowa | RPU-2009-0004 | 4/30/2009 | $9.4 | 12.20% | 7/27/2009 | 10.50% | $6.1 |
| Pennsylvania | R-2009-2097323 | 4/24/2009 | $58.1 | 12.00% | 11/7/2009 | 10.80% | $30.8 |
| Texas | 2008-0910-UCR | 2/21/2008 | $0.9 | 12.00% | 11/30/2009 | 12.00% | $0.5 |
| Arizona (multiple) | W-01303A-08-0227 | 5/1/2008 | $20.0 | 11.75% | 12/1/2009 | 9.90% | $8.1 |
| Illinois | Docket No. 09-0319 | 5/29/2009 | $58.6 | 12.25% | 4/23/2010 | 10.38% | $41.4 |
| New Mexico (Edgewood) | Case No. 09-00156-UT | 8/21/2009 | $0.7 | 12.25% | 5/10/2010 | 10.00% | $0.5 |
| Indiana | Case No. 43680 | 4/1/2009 | $46.9 | 12.00% | 05/03/2010 | 10.00% | $31.5 |
| Total General Rate Cases | | | | | | | **$154.3** |
| Total Infrastructure Surcharges 2009 to date | | | | | | | $32.3 |
| Total Additional Revenues Due to Rates Activity at 5/3/2010 | | | | | | | **$186.6** |

# Rate of Return Regulation in the United States

## Prudent Investment Drives Need for Rate Cases




**American Water has experience in securing appropriate rates of return and promoting constructive regulatory frameworks**

**KENTUCKY AMERICAN WATER COMPANY**
**WATER UTILITY COMPARISON GROUP**
**AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD**

| | | May-10 | Apr-10 | Mar-10 | Feb-10 | Jan-10 | Dec-09 |
|---|---|---|---|---|---|---|---|
| **American States Water** | High Price ($) | 39.440 | 39.610 | 35.310 | 33.670 | 36.420 | 36.860 |
| | Low Price ($) | 32.610 | 34.790 | 32.140 | 31.200 | 33.010 | 32.790 |
| | Avg. Price ($) | 36.025 | 37.200 | 33.725 | 32.435 | 34.715 | 34.825 |
| | Dividend ($) | 0.260 | 0.260 | 0.260 | 0.260 | 0.260 | 0.260 |
| | Mo. Avg. Div. | 2.89% | 2.80% | 3.08% | 3.21% | 3.00% | 2.99% |
| | 6 mos. Avg. | 2.99% | | | | | |
| **American Water Works** | High Price ($) | 22.130 | 22.220 | 22.390 | 23.000 | 23.770 | 23.030 |
| | Low Price ($) | 19.410 | 20.750 | 20.390 | 21.200 | 21.390 | 21.340 |
| | Avg. Price ($) | 20.770 | 21.485 | 21.390 | 22.100 | 22.580 | 22.185 |
| | Dividend ($) | 0.210 | 0.210 | 0.210 | 0.210 | 0.210 | 0.210 |
| | Mo. Avg. Div. | 4.04% | 3.91% | 3.93% | 3.80% | 3.72% | 3.79% |
| | 6 mos. Avg. | 3.86% | | | | | |
| **Aqua America** | High Price ($) | 18.730 | 18.640 | 17.730 | 17.570 | 17.880 | 17.890 |
| | Low Price ($) | 16.520 | 17.550 | 16.570 | 16.450 | 16.590 | 16.320 |
| | Avg. Price ($) | 17.625 | 18.095 | 17.150 | 17.010 | 17.235 | 17.105 |
| | Dividend ($) | 0.145 | 0.145 | 0.145 | 0.145 | 0.145 | 0.145 |
| | Mo. Avg. Div. | 3.29% | 3.21% | 3.38% | 3.41% | 3.37% | 3.39% |
| | 6 mos. Avg. | 3.34% | | | | | |
| **California Water** | High Price ($) | 39.700 | 39.550 | 37.970 | 37.680 | 38.090 | 38.210 |
| | Low Price ($) | 34.540 | 37.420 | 35.340 | 35.250 | 35.320 | 36.180 |
| | Avg. Price ($) | 37.120 | 38.485 | 36.655 | 36.465 | 36.705 | 37.195 |
| | Dividend ($) | 0.298 | 0.298 | 0.298 | 0.298 | 0.295 | 0.295 |
| | Mo. Avg. Div. | 3.21% | 3.10% | 3.25% | 3.27% | 3.21% | 3.17% |
| | 6 mos. Avg. | 3.20% | | | | | |
| **Connecticut Water** | High Price ($) | 24.280 | 24.000 | 24.920 | 23.700 | 25.120 | 26.450 |
| | Low Price ($) | 20.570 | 22.950 | 22.380 | 21.570 | 22.100 | 22.660 |
| | Avg. Price ($) | 22.425 | 23.475 | 23.650 | 22.635 | 23.610 | 24.555 |
| | Dividend ($) | 0.228 | 0.228 | 0.228 | 0.228 | 0.228 | 0.228 |
| | Mo. Avg. Div. | 4.07% | 3.88% | 3.86% | 4.03% | 3.86% | 3.71% |
| | 6 mos. Avg. | 3.90% | | | | | |
| **Middlesex Water** | High Price ($) | 18.700 | 18.320 | 17.770 | 17.440 | 18.000 | 17.910 |
| | Low Price ($) | 16.020 | 16.720 | 16.630 | 16.300 | 16.160 | 16.030 |
| | Avg. Price ($) | 17.360 | 17.520 | 17.200 | 16.870 | 17.080 | 16.970 |
| | Dividend ($) | 0.180 | 0.180 | 0.180 | 0.180 | 0.180 | 0.180 |
| | Mo. Avg. Div. | 4.15% | 4.11% | 4.19% | 4.27% | 4.22% | 4.24% |
| | 6 mos. Avg. | 4.19% | | | | | |

**KENTUCKY AMERICAN WATER COMPANY**
**WATER UTILITY COMPARISON GROUP**
**AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD**

| | | May-10 | Apr-10 | Mar-10 | Feb-10 | Jan-10 | Dec-09 |
|---|---|---|---|---|---|---|---|
| **Pennichuck Water** | High Price ($) | 24.410 | 23.500 | 23.510 | 21.100 | 21.520 | 24.500 |
| | Low Price ($) | 21.120 | 22.200 | 20.490 | 19.000 | 19.700 | 20.440 |
| | Avg. Price ($) | 22.765 | 22.850 | 22.000 | 20.050 | 20.610 | 22.470 |
| | Dividend ($) | 0.180 | 0.180 | 0.180 | 0.180 | 0.175 | 0.175 |
| | Mo. Avg. Div. | 3.16% | 3.15% | 3.27% | 3.59% | 3.40% | 3.12% |
| | 6 mos. Avg. | 3.28% | | | | | |
| **SJW Corp.** | High Price ($) | 28.190 | 28.240 | 26.430 | 22.750 | 23.950 | 22.970 |
| | Low Price ($) | 23.170 | 24.990 | 22.070 | 21.600 | 21.930 | 21.020 |
| | Avg. Price ($) | 25.680 | 26.615 | 24.250 | 22.175 | 22.940 | 21.995 |
| | Dividend ($) | 0.170 | 0.170 | 0.170 | 0.170 | 0.165 | 0.165 |
| | Mo. Avg. Div. | 2.65% | 2.55% | 2.80% | 3.07% | 2.88% | 3.00% |
| | 6 mos. Avg. | 2.83% | | | | | |
| **York Water Company** | High Price ($) | 14.450 | 14.240 | 14.340 | 14.080 | 15.000 | 15.240 |
| | Low Price ($) | 12.830 | 13.600 | 13.560 | 13.040 | 13.040 | 14.210 |
| | Avg. Price ($) | 13.640 | 13.920 | 13.950 | 13.560 | 14.020 | 14.725 |
| | Dividend ($) | 0.128 | 0.128 | 0.128 | 0.128 | 0.128 | 0.128 |
| | Mo. Avg. Div. | 3.75% | 3.68% | 3.67% | 3.78% | 3.65% | 3.48% |
| | 6 mos. Avg. | 3.67% | | | | | |

**Average Dividend Yield** 3.47%

**Source: Yahoo! Finance**

**KENTUCKY AMERICAN WATER COMPANY**
**WATER UTILITY 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 Financial |
|---|---|---|---|---|---|
| American States Water | 3.00% | 6.50% | 5.00% | 4.00% | 4.00% |
| American Water Works | 4.05% | 6.34% | 2.50% | 8.43% | 10.25% |
| Aqua America | 5.50% | 11.50% | 7.00% | 7.33% | 7.50% |
| California Water Service Group | 1.00% | 6.50% | 6.00% | 6.00% | 5.55% |
| Connecticut Water Services | N/A | N/A | N/A | N/A | 15.00% |
| Middlesex Water Company | N/A | N/A | N/A | N/A | 8.00% |
| Pennichuck Corp. | N/A | N/A | N/A | N/A | 9.00% |
| SJW Corp. | N/A | N/A | N/A | N/A | 10.00% |
| York Water Company | N/A | N/A | N/A | N/A | 6.00% |
| Averages excluding negative values | 3.39% | 7.71% | 5.13% | 6.44% | 8.37% |
| Median Values | 3.52% | 6.50% | 5.50% | 6.67% | 8.00% |

**Sources: Zack's and First Call/Thomson Earnings Reports, retrieved May 28, 2010**
**Value Line Investment Survey, April 23, 2010**

## Five-Year Historical Growth Rates

| | DPS | EPS | Book Value |
|---|---|---|---|
| Connecticut Water Services | 1.50% | -0.50% | 3.00% |
| Middlesex Water Company | 1.50% | 3.50% | 5.50% |
| Pennichuck Corp. | 1.00% | 1.00% | 3.50% |
| SJW Corp. | 5.50% | 3.00% | 8.00% |
| York Water Company | 6.00% | 5.50% | 8.50% |
| Average excluding negative values | 3.10% | 3.25% | 5.70% |

**RETURN ON EQUITY CALCULATION**
**WATER UTILITY COMPARISON GROUP**

| | (1) Value Line Dividend Gr. | (2) Value Line Earnings Gr. | (3) Zack's Earning Gr. | (4) First Call Earning Gr. | (5) Average of All Gr. Rates |
|---|---|---|---|---|---|
| Method 1: | | | | | |
| Dividend Yield | 3.47% | 3.47% | 3.47% | 3.47% | 3.47% |
| Growth Rate | 3.39% | 7.71% | 6.44% | 8.37% | 6.48% |
| Expected Div. Yield | 3.53% | 3.61% | 3.59% | 3.62% | 3.59% |
| ***DCF Return on Equity*** | ***6.92%*** | ***11.32%*** | ***10.03%*** | ***11.99%*** | ***10.07%*** |
| ***Midpoint of Results*** | | | | | ***9.45%*** |
| Method 2: | | | | | |
| Dividend Yield | 3.47% | 3.47% | 3.47% | 3.47% | 3.47% |
| Median Growth Rate | 3.52% | 6.50% | 6.67% | 8.00% | 6.17% |
| Expected Div. Yield | 3.54% | 3.59% | 3.59% | 3.61% | 3.58% |
| ***DCF Return on Equity*** | ***7.06%*** | ***10.09%*** | ***10.26%*** | ***11.61%*** | ***9.75%*** |
| ***Midpoint of Results*** | | | | | ***9.34%*** |

**KENTUCKY AMERICAN WATER COMPANY**
**GAS DISTRIBUTION COMPANY COMPARISON GROUP**
**AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD**

| | | May-10 | Apr-10 | Mar-10 | Feb-10 | Jan-10 | Dec-09 |
|---|---|---|---|---|---|---|---|
| **AGL Resources** | High Price ($) | 40.080 | 40.000 | 38.830 | 36.860 | 37.240 | 37.520 |
| | Low Price ($) | 34.720 | 37.720 | 36.330 | 34.260 | 34.910 | 34.510 |
| | Avg. Price ($) | 37.400 | 38.860 | 37.580 | 35.560 | 36.075 | 36.015 |
| | Dividend ($) | 0.440 | 0.440 | 0.440 | 0.440 | 0.430 | 0.430 |
| | Mo. Avg. Div. | 4.71% | 4.53% | 4.68% | 4.95% | 4.77% | 4.78% |
| | 6 mos. Avg. | 4.74% | | | | | |
| **Atmos Energy** | High Price ($) | 29.920 | 30.150 | 29.240 | 28.190 | 29.820 | 30.320 |
| | Low Price ($) | 25.860 | 28.710 | 27.480 | 26.330 | 27.600 | 27.350 |
| | Avg. Price ($) | 27.890 | 29.430 | 28.360 | 27.260 | 28.710 | 28.835 |
| | Dividend ($) | 0.335 | 0.335 | 0.335 | 0.335 | 0.335 | 0.335 |
| | Mo. Avg. Div. | 4.80% | 4.55% | 4.72% | 4.92% | 4.67% | 4.65% |
| | 6 mos. Avg. | 4.72% | | | | | |
| **LaClede Gas** | High Price ($) | 35.890 | 35.420 | 34.630 | 33.730 | 34.500 | 34.920 |
| | Low Price ($) | 32.050 | 33.710 | 32.880 | 30.810 | 31.990 | 31.400 |
| | Avg. Price ($) | 33.970 | 34.565 | 33.755 | 32.270 | 33.245 | 33.160 |
| | Dividend ($) | 0.395 | 0.395 | 0.395 | 0.395 | 0.395 | 0.395 |
| | Mo. Avg. Div. | 4.65% | 4.57% | 4.68% | 4.90% | 4.75% | 4.76% |
| | 6 mos. Avg. | 4.72% | | | | | |
| **New Jersey Resources** | High Price ($) | 38.630 | 39.010 | 38.170 | 37.040 | 37.960 | 38.550 |
| | Low Price ($) | 34.300 | 36.950 | 36.430 | 33.490 | 36.020 | 35.280 |
| | Avg. Price ($) | 36.465 | 37.980 | 37.300 | 35.265 | 36.990 | 36.915 |
| | Dividend ($) | 0.340 | 0.340 | 0.340 | 0.340 | 0.340 | 0.340 |
| | Mo. Avg. Div. | 3.73% | 3.58% | 3.65% | 3.86% | 3.68% | 3.68% |
| | 6 mos. Avg. | 3.70% | | | | | |
| **Nicor Inc.** | High Price ($) | 43.710 | 44.700 | 43.750 | 41.890 | 42.830 | 43.390 |
| | Low Price ($) | 38.630 | 41.860 | 41.820 | 37.990 | 40.000 | 39.280 |
| | Avg. Price ($) | 41.170 | 43.280 | 42.785 | 39.940 | 41.415 | 41.335 |
| | Dividend ($) | 0.465 | 0.465 | 0.465 | 0.465 | 0.465 | 0.465 |
| | Mo. Avg. Div. | 4.52% | 4.30% | 4.35% | 4.66% | 4.49% | 4.50% |
| | 6 mos. Avg. | 4.47% | | | | | |
| **NiSource Inc.** | High Price ($) | 16.730 | 16.800 | 16.030 | 15.290 | 15.690 | 15.820 |
| | Low Price ($) | 14.130 | 15.860 | 14.860 | 14.250 | 14.240 | 14.330 |
| | Avg. Price ($) | 15.430 | 16.330 | 15.445 | 14.770 | 14.965 | 15.075 |
| | Dividend ($) | 0.230 | 0.230 | 0.230 | 0.230 | 0.230 | 0.230 |
| | Mo. Avg. Div. | 5.96% | 5.63% | 5.96% | 6.23% | 6.15% | 6.10% |
| | 6 mos. Avg. | 6.01% | | | | | |

**KENTUCKY AMERICAN WATER COMPANY**
**GAS DISTRIBUTION COMPANY COMPARISON GROUP**
**AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD**

| | | May-10 | Apr-10 | Mar-10 | Feb-10 | Jan-10 | Dec-09 |
|---|---|---|---|---|---|---|---|
| **Northwest Natural Gas** | High Price ($) | 48.570 | 49.180 | 47.540 | 44.840 | 45.820 | 46.470 |
| | Low Price ($) | 41.900 | 46.070 | 44.230 | 41.050 | 42.790 | 42.820 |
| | Avg. Price ($) | 45.235 | 47.625 | 45.885 | 42.945 | 44.305 | 44.645 |
| | Dividend ($) | 0.415 | 0.415 | 0.415 | 0.415 | 0.415 | 0.415 |
| | Mo. Avg. Div. | 3.67% | 3.49% | 3.62% | 3.87% | 3.75% | 3.72% |
| | 6 mos. Avg. | 3.68% | | | | | |
| **Piedmont Natural Gas** | High Price ($) | 27.970 | 28.520 | 28.040 | 25.980 | 27.100 | 27.840 |
| | Low Price ($) | 24.500 | 27.010 | 25.950 | 23.870 | 25.510 | 23.660 |
| | Avg. Price ($) | 26.235 | 27.765 | 26.995 | 24.925 | 26.305 | 25.750 |
| | Dividend ($) | 0.280 | 0.280 | 0.280 | 0.270 | 0.270 | 0.270 |
| | Mo. Avg. Div. | 4.27% | 4.03% | 4.15% | 4.33% | 4.11% | 4.19% |
| | 6 mos. Avg. | 4.18% | | | | | |
| **South Jersey Industries** | High Price ($) | 45.840 | 46.000 | 42.500 | 40.500 | 39.250 | 40.240 |
| | Low Price ($) | 41.170 | 41.980 | 39.630 | 37.190 | 37.390 | 36.090 |
| | Avg. Price ($) | 43.505 | 43.990 | 41.065 | 38.845 | 38.320 | 38.165 |
| | Dividend ($) | 0.330 | 0.330 | 0.330 | 0.330 | 0.330 | 0.330 |
| | Mo. Avg. Div. | 3.03% | 3.00% | 3.21% | 3.40% | 3.44% | 3.46% |
| | 6 mos. Avg. | 3.26% | | | | | |
| **Southwest Gas** | High Price ($) | 32.910 | 32.580 | 30.700 | 28.820 | 29.400 | 29.480 |
| | Low Price ($) | 28.120 | 30.060 | 28.830 | 26.280 | 27.600 | 26.330 |
| | Avg. Price ($) | 30.515 | 31.320 | 29.765 | 27.550 | 28.500 | 27.905 |
| | Dividend ($) | 0.250 | 0.238 | 0.238 | 0.238 | 0.238 | 0.238 |
| | Mo. Avg. Div. | 3.28% | 3.04% | 3.20% | 3.46% | 3.34% | 3.41% |
| | 6 mos. Avg. | 3.29% | | | | | |
| **WGL** | High Price ($) | 36.570 | 36.120 | 35.020 | 33.340 | 34.070 | 34.580 |
| | Low Price ($) | 33.000 | 34.330 | 32.880 | 31.000 | 31.630 | 31.430 |
| | Avg. Price ($) | 34.785 | 35.225 | 33.950 | 32.170 | 32.850 | 33.005 |
| | Dividend ($) | 0.378 | 0.378 | 0.368 | 0.368 | 0.368 | 0.368 |
| | Mo. Avg. Div. | 4.35% | 4.29% | 4.34% | 4.58% | 4.48% | 4.46% |
| | 6 mos. Avg. | 4.42% | | | | | |

**Average Dividend Yield** 4.29%

**Source: Yahoo! Finance**

**KENTUCKY AMERICAN WATER COMPANY**
**GAS DISTRIBUTION COMPANY 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 Financial |
|---|---|---|---|---|---|
| AGL Resources | 2.50% | 3.50% | 5.00% | 4.00% | 5.07% |
| Atmos Energy | 2.00% | 5.50% | 4.50% | 4.67% | 4.20% |
| LaClede Group | 2.50% | 2.50% | 5.00% | 3.00% | 3.50% |
| New Jersey Resources | 5.50% | 6.50% | 8.50% | N/A | 5.10% |
| Nicor Inc. | 0.00% | 2.50% | 4.00% | 3.67% | 2.70% |
| NiSource, Inc. | 0.50% | 5.00% | 2.50% | 3.00% | 2.63% |
| Northwest Natural Gas | 5.50% | 4.50% | 4.00% | 5.13% | 4.83% |
| Piedmont Natural Gas | 3.50% | 3.50% | 4.00% | 6.33% | 3.70% |
| South Jersey Industries | 6.00% | 7.00% | 7.50% | 9.50% | 7.50% |
| Southwest Gas | 5.00% | 8.00% | 5.00% | 6.00% | 3.30% |
| WGL Holdings | 3.00% | 2.50% | 4.00% | 3.05% | 3.05% |
| Averages excluding negative values | 3.27% | 4.64% | 4.91% | 4.84% | 4.14% |
| Median Values | 3.00% | 4.50% | 4.50% | 4.34% | 3.70% |
| Averages excl. > or =10% & < or = 1% | 3.94% | 4.64% | 4.91% | 4.84% | 4.14% |

**Sources: Zack's and First Call/Thomson Earnings Reports, retrieved May 28, 2010**
**Value Line Investment Survey, June 11, 2010**

**RETURN ON EQUITY CALCULATION**
**GAS DISTRIBUTION COMPANY COMPARISON GROUP**

| | (1) Value Line Dividend Gr. | (2) Value Line Earnings Gr. | (3) Zack's Earning Gr. | (4) First Call Earning Gr. | (5) Average of All Gr. Rates |
|---|---|---|---|---|---|
| Method 1: | | | | | |
| Dividend Yield | 4.29% | 4.29% | 4.29% | 4.29% | 4.29% |
| Growth Rate | 3.27% | 4.64% | 4.84% | 4.14% | 4.22% |
| Expected Div. Yield | 4.36% | 4.39% | 4.39% | 4.38% | 4.38% |
| ***DCF Return on Equity*** | ***7.63%*** | ***9.03%*** | ***9.23%*** | ***8.52%*** | ***8.60%*** |
| ***Midpoint of Results*** | | | | | ***8.43%*** |
| Method 2: | | | | | |
| Dividend Yield | 4.29% | 4.29% | 4.29% | 4.29% | 4.29% |
| Median Growth Rate | 3.00% | 4.50% | 4.34% | 3.70% | 3.88% |
| Expected Div. Yield | 4.35% | 4.38% | 4.38% | 4.37% | 4.37% |
| ***DCF Return on Equity*** | ***7.35%*** | ***8.88%*** | ***8.72%*** | ***8.07%*** | ***8.25%*** |
| ***Midpoint of Results*** | | | | | ***8.12%*** |
| Method 3: | | | | | |
| Dividend Yield | 4.13% | 4.29% | 4.29% | 4.29% | 4.25% |
| Growth Rate Excl. Rates > 10% & < or = 1% | 3.94% | 4.64% | 4.84% | 4.14% | 4.39% |
| Expected Div. Yield | 4.21% | 4.39% | 4.39% | 4.38% | 4.34% |
| DCF Return on Equity | ***8.15%*** | ***9.03%*** | ***9.23%*** | ***8.52%*** | ***8.73%*** |
| Midpoint of Results | | | | | ***8.69%*** |

**KENTUCKY AMERICAN WATER COMPANY**
**Capital Asset Pricing Model Analysis**
**Water Utility Comparison Group**

**20-Year Treasury Bond, Value Line Beta**

| Line No. | | Value Line |
|---|---|---|
| 1 | Market Required Return Estimate | |
| 2 | Expected Dividend Yield | 0.65% |
| 3 | Expected Growth | 10.74% |
| 4 | Required Return | 11.39% |
| 5 | Risk-free Rate of Return, 20-Year Treasury Bond | |
| 6 | Average of Last Six Months | 4.44% |
| 8 | Risk Premium | |
| 9 | @ 6 Month Average RFR (Line 4 minus Line 6) | 6.95% |
| 10 | Comparison Group Beta | 0.72 |
| 11 | Comparison Group Beta * Risk Premium | |
| 12 | @ 6 Month Average RFR (Line 10 * Line 9) | 5.02% |
| 13 | CAPM Return on Equity | |
| 14 | @ 6 Month Average RFR (Line 12 plus Line 6) | 9.46% |

**5-Year Treasury Bond, Value Line Beta**

| | | |
|---|---|---|
| 1 | Market Required Return Estimate | |
| 2 | Expected Dividend Yield | 0.65% |
| 3 | Expected Growth | 10.74% |
| 4 | Required Return | 11.39% |
| 5 | Risk-free Rate of Return, 5-Year Treasury Bond | |
| 6 | Average of Last Six Months | 2.40% |
| 8 | Risk Premium | |
| 9 | @ 6 Month Average RFR (Line 4 minus Line 6) | 8.98% |
| 10 | Comparison Group Beta | 0.72 |
| 11 | Comparison Group Beta * Risk Premium | |
| 12 | @ 6 Month Average RFR (Line 9 * Line 10) | 6.49% |
| 13 | CAPM Return on Equity | |
| 14 | @ 6 Month Average RFR (Line 12 plus Line 6) | 8.89% |

**KENTUCKY AMERICAN WATER COMPANY**
**Capital Asset Pricing Model Analysis**
**Water Utility Comparison Group**

**Supporting Data for CAPM Analyses**

20 Year Treasury Bond Data

| | Avg. Yield |
|---|---|
| November-09 | 4.24% |
| December-09 | 4.40% |
| January-10 | 4.50% |
| February-10 | 4.48% |
| March-10 | 4.49% |
| April-10 | 4.53% |
| 6 month average | 4.44% |

5 Year Treasury Bond Data

| | Avg. Yield |
|---|---|
| November-09 | 2.23% |
| December-09 | 2.34% |
| January-10 | 2.48% |
| February-10 | 2.36% |
| March-10 | 2.43% |
| April-10 | 2.58% |
| 6 month average | 2.40% |

Value Line Market Growth Rate Data:

| | |
|---|---|
| Forecasted Data: | |
| Earnings | 12.96% |
| Book Value | 8.51% |
| Average | 10.74% |

Source: Value Line Investment Survey for Windows, May 28, 2010

| Comparison Group Betas: | Value Line Beta |
|---|---|
| American States Water | 0.80 |
| American Water Works | 0.65 |
| Aqua America | 0.65 |
| California Water Service Group | 0.75 |
| Connecticut Water Services | 0.80 |
| Middlesex Water Company | 0.75 |
| Pennichuck Corp. | 0.50 |
| SJW Corp. | 0.95 |
| York Water Company | 0.65 |
| Group Average Beta | 0.72 |

Sources: Value Line reports

Exhibit ____ (RAB-9)

**KENTUCKY AMERICAN WATER COMPANY**
**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 | 5.10% | 5.20% |
| Historical Market Risk Premium | 4.70% | 6.60% |
| Comparison Group Beta, Value Line | 0.72 | 0.72 |
| Beta * Market Premium | 3.39% | 4.77% |
| Current 20-Year Treasury Bond Yield | 4.44% | 4.44% |
| **CAPM Cost of Equity** | **7.83%** | **9.21%** |

Source: *Ibbotson SBBI 2010 Valuation Yearbook,* Morningstar

**Exhibit ____(RAB-10)**

**KENTUCKY-AMERICAN WATER COMPANY**
**CASE NO. 2010-00036**
**COMMISSION STAFF'S THIRD SET OF INFORMATION REQUESTS**

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**Witness: Sheila Miller/Michael A. Miller/Keith Cartier**

4. Refer to Kentucky-American's responses to the Commission Staff's Second Information Request, Item 13(a).

   a. The average actual capitalization rate for the five-year period is 19.472 percent, which is approximately 2.118 percent greater than the five-year average budgeted capitalization rate of 17.624 percent. Given that, for the five-year period from 2005 through 2009, Kentucky-American under-budgeted its capitalization rate by 2.118 percent, explain why the forecasted capitalization should not be adjusted by this factor.

   b. Provide the impact that revising the forecasted capitalization rate from 17.624 percent to 18.742 percent would have upon Kentucky-American's revenue requirement. Include copies of all workpapers, assumptions, and calculations used to calculate the revenue requirement impact.

**Response:**

   a. The response to PSC-2-13, the response that generated the average numbers reflected in this question, was developed using hours (not dollars). The Company's experience in 2009 produced a result much closer to Plan than in prior years and reflects the Company's continuing efforts to improve actual to budget results. Attached to this response is a schedule that calculates the capital payroll ratio based on payroll dollars. This produced a capitalized payroll dollar ratio of 18.65%. On the attached schedule we then reflected the additional payroll dollars for the 6 new employees at the KRS II plant and the KRS superintendant with a capital rate of 5% (a large portion of this time was capitalized in 2009 due to assisting in managing the construction of the new treatment plant). This resulted in a capitalization rate of 17.72% versus the 17.34% used by the Company in its application. The Company believes that after operation of the new plant the 17.34% capitalization rate accurately reflects what will be in place in the forecasted test-year once the KRS II treatment plant is in service.

   b. Revising the forecasted capitalization rate from 17.34% to 18.742% results in a reduction of $211,276 to the Company's revenue requirement. Please refer to the attached working papers. While the Company has provided the information as requested, the Company continues to believe its 17.34% capitalization rate is appropriate for the forecasted test-year. See the response to part a. above.

   For the electronic version, refer to KAW_R_PSCDR3#4_052810.pdf.

**COMMONWEALTH OF KENTUCKY**
**BEFORE THE PUBLIC SERVICE COMMISSION**

| | | |
|---|---|---|
| **In The Matter Of:** | : | |
| **The Application of Kentucky-American Water** | : | **Case No. 2010-00036** |
| **Company for an Adjustment of Rates On and After** | : | |
| **March 28, 2010** | : | |

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 Kennedy & Associates;

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

Subscribed and sworn to or affirmed before me this 10th day of June, 2010, by Richard A. Baudino.

OFFICIAL SEAL
Notary Public, North Carolina
County of Forsyth
RICHARD H. REICH
My commission expires Feb. 11, 2012

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