Case No. 2010-00036 Exhibit JRW-1 Weighted Average Cost of Capital Page 1 of 1

Exhibit JRW-1 Kentucky-American Water Company Cost of Capital

| | Capitalization | Cost | Weighted |
|-----------------|----------------|-------|-----------|
| Capital Source | Ratio | Rate | Cost Rate |
| Short-Term Debt | 2.32% | 0.63% | 0.01% |
| Long-Term Debt | 52.06% | 6.32% | 3.29% |
| Preferred Stock | 1.65% | 7.75% | 0.13% |
| Common Equity | 43.97% | 9.25% | 4.07% |
| Total Capital | 100.00% | | 7.50% |

Panel A
Ten-Year Treasury Yields
1953-Present



Source: http://research.stlouisfed.org/fred2/data/GS10.txt

Panel B Long-Term Moody's Baa Yields Minus Ten-Year Treasury Yields 2000-Present

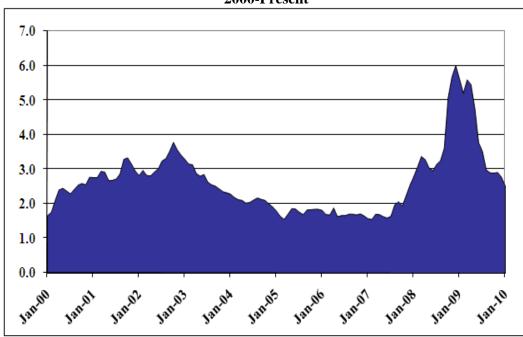
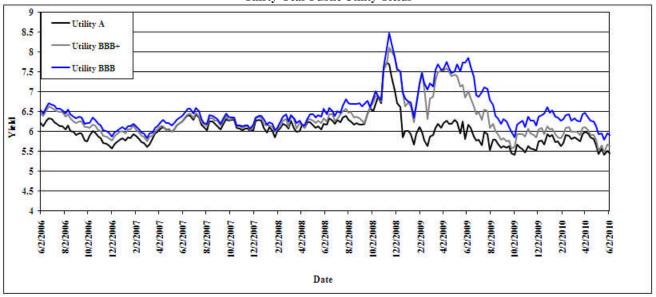


Exhibit JRW-3
Panel A
Thirty-Year Public Utility Yields



Panel B
Thirty-Year Public Utility Yield Spread Over Treasuries

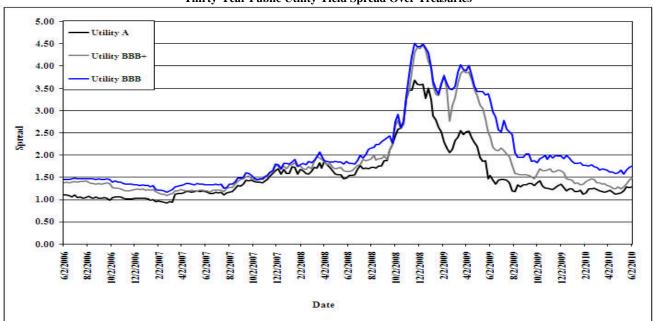


Exhibit JRW-4 Kentucky-American Water Company Summary Financial Statistics for Proxy Groups

Panel A Water Proxy Group

| | Operating | Percent | | | Moody's | Pre-Tax | | Common | | Market |
|--|-----------|---------|-----------|----------|---------|----------|----------------------|--------|-----------|---------|
| | Revenue | Water | Net Plant | S&P Bond | Bond | Interest | | Equity | Return on | to Book |
| Company | (\$mil) | Revenue | (\$mil) | Rating | Rating | Coverage | Primary Service Area | Ratio | Equity | Ratio |
| American States Water Co. (NYSE-AWR) | 371.6 | 74 | 769.0 | A | A2 | 3.5 | CA, AZ | 54.0 | 9.8% | 1.95 |
| | | | | | | | PA, OH, NJ, IL, ME, | | | 1 |
| Aqua America, Inc. (NYSE-WTR) | 676.6 | 97 | 2813.6 | AA- | NR | 3.4 | NC, TX, FL, KY | 44.0 | 9.8% | 2.19 |
| Artesian Resources Corp. (NDQ-ARTNA) | 62.0 | 87 | 255.3 | NR | NR | 1.8 | DE | 46.0 | 8.1% | 1.52 |
| California Water Service Group (NYSE-CWT) | 453.0 | 98 | 1095.8 | AA- | NR | 6.6 | CA,WA,NM | 51.0 | 7.3% | 1.94 |
| Connecticut Water Service, Inc. (NDQ-CTWS) | 68.0 | 90 | 274.7 | A | NR | 2.7 | CT | 49.0 | 9.7% | 1.81 |
| Middlesex Water Company (NDQ-MSEX) | 92.3 | 88 | 332.7 | A | NR | 3.4 | NJ, DE | 44.0 | 7.2% | 1.85 |
| Pennichuck Corporation (NDQ-PNNW) | 33.1 | 92 | 122.9 | NR | NR | 2.1 | NH | 48.0 | 6.3% | 2.04 |
| SJW Corporation (NYSE-SJW) | 216.5 | 96 | 536.5 | NR | NR | 2.2 | CA | 50.0 | 6.4% | 2.07 |
| York Water Company (NDQ-YORW) | 37.3 | 92 | 196.6 | Α- | NR | 3.1 | PA | 54.0 | 9.9% | 2.05 |
| Mean | 223.4 | 90 | 710.8 | A | | 3.2 | | 48.9 | 8.3% | 1.94 |
| Median | 92.3 | 92 | 332.7 | A | | 3.1 | | 49.0 | 8.1% | 1.95 |

Data Source: AUS Utility Reports, June, 2010; Pre-Tax Interest Coverage and Primary Service Territory are from Value Line Investment Survey, 2010.

Panel B Gas Proxy Group

| | Operating | Percent | | Ì | Moody's | Pre-Tax | | Common | | Market |
|---|-----------|---------|-----------|----------|---------|----------|----------------------|--------|-----------|---------|
| | Revenue | Gas | Net Plant | S&P Bond | Bond | Interest | | Equity | Return on | to Book |
| Company | (\$mil) | Revenue | (\$mil) | Rating | Rating | Coverage | Primary Service Area | Ratio | Equity | Ratio |
| AGL Resources Inc. (NYSE-ATG) | 2,325.0 | 63 | 4,211.0 | A- | A3 | 3.2 | GA,TN,VA,NJ | 48 | 13.3 | 1.62 |
| Atmos Energy Corporation (NYSE-ATO) | 4,664.5 | 61 | 4,590.5 | BBB+ | Baa2 | 2.8 | LA,KY,TX, CO,KS | 52 | 8.6 | 1.13 |
| Laclede Group, Inc. (NYSE-LG) | 1,688.4 | 54 | 865.8 | A | A2 | 4.3 | MO | 52 | 9.8 | 1.41 |
| NICOR Inc. (NYSE-GAS) | 2,734.2 | 81 | 2,942.4 | AA | A1 | 11.7 | IL | 68 | 13.7 | 1.82 |
| Northwest Natural Gas Co. (NYSE-NWN) | 861.9 | 97 | 1,707.2 | AA- | A1 | 2.3 | OR,WA | 49 | 10.5 | 1.80 |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 1,532.2 | 86 | 2,317.5 | A | A3 | 3.5 | NC,SC,TN | 48 | 18.9 | 2.02 |
| South Jersey Industries, Inc. (NYSE-SJI) | 812.6 | 54 | 1,083.1 | A | A2 | 5.9 | NJ | 53 | 10.6 | 2.39 |
| Southwest Gas Corporation (NYSE-SWX) | 1,872.7 | 85 | 3,082.9 | BBB | Baa3 | 2.6 | AZ,NV,CA | 51 | 9.1 | 1.27 |
| WGL Holdings, Inc. (NYSE-WGL) | 2,623.9 | 50 | 2,296.4 | AA- | A2 | 5.7 | DC,MD,VA | 62 | 10.0 | 1.53 |
| Mean | 2,123.9 | 70 | 2,566.3 | A | A3 | 4.7 | | 54 | 11.6 | 1.66 |
| Median | 1,872.7 | 63 | 2,317.5 | A | | 3.5 | | 52 | 10.5 | 1.62 |

Data Source: AUS Utility Reports, June, 2010; Pre-Tax Interest Coverage and Primary Service Territory are from Value Line Investment Survey, 2010.

Exhibit JRW-4 Kentucky-American Water Company Value Line Risk Metrics

Panel A Water Proxy Group

| | | | | Stock | | |
|--|------|--------|------------|-----------|--------------|----------|
| | | | Financial | Price | Price Growth | Earnings |
| Company | Beta | Safety | Strength | Stability | Persistence | Predict |
| American States Water Co. (NYSE-AWR) | 0.80 | 3 | B++ | 85 | 70 | 70 |
| Aqua America, Inc. (NYSE-WTR) | 0.65 | 3 | B + | 95 | 70 | 100 |
| Artesian Resources Corp. (NDQ-ARTNA) | | | | | | |
| California Water Service Group (NYSE-CWT) | 0.75 | 3 | B++ | 85 | 75 | 80 |
| Connecticut Water Service, Inc. (NDQ-CTWS) | 0.80 | 2 | B+ | 95 | 30 | 85 |
| Middlesex Water Company (NDQ-MSEX) | 0.75 | 2 | B+ | 95 | 40 | 90 |
| Pennichuck Corporation (NDQ-PNNW) | 0.50 | 3 | B+ | 90 | 50 | 30 |
| SJW Corporation (NYSE-SJW) | 0.95 | 3 | B+ | 65 | 75 | 85 |
| York Water Company (NDQ-YORW) | 0.65 | 3 | B+ | 85 | 55 | 95 |
| Mean | 0.73 | 3 | B+ | 87 | 58 | 79 |
| Median | 0.75 | 3 | B+ | 88 | 63 | 85 |

Data Source: Value Line Investment Survey, 2010.

Panel B Gas Proxy Group

| | is I I UAy (| Jioup | | | | |
|---|--------------|--------|-----------|-----------|--------------|----------|
| | | | | Stock | | |
| | | | Financial | Price | Price Growth | Earnings |
| Company | Beta | Safety | Strength | Stability | Persistence | Predict |
| AGL Resources Inc. (NYSE-ATG) | 0.75 | 2 | B++ | 100 | 75 | 95 |
| Atmos Energy Corporation (NYSE-ATO) | 0.65 | 2 | B+ | 100 | 50 | 90 |
| Laclede Group, Inc. (NYSE-LG) | 0.55 | 2 | B+ | 100 | 60 | 85 |
| NICOR Inc. (NYSE-GAS) | 0.75 | 3 | A | 100 | 45 | 85 |
| Northwest Natural Gas Co. (NYSE-NWN) | 0.60 | 1 | A | 100 | 70 | 95 |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 0.65 | 2 | B++ | 100 | 60 | 95 |
| South Jersey Industries, Inc. (NYSE-SJI) | 0.60 | 2 | B++ | 100 | 90 | 85 |
| Southwest Gas Corporation (NYSE-SWX) | 0.75 | 3 | В | 100 | 65 | 70 |
| WGL Holdings, Inc. (NYSE-WGL) | 0.65 | 1 | A | 100 | 50 | 95 |
| Mean | 0.66 | 2 | B++ | 100 | 63 | 88 |
| Median | 0.65 | 2 | B++ | 100 | 60 | 90 |

Data Source: Value Line Investment Survey, 2010.

Case No. 2010-00036 Exhibit JRW-4 Value Line Risk Metrics Page 3 of 3

Exhibit JRW-4 Kentucky-American Water Company Value Line Risk Metrics

Beta - A relative measure of the historical sensitivity of the stock's price to overall fluctuations in the New York Stock Exchange Composite Index. A Beta of 1.50 indicates a stock tends to rise (or fall) 50% more than the New York Stock Exchange Composite Index. The "Beta coefficient" is derived from a regression analysis of the relationship between weekly percentage changes in the price of a stock and weekly percentage changes in the NYSE Index over a period of five years. In the case of shorter price histories, a smaller time period is used, but two years is the minimum. The Betas are adjusted for their long-term tendency to converge toward 1.00. Additionally, Value Line shows betas computed based on monthly total returns for the trailing three year, five-year and 10-year periods.

Safety Rank - A measurement of potential risk associated with individual common stocks. The Safety Rank is computed by averaging two other Value Line indexes - the Price Stability Index and the Financial strength Rating. Safety Ranks range from 1 (Highest) to 5 (Lowest). Conservative investors should try to limit their purchases to equities ranked 1 (Highest) and 2 (Above Average) for Safety.

Financial Strength Rating - A relative measure of financial strength of the companies reviewed by Value Line. The relative ratings range from A++ (strongest) down to C (weakest), in nine steps.

Price Stability Index - A measure of the stability of a stock's price. It includes sensitivity to the market (see Beta) as well as the stock's inherent volatility. Value Line Stability ratings range from 100 (highest) to 5 (lowest).

Price Growth Persistence - The historic tendency of a stock to show persistent growth compared with the average stock. Expressed as an index ranging from 100 (highest) to 5 (lowest) in increments of 5.

Earnings Predictability Index - A measure of the reliability of an earnings forecast. Predictability is based upon the stability of year-to-year comparisons, with recent years being weighted more heavily that earlier ones. The most reliable forecasts tend to be those with the highest rating (100); the least reliable, the lowest (5). The earnings stability is derived from the standard deviation of percentage changes in quarterly earnings over an eight-year period. Special adjustments are made for comparisons around zero and from plus to minus.

Exhibit JRW-5 Kentucky-American Water Company Capital Structure Ratios

Panel A - Kentucky-American Water Company Recommended Capitalization Ratios and Debt Cost Rate

| | Capitalization | Cost |
|-----------------|----------------|-------|
| Capital | Ratios | Rate |
| Short-Term Debt | 2,32% | 2.08% |
| Long-Term Debt | 52.06% | 6.41% |
| Preferred Stock | 1.65% | 7.75% |
| Common Equity | 43.97% | |
| Total Capital | 100.00% | |

Panel B - Water Proxy Group Average Quarterly Capital Structure Ratios

| Capital | QTR1 | QTR2 | QTR3 | QTR4 | Average |
|-----------------|---------|---------|---------|---------|---------|
| Short-Term Debt | 6.16% | 5.52% | 5.99% | 6.29% | 5.99% |
| Long-Term Debt | 48.45% | 49.49% | 49.29% | 48.08% | 48.83% |
| Preferred Stock | 0.16% | 0.18% | 0.18% | 0.17% | 0.17% |
| Common Equity | 45.22% | 44.81% | 44.54% | 45.46% | 45.01% |
| Total Capital | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

^{*} See page 2 of Exhibit JRW-5.

Panel C - OAG Recommended Capital Structure

| | Capitalization | Cost |
|-----------------|----------------|-------|
| Capital | Ratios | Rate |
| Short-Term Debt | 2.32% | 0.63% |
| Long-Term Debt | 52.06% | 6.32% |
| Preferred Stock | 1.65% | 7.75% |
| Common Equity | 43.97% | |
| Total Capital | 100.00% | |

Exhibit JRW-5 Kentucky-American Water Company <u>Capital Structure Ratios</u>

Water Proxy Group

| - | | | | | Water Proxy Grou | up | | | | |
|--------|-----------------|--------------------|-----------|------------|------------------|-----------------|----------|----------|----------|----------|
| AWR | | QTR1 | QTR2 | QTR3 | QTR4 AWR | | QTR1 | QTR2 | QTR3 | QTR4 |
| | Short Term Debt | 21,198 | 15,914 | 55,010 | 75,336 | Short Term Debt | 2.75% | 2.09% | 8.17% | 11.55% |
| | Long-Term Debt | 390,917 | 391,957 | 306,469 | 266,536 | Long-Term Debt | 50.65% | 51.45% | 45.52% | 40.86% |
| | Preferred Stock | | | | | Preferred Stock | 0.00% | 0.00% | 0.00% | 0.00% |
| | Common Equity | 359,747 | 353,979 | 311,857 | 310,503 | Common Equity | 46.61% | 46.46% | 46.32% | 47.60% |
| | Total | 771,862 | 761,850 | 673,336 | 652,375 | Total | 100.00% | 100.00% | 100.00% | 100.00% |
| WTR | | | | | WTR | | | | | |
| | Short Term Debt | 131,394 | 124,737 | 111,940 | 87,886 | Short Term Debt | 5.15% | 4.98% | 3.86% | 3.56% |
| | Long-Term Debt | 1,343,289 | 1,305,742 | 1,726,068 | 1,321,059 | Long-Term Debt | 52.64% | 52.11% | 59.50% | 53.54% |
| | Preferred Stock | | | | | Preferred Stock | 0.00% | 0.00% | 0.00% | 0.00% |
| | Common Equity | 1,077,356 | 1,075,441 | 1,062,794 | 1,058,446 | Common Equity | 42.22% | 42.92% | 36.64% | 42.90% |
| | Total | 2,552,039 | 2,505,920 | 2,900,802 | 2,467,391 | Total | 100.00% | 100.00% | 100.00% | 100.00% |
| ARTNA | | | | | ARTNA | | | | | |
| | Short Term Debt | 27,694 | 24,114 | 21,606 | 21,802 | Short Term Debt | 11.33% | 10.01% | 9.94% | 10.04% |
| | Long-Term Debt | 126,020 | 127,365 | 107,277 | 107,555 | Long-Term Debt | 51.56% | 52.88% | 49.37% | 49.53% |
| | Preferred Stock | .,. | .,. | | , | Preferred Stock | 0.00% | 0.00% | 0.00% | 0.00% |
| | Common Equity | 90,688 | 89,390 | 88,400 | 87,794 | Common Equity | 37.11% | 37.11% | 40.68% | 40.43% |
| | Total | 244,402 | 240,869 | 217,283 | 217,151 | Total | 100.00% | 100.00% | 100.00% | 100.00% |
| CWT | 10111 | 2,.02 | 2.0,00> | 217,200 | CWT | 10111 | 100.0070 | 100.0070 | 100.0070 | 100.0070 |
| CWI | Short Term Debt | 24,424 | 14,664 | 54,891 | 42,818 | Short Term Debt | 2.99% | 1.85% | 7.40% | 5.84% |
| | Long-Term Debt | 374,269 | 373,541 | 287,202 | 287,498 | Long-Term Debt | 45.74% | 47.05% | 38.72% | 39.21% |
| | Preferred Stock | 374,209 | 373,341 | 201,202 | 201,490 | Preferred Stock | 0.00% | 0.00% | 0.00% | 0.00% |
| | | 410 402 | 105 756 | 200 571 | 402.040 | Common Equity | 51.27% | 51.11% | 53.87% | 54.95% |
| | Common Equity | 419,492 818,185 | 405,756 | 399,571 | 402,949 | | 100.00% | 100.00% | | 100.00% |
| CTMC | Total | 818,183 | 793,961 | 741,664 | 733,265 | Total | 100.00% | 100.00% | 100.00% | 100.00% |
| CTWS | Cl T D. 1. | 21.607 | 17.770 | 16161 | CTWS | Cl T D. L. | 12.570/ | 0.200/ | 7.610/ | 5 700/ |
| | Short Term Debt | 31,607 | 17,779 | 16,161 | 12,081 | Short Term Debt | 13.57% | 8.28% | 7.61% | 5.79% |
| | Long-Term Debt | 92,020 | 92,094 | 92,216 | 92,227 | Long-Term Debt | 39.50% | 42.88% | 43.43% | 44.22% |
| | Preferred Stock | 772 | 772 | 772 | 772 | Preferred Stock | 0.33% | 0.36% | 0.36% | 0.37% |
| | Common Equity | 108,539 | 104,146 | 103,192 | 103,476 | Common Equity | 46.60% | 48.49% | 48.60% | 49.62% |
| | Total | 232,938 | 214,791 | 212,341 | 208,556 | Total | 100.00% | 100.00% | 100.00% | 100.00% |
| MSEX | | | | | MSEX | | | | | |
| | Short Term Debt | 3,643 | 3,463 | 3,323 | 17,985 | Short Term Debt | 1.24% | 1.27% | 1.24% | 6.01% |
| | Long-Term Debt | 148,052 | 128,845 | 124,351 | 140,306 | Long-Term Debt | 50.19% | 47.09% | 46.37% | 46.85% |
| | Preferred Stock | 3,373 | 3,373 | 3,375 | 3,375 | Preferred Stock | 1.14% | 1.23% | 1.26% | 1.13% |
| | Common Equity | 139,900 | 137,906 | 137,106 | 137,803 | Common Equity | 47.43% | 50.41% | 51.13% | 46.02% |
| | Total | 294,968 | 273,587 | 268,155 | 299,469 | Total | 100.00% | 100.00% | 100.00% | 100.00% |
| PNNW | | | | | PNNW | | | | | |
| | Short Term Debt | 13,942 | 13,863 | 12,636 | 6,664 | Short Term Debt | 12.01% | 12.03% | 11.07% | 4.56% |
| | Long-Term Debt | 54,235 | 54,314 | 54,534 | 91,701 | Long-Term Debt | 46.73% | 47.11% | 47.76% | 62.75% |
| | Preferred Stock | | | | | Preferred Stock | 0.00% | 0.00% | 0.00% | 0.00% |
| | Common Equity | 47,877 | 47,107 | 47,012 | 47,780 | Common Equity | 41.25% | 40.86% | 41.17% | 32.69% |
| | Total | 116,054 | 115,284 | 114,182 | 146,145 | Total | 100.00% | 100.00% | 100.00% | 100.00% |
| SJW | | | | | SJW | | | | | |
| | Short Term Debt | 5,081 | 3,728 | 17,436 | 19,105 | Short Term Debt | 0.88% | 0.65% | 3.08% | 3.90% |
| | Long-Term Debt | 316,832 | 318,094 | 299,547 | 216,613 | Long-Term Debt | 54.98% | 55.86% | 52.90% | 44.20% |
| | Preferred Stock | ., | -, | , - | * | Preferred Stock | 0.00% | 0.00% | 0.00% | 0.00% |
| | Common Equity | 254,407 | 247,603 | 249,272 | 254,326 | Common Equity | 44.14% | 43.48% | 44.02% | 51.90% |
| | Total | 576,320 | 569,425 | 566,255 | 490,044 | Total | 100.00% | 100.00% | 100.00% | 100.00% |
| YORW | | | , | , | YORW | | | | | |
| 101011 | Short Term Debt | 9,341 | 14,341 | 2,741 | 8,741 | Short Term Debt | 5.56% | 8.56% | 1.50% | 5.39% |
| | Long-Term Debt | 74,008 | 82,154 | 109,745 | 83,612 | Long-Term Debt | 44.09% | 49.02% | 60.05% | 51.57% |
| | Preferred Stock | 7-1,000 | 02,134 | 107,743 | 05,012 | Preferred Stock | 0.00% | 0.00% | 0.00% | 0.00% |
| | Common Equity | 84,507 | 71,097 | 70,280 | 69,766 | Common Equity | 50.34% | 42.42% | 38.45% | 43.03% |
| | Total | 167,856 | 167,592 | 182,766 | 162,119 | Total | 100.00% | 100.00% | 100.00% | 100.00% |
| | 10.01 | 107,050 | 101,372 | 102,700 | | 10.01 | | | | |
| | | | | | Summary | Chart Tarre Dal | QTR1 | QTR2 | QTR3 | QTR4 |
| | | | | | | Short Term Debt | 6.16% | 5.52% | 5.99% | 6.29% |
| | | | | | | Long-Term Debt | 48.45% | 49.49% | 49.29% | 48.08% |
| | | | | | | Preferred Stock | 0.16% | 0.18% | 0.18% | 0.17% |
| | | | | | | Common Equity | 45.22% | 44.81% | 44.54% | 45.46% |
| | | | | | | Total | 100.00% | 100.00% | 100.00% | 100.00% |

Case No. 2010-00036 Exhibit JRW-5 Short-Term Debt Cost Rate Page 3 of 4

Exhibit JRW-5 Kentucky-American Water Company Short-Term Debt Cost Rate

| Average Spread Paid by KAWC on Short-Term Debt* | 0.3847% |
|---|---------|
| Fed Funds Rate** | 0.2500% |
| Short-Term Debt Cost Rate | 0.6347% |

Data Sources:

* KAWC Exhibit MAM-6

** www.bloomberg.com, May 25, 2010

| Key Rates | | | | | |
|-------------------------|---------|------------|------------|------------|------------|
| | CURRENT | 1 MO PRIOR | 3 MO PRIOR | 6 MO PRIOR | 1 YR PRIOR |
| Fed Funds Rate | .22 | .21 | .12 | .13 | .12 |
| Fed Reserve Target Rate | .25 | .25 | .25 | .25 | .25 |

Exhibit JRW-5 Kentucky-American Water Company Long-Term Debt Cost Rate

Panel A Yield on Proposed \$25M 30-Year Bond Issue - September 2010

Recent Yields - BBB Utilities - 30-Year Treasuries

| <u>Date</u> | Yield |
|-----------------|-------------|
| 05/07/10 | 5.92 |
| 05/14/10 | 5.94 |
| 05/21/10 | 5.79 |
| 05/28/10 | 5.95 |
| <u>06/04/10</u> | <u>5.90</u> |
| Average | 5.90 |

Source: Bloomberg

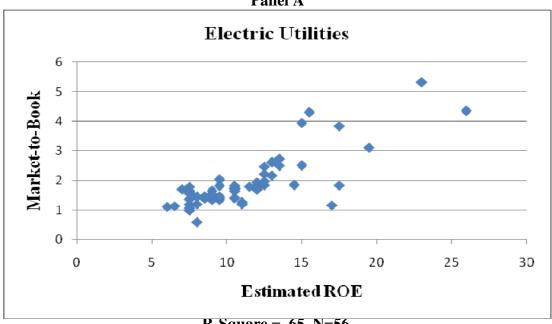
Panel B Long-Term Debt Cost Rate

KENTUCKY-AMERICAN WATER COMPANY LONG-TERM DEBT AVERAGING FOR FORECASTED PERIOD 13 MONTH AVERAGE

| Debt Issue | • | | • | Forecasted | | Average | Net |
|-----------------------|-------------|---------------|------------|--------------|------------|-------------|--------------|
| Type & | 13 Month | Cost Rate | Cost Rate | Amort of | Annualized | Unamortized | Carrying |
| Rate | Average | At Issue | @ Maturity | Issuance Exp | Cost | Issue Exp | Value |
| Series 6.87% | - | 6.87% | - | 26,040 | - | 8,812 | -8812.36 |
| Series 6.96% | 7,000,000 | 6.96% | 0 | 2,294 | 489,510 | 29,055 | 6970945.20 |
| Series 7.15% | 7,500,000 | 7.15% | 0 | 2,424 | 538,650 | 38,464 | 7461535.54 |
| Series 6.99% | 9,000,000 | 6.99% | 0 | 3,264 | 632,340 | 55,992 | 8944007.96 |
| Series 6.58% | 47,000,000 | 6.58% | 0 | 15,962 | 3,108,580 | 440,525 | 46559475.34 |
| Series 6.25% | 45,390,000 | 6.25% | 0 | 20,390 | 2,857,301 | 574,323 | 44815677.16 |
| Series 5.625% | 26,000,000 | 5.63% | 0 | 11,064 | 1,473,680 | 362,216 | 25637783.88 |
| Prop 5.625%(tax exemp | 26,000,000 | 5.63% | 0 | 8,667 | 1,471,080 | 252,778 | 25747222.22 |
| Proposed 5.90% | 21,153,846 | <u>5.90</u> % | 0 | 7,639 | 1,255,692 | 208,013 | 20945833.33 |
| TOTAL | 189,043,846 | | | 97,743 | 11,826,833 | 1,970,178 | 187073668.27 |
| 13 MONTH AVERAGE (| COST RATE | | 6.32% | | | | |

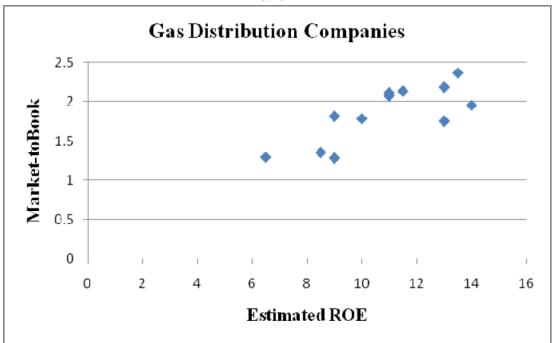
Source: Work Papers of KAWC Witness Michael Miller

Panel A



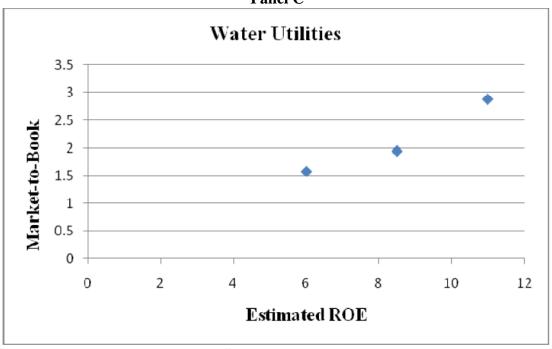
R-Square = .65, N=56.

Panel B



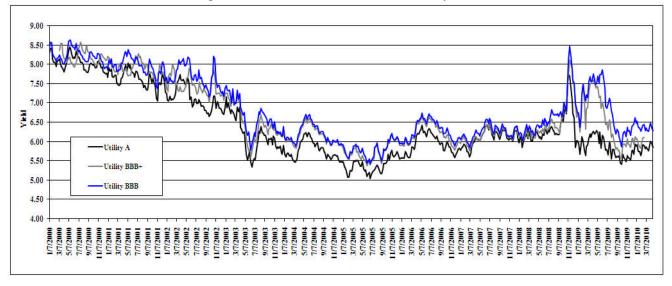
R-Square = .60, N=12.

Panel C

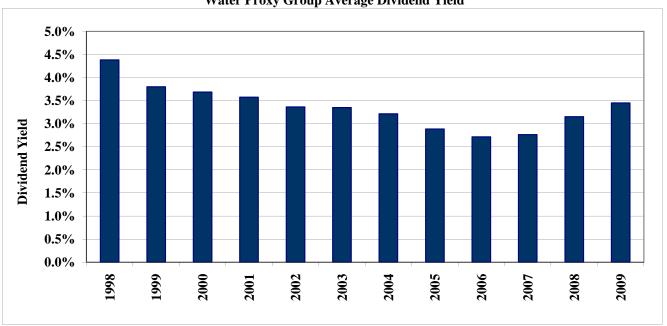


R-Square = .92, N=4.

Exhibit JRW-7 Long-Term A, BBB+, and BBB Rated Public Utility Bonds



Panel A
Water Proxy Group Average Dividend Yield

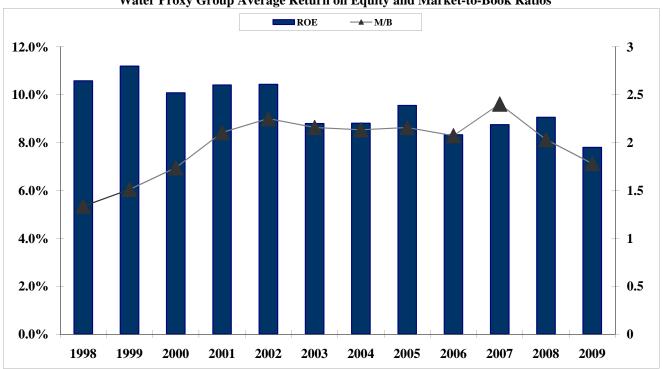


Panel B
Gas Proxy Group Average Dividend Yield

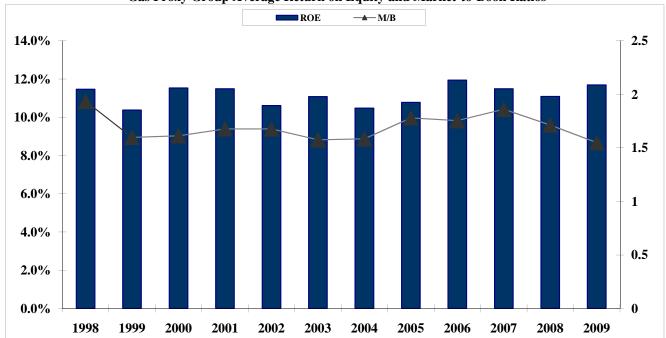


Data Source: Value Line Investment Survey.

Panel A
Water Proxy Group Average Return on Equity and Market-to-Book Ratios



Panel B
Gas Proxy Group Average Return on Equity and Market-to-Book Ratios



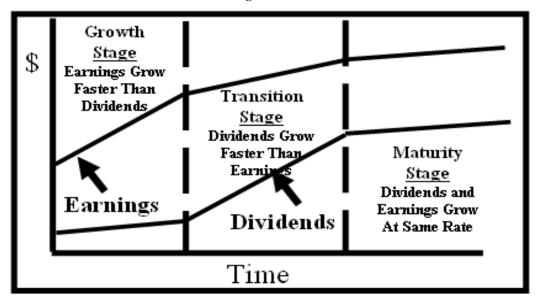
Data Source: Value Line Investment Survey.

Industry Average Betas

| Industry Name | No. | Beta | Industry Name | | Beta | Industry Name | No. | Beta |
|-------------------------|-----|------|------------------------|-----|------|--------------------------|------|------|
| Public/Private Equity | 9 | 2.40 | Retail Store | 43 | 1.35 | Telecom. Services | 140 | 1.10 |
| Newspaper | 15 | 1.94 | Restaurant | 68 | 1.34 | Biotechnology | 121 | 1.10 |
| Semiconductor Equip | 14 | 1.93 | Shoe | 19 | 1.34 | Industrial Services | 168 | 1.07 |
| Steel (Integrated) | 15 | 1.85 | Machinery | 130 | 1.32 | Reinsurance | 8 | 1.07 |
| Entertainment | 95 | 1.81 | Entertainment Tech | 35 | 1.32 | Utility (Foreign) | 5 | 1.07 |
| Auto Parts | 54 | 1.75 | Apparel | 56 | 1.30 | Air Transport | 44 | 1.06 |
| Hotel/Gaming | 74 | 1.74 | Trucking | 33 | 1.30 | Medical Supplies | 264 | 1.04 |
| Auto & Truck | 22 | 1.72 | Railroad | 15 | 1.29 | Internet | 239 | 1.04 |
| Cable TV | 24 | 1.69 | Natural Gas (Div.) | 32 | 1.29 | Beverage | 41 | 1.04 |
| Coal | 21 | 1.67 | Chemical (Specialty) | 97 | 1.29 | Computer Software/Svcs | 333 | 1.02 |
| Paper/Forest Products | 39 | 1.63 | Computers/Peripherals | 129 | 1.29 | Medical Services | 162 | 0.97 |
| Property Management | 20 | 1.63 | Information Services | 29 | 1.28 | Healthcare Information | 33 | 0.97 |
| Steel (General) | 20 | 1.61 | Chemical (Basic) | 17 | 1.27 | Environmental | 91 | 0.97 |
| Advertising | 36 | 1.60 | Petroleum (Integrated) | 24 | 1.24 | Bank (Midwest) | 39 | 0.96 |
| R.E.I.T. | 143 | 1.60 | Precision Instrument | 98 | 1.24 | Retail Building Supply | 7 | 0.95 |
| Semiconductor | 125 | 1.56 | Power | 77 | 1.23 | Insurance (Prop/Cas.) | 85 | 0.92 |
| Metal Fabricating | 36 | 1.54 | Toiletries/Cosmetics | 19 | 1.23 | Oil/Gas Distribution | 19 | 0.89 |
| Furn/Home Furnishings | 35 | 1.52 | Metals & Mining (Div.) | 79 | 1.23 | Pharmacy Services | 21 | 0.88 |
| Wireless Networking | 60 | 1.50 | Manuf. Housing/RV | 15 | 1.21 | Bank (Canadian) | 7 | 0.86 |
| Retail Automotive | 15 | 1.46 | Diversified Co. | 121 | 1.20 | Food Processing | 121 | 0.86 |
| Oilfield Svcs/Equip. | 113 | 1.45 | Packaging & Container | 31 | 1.20 | Water Utility | 15 | 0.82 |
| Homebuilding | 28 | 1.45 | Office Equip/Supplies | 25 | 1.19 | Electric Util. (Central) | 23 | 0.79 |
| Building Materials | 53 | 1.45 | Funeral Services | 5 | 1.19 | Tobacco | 12 | 0.78 |
| Publishing | 30 | 1.43 | Aerospace/Defense | 67 | 1.19 | Investment Co. | 19 | 0.76 |
| Retail (Special Lines) | 157 | 1.43 | Precious Metals | 78 | 1.18 | Electric Utility (West) | 14 | 0.75 |
| Recreation | 65 | 1.43 | E-Commerce | 56 | 1.18 | Educational Services | 38 | 0.75 |
| Heavy Construction | 14 | 1.42 | Canadian Energy | 10 | 1.18 | Bank | 481 | 0.75 |
| Electrical Equipment | 87 | 1.41 | Securities Brokerage | 30 | 1.18 | Electric Utility (East) | 24 | 0.73 |
| Financial Svcs. (Div.) | 296 | 1.39 | Electronics | 183 | 1.16 | Thrift | 227 | 0.73 |
| Investment Co.(Foreign) | 16 | 1.39 | Petroleum (Producing) | 198 | 1.16 | Retail/Wholesale Food | 32 | 0.73 |
| Maritime | 53 | 1.38 | Household Products | 23 | 1.15 | Natural Gas Utility | 24 | 0.68 |
| Human Resources | 30 | 1.38 | Telecom. Equipment | 115 | 1.15 | Total Market | 7036 | 1.17 |
| Insurance (Life) | 31 | 1.38 | Foreign Electronics | 9 | 1.13 | | | |
| Chemical (Diversified) | 31 | 1.37 | Drug | 337 | 1.11 | | | |
| Source: Demoderan Onlin | | | | | | | | |

Source: Damodaran Online

Exhibit JRW-9 Three-Stage DCF Model



Source: William F. Sharpe, Gordon J. Alexander, and Jeffrey V. Bailey, Investments (Prentice-Hall, 1995), pp. 590-91.

Kentucky-American Water Company Discounted Cash Flow Analysis

Panel A Water Proxy Group

| <u> </u> | |
|--------------------------------|--------------|
| Dividend Yield* | 3.25% |
| Adjustment Factor $(1 + 1/2g)$ | <u>1.03</u> |
| Adjusted Dividend Yield | 3.35% |
| Growth Rate** | <u>6.00%</u> |
| Equity Cost Rate | 9.3% |

^{*} Page 2 of Exhibit JRW-10

Panel B Gas Proxy Group

| <u> </u> | |
|--------------------------------|--------------|
| Dividend Yield* | 4.30% |
| Adjustment Factor $(1 + 1/2g)$ | 1.0225 |
| Adjusted Dividend Yield | 4.40% |
| Growth Rate** | <u>4.50%</u> |
| Equity Cost Rate | 8.9% |

^{*} Page 2 of Exhibit JRW-10

^{**} Based on data provided on pages 3, 4, 5, 6, and 7 of Exhibit JRW-10

^{**} Based on data provided on pages 3, 4, 5, 6, and 7 of Exhibit JRW-10

Kentucky-American Water Company Monthly Dividend Yields

Panel A Water Proxy Group

| | | ong oroup | | | | | |
|--|------|-----------|------|------|------|------|------|
| Company | Jan | Feb | Mar | Apr | May | Jun | Mean |
| American States Water Co. (NYSE-AWR) | 3.0% | 3.0% | 3.2% | 3.2% | 2.8% | 2.7% | 3.0% |
| Aqua America, Inc. (NYSE-WTR) | 3.4% | 3.3% | 3.4% | 3.4% | 3.2% | 3.2% | 3.3% |
| Artesian Resources Corp. (NDQ-ARTNA) | 4.4% | 4.1% | 4.1% | 4.1% | 4.1% | 4.1% | 4.2% |
| California Water Service Group (NYSE-CWT) | 3.2% | 3.1% | 3.3% | 3.2% | 3.1% | 3.1% | 3.2% |
| Connecticut Water Service, Inc. (NDQ-CTWS) | 3.7% | 3.8% | 4.0% | 3.8% | 3.9% | 4.0% | 3.9% |
| Middlesex Water Company (NDQ-MSEX) | 4.3% | 4.2% | 4.4% | 4.1% | 4.1% | 3.9% | 4.2% |
| Pennichuck Corporation (NDQ-PNNW) | 3.4% | 3.4% | 3.6% | 3.4% | 3.1% | 3.0% | 3.3% |
| SJW Corporation (NYSE-SJW) | 3.0% | 2.8% | 3.1% | 2.9% | 2.5% | 2.4% | 2.8% |
| York Water Company (NDQ-YORW) | 3.4% | 3.6% | 3.7% | 3.6% | 3.6% | 3.6% | 3.6% |
| Mean | 3.5% | 3.5% | 3.6% | 3.5% | 3.4% | 3.3% | 3.5% |
| Median | 3.4% | 3.4% | 3.6% | 3.4% | 3.2% | 3.2% | 3.3% |

Data Source: AUS *Utility Reports*, monthly issues.

Panel B Gas Proxy Group

| Company | Jan | Feb | Mar | Apr | May | Jun | Mean |
|---|------|------|------|------|------|------|------|
| AGL Resources Inc. (NYSE-ATG) | 4.7% | 4.6% | 4.9% | 4.7% | 4.6% | 4.6% | 4.7% |
| Atmos Energy Corporation (NYSE-ATO) | 4.6% | 4.6% | 4.9% | 4.7% | 4.6% | 4.7% | 4.7% |
| Laclede Group, Inc. (NYSE-LG) | 4.7% | 4.7% | 4.9% | 4.7% | 4.6% | 4.4% | 4.7% |
| NICOR Inc. (NYSE-GAS) | 4.4% | 4.4% | 4.7% | 4.3% | 4.3% | 4.3% | 4.4% |
| Northwest Natural Gas Co. (NYSE-NWN) | 3.7% | 3.7% | 3.8% | 3.6% | 3.5% | 3.5% | 3.6% |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 4.2% | 4.1% | 4.3% | 4.1% | 4.1% | 4.1% | 4.2% |
| South Jersey Industries, Inc. (NYSE-SJI) | 3.5% | 3.4% | 3.4% | 3.2% | 3.1% | 2.9% | 3.3% |
| Southwest Gas Corporation (NYSE-SWX) | 3.3% | 3.3% | 3.4% | 3.4% | 3.2% | 3.1% | 3.3% |
| WGL Holdings, Inc. (NYSE-WGL) | 4.4% | 4.5% | 4.5% | 4.5% | 4.3% | 4.2% | 4.4% |
| Mean | 4.2% | 4.1% | 4.3% | 4.1% | 4.0% | 4.0% | 4.1% |
| Median | 4.4% | 4.4% | 4.5% | 4.3% | 4.3% | 4.2% | 4.4% |

Exhibit JRW-10 Kentucky-American Water Company DCF Equity Cost Growth Rate Measures Historic Growth Rates

| | roxy Group | | | oxy Group | 40.77 |
|--------------------------|------------|---------|--------------------------|------------|---------|
| EPS Growth Rates | 5-Year | 10-Year | EPS Growth Rates | 5-Year | 10-Year |
| AWR | 9.06% | | ATG | 4.86% | 12.25% |
| WTR | 3.77% | | ATO | 4.51% | 9.29% |
| ARTNA | 6.14% | | LG | 9.92% | 7.10% |
| CWT | 5.96% | | GAS | 5.99% | 1.46% |
| CTWS | 0.51% | | NWN | 8.29% | 5.00% |
| MSEX | -0.28% | | PNY | 5.63% | 6.03% |
| PNNW | -1.73% | | SJI | 8.54% | 8.95% |
| SJW | -1.42% | | SWX | 3.17% | 4.33% |
| YORW | 5.49% | | WGL | 5.02% | 5.58% |
| Mean | 3.06% | | Mean | 6.21% | 6.67% |
| Median | 3.77% | 2.46% | Median | 5.63% | 6.03% |
| DPS Growth Rates | 5-Year | 10-Year | DPS Growth Rates | 5-Year | 10-Year |
| AWR | 2.56% | 1.74% | ATG | 8.38% | 4.76% |
| WTR | 8.37% | 7.41% | ATO | 1.59% | 1.84% |
| ARTNA | 6.28% | | LG | 2.53% | 1.33% |
| CWT | 0.87% | | GAS | 0.00% | 1.91% |
| CTWS | 1.51% | | NWN | 4.24% | 2.66% |
| MSEX | 1.38% | | PNY | 4.64% | 4.64% |
| PNNW | 1.49% | | SJI | 8.27% | 5.42% |
| SJW | 5.29% | | SWX | 2.99% | 1.48% |
| YORW | 5.30% | | WGL | 2.57% | 1.88% |
| Mean | 3.67% | | Mean | 3.91% | 2.88% |
| Median | 2.56% | | Median | 2.99% | 1.91% |
| | | | | <u>l</u> | |
| BVPS Growth Rates | 5-Year | 10-Year | BVPS Growth Rates | 5-Year | 10-Year |
| AWR | 5.25% | 5.07% | ATG | 4.91% | 7.07% |
| WTR | 6.63% | | ATO | 5.44% | 6.88% |
| ARTNA | 5.65% | | LG | 6.58% | 4.54% |
| CWT | 5.29% | | GAS | 6.18% | 3.16% |
| CTWS | 2.98% | | NWN | 3.81% | 3.81% |
| MSEX | 4.27% | | PNY | 2.59% | 4.89% |
| PNNW | 4.84% | | SJI | 8.05% | 10.49% |
| SJW | 6.20% | | SWX | 4.98% | 4.13% |
| YORW | 8.28% | | WGL | 5.25% | 4.05% |
| Mean | 5.49% | | Mean | 5.31% | 5.45% |
| Median | 5.29% | | Median | 5.25% | 4.54% |
| Average (of Medians) | 3.87% | 3.52% | Average (of Medians | 4.62% | 4.16% |
| | 5-Year | 10-Year | | 5-Year | 10-Year |
| Overall Average | 3.87% | | Overall Average | 4.62% | 4.16% |
| Average of 5-Year and | 110-Vaar | 3.7% | Average of 5-Year an | d 10-Voor | 4.4% |
| Average of 3-1 car allo | 1 10-1 641 | J.1 /0 | Average of 3-1 car all | u 10-1 cai | 7.7 /0 |

Kentucky-American Water Company DCF Equity Cost Growth Rate Measures Value Line Historic Growth Rates

Panel A Water Proxy Group

| | Value Line Historic Growth | | | | | | | | | |
|--|----------------------------|--------------|---------------|--------------|-----------|---------------|--|--|--|--|
| Company | P | ast 10 Years | S | Past 5 Years | | | | | | |
| | Earnings | Dividends | Book Value | Earnings | Dividends | Book Value | | | | |
| American States Water Co. (NYSE-AWR) | 4.0% | 1.5% | 4.5% | 8.5% | 2.5% | 5.0% | | | | |
| Aqua America, Inc. (NYSE-WTR) | 7.5% | 7.0% | 9.5% | 5.5% | 8.0% | 10.0% | | | | |
| Artesian Resources Corp. (NDQ-ARTNA) | | | | | | | | | | |
| California Water Service Group (NYSE-CWT) | 1.0% | 1.0% | 4.0% | 6.5% | 1.0% | 6.0% | | | | |
| Connecticut Water Service, Inc. (NDQ-CTWS) | | | | -0.5% | 1.5% | 3.0% | | | | |
| Middlesex Water Company (NDQ-MSEX) | | | | 3.5% | 1.5% | 5.5% | | | | |
| Pennichuck Corporation (NDQ-PNNW) | | | | 1.0% | 1.5% | 3.5% | | | | |
| SJW Corporation (NYSE-SJW) | | | | 3.0% | 5.5% | 8.0% | | | | |
| York Water Company (NDQ-YORW) | | | | 5.5% | 6.0% | 8.5% | | | | |
| Mean | 4.2% | 3.2% | 6.0% | 4.1% | 3.4% | 6.2% | | | | |
| Median | 4.0% | 1.5% | 4.5% | 4.5% | 2.0% | 5.8% | | | | |
| Data Source: Value Line Investment Survey, 2010. | Average o | f Median Fi | gures = | 3.7% | | | | | | |

Panel B Gas Proxy Group

| | Value Line Historic Growth | | | | | | | | |
|--|----------------------------|--------------|---------------|--------------|-----------|---------------|--|--|--|
| Company | P | ast 10 Years | S | Past 5 Years | | | | | |
| | Earnings | Dividends | Book Value | Earnings | Dividends | Book Value | | | |
| AGL Resources Inc. (NYSE-ATG) | 8.5% | 4.5% | 7.0% | 6.0% | 8.5% | 8.0% | | | |
| Atmos Energy Corporation (NYSE-ATO) | 4.0% | 2.0% | 7.0% | 4.5% | 1.5% | 7.0% | | | |
| Laclede Group, Inc. (NYSE-LG) | 5.0% | 1.0% | 4.0% | 10.5% | 2.0% | 6.5% | | | |
| NICOR Inc. (NYSE-GAS) | 1.5% | 2.5% | 3.0% | 3.5% | 0.0% | 5.0% | | | |
| Northwest Natural Gas Co. (NYSE-NWN) | 6.0% | 2.0% | 3.5% | 9.5% | 3.5% | 4.0% | | | |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 5.0% | 5.0% | 5.0% | 6.5% | 4.5% | 4.5% | | | |
| South Jersey Industries, Inc. (NYSE-SJI) | 11.5% | 3.5% | 9.0% | 13.0% | 6.0% | 11.0% | | | |
| Southwest Gas Corporation (NYSE-SWX) | 7.0% | 0.5% | 4.5% | 9.0% | 1.0% | 5.0% | | | |
| WGL Holdings, Inc. (NYSE-WGL) | 4.0% | 1.5% | 5.5% | 5.5% | 2.0% | 5.0% | | | |
| Mean | 5.8% | 2.5% | 5.4% | 7.6% | 3.2% | 6.2% | | | |
| Median | 5.0% | 2.0% | 5.0% | 6.5% | 2.0% | 5.0% | | | |
| Data Source: Value Line Investment Survey, 2010. | Average o | f Median Fi | gures = | 4.3% | | | | | |

Kentucky-American Water Company DCF Equity Cost Growth Rate Measures Value Line Projected Growth Rates

Panel A Water Proxy Group

| r | | | | | | | | |
|--|----------|------------------|------------|-----------|--------------------|-------------|--|--|
| | | Value Line | | | Value Line | | | |
| | P | Projected Growth | | | Sustainable Growth | | | |
| Company | Est | 'd. '07-'09 to | '13-'15 | Return on | Retention | Sustainable | | |
| | Earnings | Dividends | Book Value | Equity | Rate | Growth | | |
| American States Water Co. (NYSE-AWR) | 6.5% | 3.0% | 3.5% | 10.5% | 50.0% | 5.3% | | |
| Aqua America, Inc. (NYSE-WTR) | 11.5% | 5.5% | 4.5% | 14.0% | 49.0% | 6.9% | | |
| Artesian Resources Corp. (NDQ-ARTNA) | | | | | | | | |
| California Water Service Group (NYSE-CWT) | 6.5% | 1.0% | 3.0% | 11.0% | 52.0% | 5.7% | | |
| Connecticut Water Service, Inc. (NDQ-CTWS) | | | | | | | | |
| Middlesex Water Company (NDQ-MSEX) | | | | | | | | |
| Pennichuck Corporation (NDQ-PNNW) | | | | | | | | |
| SJW Corporation (NYSE-SJW) | | | | | | | | |
| York Water Company (NDQ-YORW) | | | | | | | | |
| Mean | 8.2% | 3.2% | 3.7% | 11.8% | 50.3% | 5.9% | | |
| Median | 6.5% | 3.0% | 3.5% | 11.0% | 50.0% | 5.7% | | |
| Average of Median Figures = | - | 4.3% | - | | Median = | 5.7% | | |

Data Source: Value Line Investment Survey, 2010.

Panel B Gas Proxy Group

| | Value Line | | | | Value Line | | | |
|---|------------|----------------|-------------------|-----------|----------------|-------------|--|--|
| | P | rojected Grov | wth | S | ustainable Gro | owth | | |
| Company | Est | 'd. '07-'09 to | '13-'15 | Return on | Retention | Sustainable | | |
| | Earnings | Dividends | Book Value | Equity | Rate | Growth | | |
| AGL Resources Inc. (NYSE-ATG) | 3.5% | 2.5% | 5.0% | 11.5% | 43.0% | 4.9% | | |
| Atmos Energy Corporation (NYSE-ATO) | 5.5% | 2.0% | 3.5% | 10.0% | 47.0% | 4.7% | | |
| Laclede Group, Inc. (NYSE-LG) | 2.5% | 2.5% | 4.0% | 11.0% | 43.0% | 4.7% | | |
| NICOR Inc. (NYSE-GAS) | 2.5% | 0.0% | 5.0% | 11.0% | 39.0% | 4.3% | | |
| Northwest Natural Gas Co. (NYSE-NWN) | 4.5% | 5.5% | 4.0% | 11.5% | 34.0% | 3.9% | | |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 3.5% | 3.5% | 3.0% | 13.0% | 33.0% | 4.3% | | |
| South Jersey Industries, Inc. (NYSE-SJI) | 7.0% | 6.0% | 5.5% | 14.5% | 53.0% | 7.7% | | |
| Southwest Gas Corporation (NYSE-SWX) | 8.0% | 5.0% | 5.0% | 9.0% | 57.0% | 5.1% | | |
| WGL Holdings, Inc. (NYSE-WGL) | 2.5% | 3.0% | 4.0% | 10.5% | 39.0% | 4.1% | | |
| Mean | 4.4% | 3.3% | 4.3% | 11.3% | 43.1% | 4.9% | | |
| Median | 3.5% | 3.0% | 4.0% | 11.0% | 43.0% | 4.7% | | |
| Average of Median Figures = | = | 3.5% | - | | Median = | 4.7% | | |

Data Source: Value Line Investment Survey, 2010.

Kentucky-American Water Company DCF Equity Cost Growth Rate Measures Analysts Projected EPS Growth Rate Estimates

Panel A Water Proxy Group

Yahoo Average **Company** First Call Zack's Reuters American States Water Co. (NYSE-AWR) 4.00% 4.00% 4.00% 4.0% 7.50% 7.33% 7.6% Aqua America, Inc. (NYSE-WTR) 8.00% Artesian Resources Corp. (NDQ-ARTNA) 6.00% N/A N/A 6.0% California Water Service Group (NYSE-CWT) 6.00% 5.55% 5.7% 5.50% **Connecticut Water Service, Inc. (NDQ-CTWS)** 15.00% N/A N/A 15.0% Middlesex Water Company (NDQ-MSEX) 8.00% N/A N/A 8.0% Pennichuck Corporation (NDQ-PNNW) 9.00% N/A N/A 9.0% SJW Corporation (NYSE-SJW) 10.00% N/A N/A 10.0% York Water Company (NDQ-YORW) 6.00% N/A N/A 6.0% Mean 7.9% 5.8% 5.9% 7.9%

Data Sources: www.reuters.com, www.zacks.com, http://quote.yahoo.com, June, 2010.

Median

Panel B Gas Proxy Group

Yahoo

7.5%

6.0%

5.6%

7.6%

| Company | First Call | Zack's | Reuters | Average |
|---|------------|--------|---------|---------|
| AGL Resources Inc. (NYSE-ATG) | 5.07% | 4.00% | 6.17% | 5.1% |
| Atmos Energy Corporation (NYSE-ATO) | 4.20% | 4.67% | 4.40% | 4.4% |
| Laclede Group, Inc. (NYSE-LG) | 3.50% | 3.00% | N/A | 3.3% |
| NICOR Inc. (NYSE-GAS) | 2.70% | 3.67% | 1.62% | 2.7% |
| Northwest Natural Gas Co. (NYSE-NWN) | 4.75% | 5.17% | 4.50% | 4.8% |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 3.70% | 6.33% | 5.80% | 5.3% |
| South Jersey Industries, Inc. (NYSE-SJI) | 7.50% | 9.50% | 7.00% | 8.0% |
| Southwest Gas Corporation (NYSE-SWX) | 3.30% | 6.00% | 5.50% | 4.9% |
| WGL Holdings, Inc. (NYSE-WGL) | 3.05% | 3.05% | 3.05% | 3.1% |
| Mean | 4.20% | 5.0% | 4.8% | 4.6% |
| Median | 3.70% | 4.7% | 5.0% | 4.8% |

Data Sources: www.reuters.com, www.zacks.com, http://quote.yahoo.com, June, 2010.

Kentucky-American Water Company DCF Growth Rate Indicators

Summary Growth Rates

| Growth Rate Indicator | Water Proxy Group | Gas Proxy Group |
|-----------------------------------|-------------------|-----------------|
| Historic Growth | | |
| in EPS, DPS, and BVPS | 3.7% | 4.4% |
| Historic Value Line Growth | | |
| in EPS, DPS, and BVPS | 3.7% | 4.3% |
| Projected Value Line Growth | | |
| in EPS, DPS, and BVPS | 4.3% | 3.5% |
| Sustainable Growth | | |
| ROE * Retention Rate | 5.7% | 4.7% |
| Projected EPS Growth from First | | |
| Call, Zacks, and Reuters | 7.6% | 4.8% |
| Average of Historic and Projected | | |
| Growth Rates | 5.0% | 4.3% |
| Average of Sustainable and | | |
| Projected Growth Rates | 5.9% | 4.3% |

Case No. 2010-00036 Exhibit JRW-11 CAPM Study Page 1 of 11

Exhibit JRW-11

Kentucky-American Water Company Capital Asset Pricing Model

Panel A Water Proxy Group

| Risk-Free Interest Rate | 4.25% |
|-------------------------------|-------|
| Beta* | 0.75 |
| Ex Ante Equity Risk Premium** | 4.68% |
| CAPM Cost of Equity | 7.8% |

^{*} See page 3 of Exhibit JRW-11

Panel B Gas Proxy Group

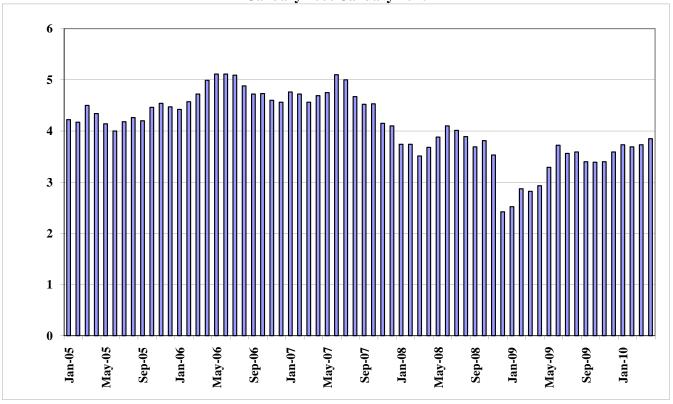
| Risk-Free Interest Rate | 4.25% |
|-------------------------------|-------|
| Beta* | 0.65 |
| Ex Ante Equity Risk Premium** | 4.68% |
| CAPM Cost of Equity | 7.3% |

^{*} See page 3 of Exhibit JRW-11

^{**} See pages 5 and 6 of Exhibit JRW-11

^{**} See pages 5 and 6 of Exhibit JRW-11

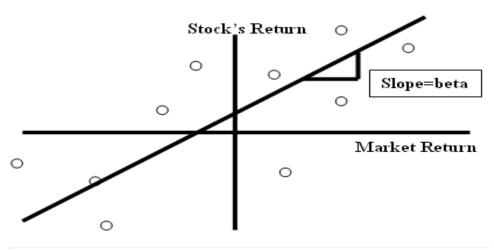
Panel A
Ten-Year U.S. Treasury Yields
January 2000-January 2010



Panel B Current Rates

| U.S. Treasuries | | | | | | | | | |
|-----------------|--------|------------------|------------------------|--|--|--|--|--|--|
| | COUPON | MATURITY DATE | CURRENT PRICE/YIELD | | | | | | |
| 3-MONTH | 0.000 | 08/26/2010 | 0.16 / .16 | | | | | | |
| 6-MONTH | 0.000 | 11/26/2010 | 0.22 / .22 | | | | | | |
| 12-MONTH | 0.000 | 05/05/2011 | 0.33 / .34 | | | | | | |
| 2-YEAR | 0.750 | 05/31/2012 | 99-25½ / .85 | | | | | | |
| 3-YEAR | 1.375 | 05/15/2013 | 100-051/2 / 1.32 | | | | | | |
| 5-YEAR | 2.125 | 05/31/2015 | 99-31+ / 2.13 | | | | | | |
| 7-YEAR | 3.125 | 04/30/2017 | 102-14 / 2.74 | | | | | | |
| 10-YEAR | 3.500 | 05/15/2020 | 101-27+ / 3.28 | | | | | | |
| 30-YEAR | 4.375 | 05/15/2040 | 103-12+ / 4.17 | | | | | | |

Panel A Calculation of Beta



Panel B Proxy Group Betas

Water Proxy Group

| Company | Beta |
|--|------|
| American States Water Co. (NYSE-AWR) | 0.80 |
| Aqua America, Inc. (NYSE-WTR) | 0.65 |
| Artesian Resources Corp. (NDQ-ARTNA) | |
| California Water Service Group (NYSE-CWT) | 0.75 |
| Connecticut Water Service, Inc. (NDQ-CTWS) | 0.80 |
| Middlesex Water Company (NDQ-MSEX) | 0.75 |
| Pennichuck Corporation (NDQ-PNNW) | 0.50 |
| SJW Corporation (NYSE-SJW) | 0.95 |
| York Water Company (NDQ-YORW) | 0.65 |
| Mean | 0.73 |
| Median | 0.75 |

Data Source: Value Line Investment Survey, 2010.

Gas Proxy Group

| Company | Beta |
|---|------|
| AGL Resources Inc. (NYSE-ATG) | 0.75 |
| Atmos Energy Corporation (NYSE-ATO) | 0.65 |
| Laclede Group, Inc. (NYSE-LG) | 0.55 |
| NICOR Inc. (NYSE-GAS) | 0.75 |
| Northwest Natural Gas Co. (NYSE-NWN) | 0.60 |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 0.65 |
| South Jersey Industries, Inc. (NYSE-SJI) | 0.60 |
| Southwest Gas Corporation (NYSE-SWX) | 0.75 |
| WGL Holdings, Inc. (NYSE-WGL) | 0.65 |
| Mean | 0.66 |
| Median | 0.65 |

Data Source: Value Line Investment Survey, 2010.

Case No. 2010-00036 Exhibit JRW-11 CAPM Study Page 4 of 11

Exhibit JRW-11

Risk Premium Approaches

| | Historical Ex Post Excess Returns | Surveys | Ex Ante Models and Market Data |
|---|---|---|--|
| Means of Assessing the Equity-Bond Risk Premium | Historical average is a popular proxy for the ex ante premium – but likely to be misleading | Investor and expert surveys can provide direct estimates of prevailing expected returns/premiums | Current financial market prices (simple valuation ratios or DCF- based measures) can give most objective estimates of feasible ex ante equity-bond risk premium |
| Problems/Debated Issues | Time variation in required returns and systematic selection and other biases have boosted valuations over time, and have exaggerated realized excess equity returns compared with ex ante expected premiums | Limited survey histories and questions of survey representativeness. Surveys may tell more about hoped-for expected returns than about objective required premiums due to irrational biases such as extrapolation. | Assumptions needed for DCF inputs, notably the trend earnings growth rate, make even these models' outputs subjective. The range of views on the growth rate, as well as the debate on the relevant stock and bond yields, leads to a range of premium estimates. |

Source: Antti Ilmanen, Expected Returns on Stocks and Bonds," *Journal of Portfolio Management*, (Winter 2003).

Kentucky-American Water Company Capital Asset Pricing Model Equity Risk Premium

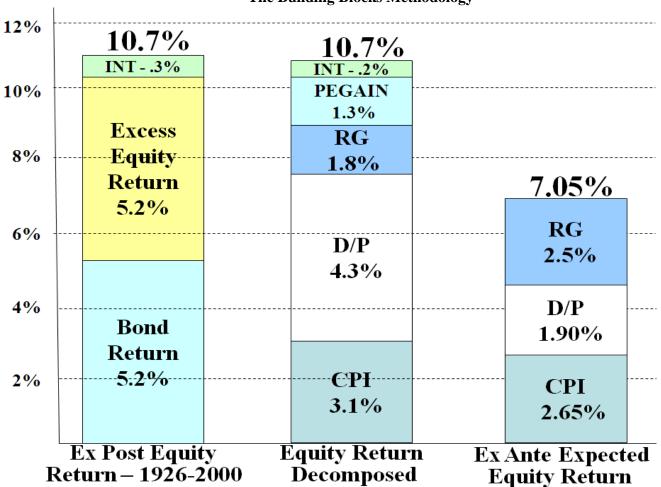
| | | | | Equity Risk Premium | | | | | | |
|--------------|--|---------------------|-------------------------|--|-------------------|-----------|-------------|-------------------|-------|-------|
| Category | Study Authors | Publication Date | Time Period Of Study | Methodology | Return Measure | Ra Low | nge High | Midpoint of Range | Mean | Media |
| Historical F | Risk Premium | | | | | | | | | |
| | Ibbotson | 2010 | 1926-2009 | Historical Stock Returns - Bond Returns | Arithmetic | | | | 6.00% | |
| | | | | | Geometric | | | | 4.40% | |
| | Bate | 2008 | 1900-2007 | Historical Stock Returns - Bond Returns | Geometric | | | | 4.50% | |
| | Shiller | 2006 | 1926-2005 | Historical Stock Returns - Bond Returns | Arithmetic | | | | 7.00% | |
| | | | | | Geometric | | | | 5.50% | |
| | Damodoran | 2006 | 1926-2005 | Historical Stock Returns - Bond Returns | Arithmetic | | | | 6.70% | |
| | | | | | Geometric | | | | 5.10% | |
| | Siegel | 2005 | 1926-2005 | Historical Stock Returns - Bond Returns | Arithmetic | | | | 6.10% | |
| | | | | | Geometric | | | | 4.60% | |
| | Dimson, Marsh, and Staunton | 2006 | 1900-2005 | Historical Stock Returns - Bond Returns | Arithmetic | | | | 5.50% | |
| | Goyal & Welch | 2006 | 1872-2004 | Historical Stock Returns - Bond Returns | | | | | 4.77% | |
| | Median | | | | | | | | | 5.50% |
| Ex Ante Mo | odels (Puzzle Research) | | | | | | | | | |
| | Claus Thomas | 2001 | 1985-1998 | Abnormal Earnings Model | | | | | 3.00% | |
| | Arnott and Bernstein | 2002 | 1810-2001 | Fundamentals - Div Yld + Growth | | | | | 2.40% | I |
| | Constantinides | 2002 | 1872-2000 | Historical Returns & Fundamentals - P/D & P/E | | | | | 6.90% | I |
| | Cornell | 1999 | 1926-1997 | Historical Returns & Fundamental GDP/Earnings | | 3.50% | 5.50% | 4.50% | 4.50% | I |
| | Easton, Taylor, et al | 2002 | 1981-1998 | Residual Income Model | | | | | 5.30% | |
| | Fama French | 2002 | 1951-2000 | Fundamental DCF with EPS and DPS Growth | | 2.55% | 4.32% | | 3.44% | |
| | Harris & Marston | 2001 | 1982-1998 | Fundamental DCF with Analysts' EPS Growth | | | | | 7.14% | |
| | Best & Byrne | 2001 | | · | | | | | | |
| | McKinsey | 2002 | 1962-2002 | Fundamental (P/E, D/P, & Earnings Growth) | | 3.50% | 4.00% | | 3.75% | |
| | Siegel | 2005 | 1802-2001 | Historical Earnings Yield | Geometric | | | | 2.50% | |
| | Grabowski | 2006 | 1926-2005 | Historical and Projected | Geometrie | 3 50% | 6.00% | 4.75% | 4.75% | |
| | Maheu & McCurdy | 2006 | 1885-2003 | Historical Excess Returns, Structural Breaks, | | | 5.10% | 4.56% | 4.56% | |
| | Bostock | 2004 | 1960-2002 | Bond Yields, Credit Risk, and Income Volatility | | | 1.30% | 2.60% | 2.60% | |
| | Bakshi & Chen | 2004 | 1982-1998 | Fundamentals - Interest Rates | | 3.90% | 1.30% | 2.00% | 7.31% | |
| | | | | | | 2 000/ | 4.000/ | 2.500/ | | |
| | Donaldson, Kamstra, & Kramer | 2006 | 1952-2004 | Fundamental, Dividend yld., Returns,, & Volatility | | | 4.00% | 3.50% | 3.50% | |
| | Campbell | 2008 | 1982-2007 | Historical & Projections (D/P & Earnings Growth) | | 4.10% | 5.40% | | 4.75% | |
| | Best & Byrne | 2001 | Projection | Fundamentals - Div Yld + Growth | | | | | 2.00% | |
| | Fernandez | 2007 | Projection | Required Equity Risk Premium | | | | | 4.00% | |
| | DeLong & Magin | 2008 | Projection | Earnings Yield - TIPS | | | | | 3.22% | |
| | Damodoran | 2010 | Projection | Fundamentals - Implied from FCF to Equity Model | | | | | 4.36% | |
| | Social Security | | | | | | | | | |
| | Office of Chief Actuary | | 1900-1995 | | | | | | | |
| | John Campbell | 2001 | 1860-2000 | Historical & Projections (D/P & Earnings Growth) | Arithmetic | 3.00% | 4.00% | 3.50% | 3.50% | |
| | | | Projected for 75 Years | | Geometric | 1.50% | 2.50% | 2.00% | 2.00% | |
| | Peter Diamond | 2001 | Projected for 75 Years | Fundamentals (D/P, GDP Growth) | | 3.00% | 4.80% | 3.90% | 3.90% | |
| | John Shoven | 2001 | Projected for 75 Years | Fundamentals (D/P, P/E, GDP Growth) | | 3.00% | 3.50% | 3.25% | 3.25% | |
| Surveys | Median | | | | | | | | | 3.75% |
| | Survey of Financial Forecasters | 2010 | 10-Year Projection | About 50 Financial Forecastsers | | | | | 2.75% | l |
| | Duke - CFO Magazine Survey | 2010 | 10-Year Projection | Approximately 500 CFOs | | | | | 3.92% | 1 |
| | Welch - Academics | 2008 | 30-Year Projection | Random Academics | | 5 00% | 5.74% | 5.37% | 5.37% | |
| | Fernandez - Academics | 2008 | Long-Term | Survey of Academics | | 5.0070 | J.1+70 | 3.3170 | 6.00% | |
| | Fernandez - Academics Fernandez - Analysts | 2010 | Long-Term | Survey of Analysts | | | | | 5.00% | l |
| | Fernandez - Companies | 2010 | Long-Term | Survey of Companies | | | | | 5.00% | I |
| | Median | 2010 | Long-Term | Survey of Companies | | | | | J.0U% | 5.00% |
| Building Bl | ock | | | | | | | | | |
| | Ibbotson and Chen | 2010 | 1926-2009 | Historical Supply Model (D/P & Earnings Growth) | Arithmetic | | | 5.73% | 4.41% | |
| | | | | | Geometric | | | 3.08% | | 1 |
| | Woolridge | | 2010 | Current Supply Model (D/P & Earnings Growth) | | | | | 2.88% | I |
| | Median | | | | | | | | | 3.64% |
| Mean | | | | <u> </u> | | | | | | 4.47% |

Kentucky-American Water Company Capital Asset Pricing Model Equity Risk Premium Summary of 2010 Equity Risk Premium Studies

| | | Publication | Time Period | | Return | Ra | inge | Midpoint | | Average |
|---------------------|---------------------------------|-------------|--------------------|---|------------|-----|------|----------|-------|---------|
| Category | Study Authors | Date | Of Study | Methodology | Measure | Low | High | of Range | Mean | |
| Historical R | isk Premium | | | | | | | | | |
| | Ibbotson | 2010 | 1926-2009 | Historical Stock Returns - Bond Returns | Arithmetic | | | | 6.00% | |
| | | | | | Geometric | | | | 4.40% | |
| | Median | | | | | | | | | 5.20% |
| Ex Ante Mo | dels (Puzzle Research) | | | | | | | | | |
| | Damodoran | 2010 | Projection | Fundamentals - Implied from FCF to Equity Model | | | | | 4.36% | |
| | Median | | | | | | | | | 4.36% |
| Surveys | | | | | | | | | | |
| | Survey of Financial Forecasters | 2010 | 10-Year Projection | About 50 Financial Forecastsers | | | | | 2.75% | |
| | Duke - CFO Magazine Survey | 2010 | 10-Year Projection | Approximately 500 CFOs | | | | | 3.92% | |
| | Fernandez - Academics | 2010 | Long-Term | Survey of Academics | | | | | 6.00% | |
| | Fernandez - Analysts | 2010 | Long-Term | Survey of Analysts | | | | | 5.00% | |
| | Fernandez - Companies | 2010 | Long-Term | Survey of Companies | | | | | 5.00% | |
| | Median | | | | | | | | | 5.00% |
| Building Blo | ock | | | | | | | | | |
| | Ibbotson and Chen | 2010 | 1926-2009 | Historical Supply Model (D/P & Earnings Growth) | Arithmetic | | | 5.73% | 4.41% | |
| | | | | | Geometric | | | 3.08% | | |
| | Woolridge | | 2010 | Current Supply Model (D/P & Earnings Growth) | | | | | 2.88% | |
| | Median | • | | | | | | | | 3.64% |
| Mean | | - | | | | | | | | 4.55% |
| Median | | | | | | | | | | 4.68% |

Exhibit JRW-11

Kentucky-American Water Company Decomposing Equity Market Returns The Building Blocks Methodology



Kentucky-American Water Company

2010 Survey of Professional Forecasters Philadelphia Federal Reserve Bank Long-Term Forecasts

Table Seven LONG-TERM (10 YEAR) FORECASTS

| | Panel B | |
|-----------|--|-------------------------------------|
| | SERIES: REAL GDP GROWTH | H RATE |
| | STATISTIC | |
| 1.00 | MINIMUM | 2.20 |
| 2.12 | LOWER QUARTILE | 2.50 |
| 2.39 | MEDIAN | 2.70 |
| 2.56 | UPPER QUARTILE | 2.90 |
| 4.50 | MAXIMUM | 3.80 |
| 2.39 | MEAN | 2.72 |
| 0.60 | STD. DEV. | 0.37 |
| 36 | N | 34 |
| 6 | MISSING | 8 |
| | Panel D | |
| <u>ГН</u> | SERIES: STOCK RETURNS (S | S&P 500) |
| | STATISTIC | |
| 1.30 | MINIMUM | 5.00 |
| 1.70 | LOWER QUARTILE | 6.43 |
| 2.00 | MEDIAN | 7.00 |
| 2.10 | UPPER QUARTILE | 8.00 |
| 3.50 | MAXIMUM | 15.00 |
| 1.99 | MEAN | 7.27 |
| 0.46 | STD. DEV. | 1.96 |
| 33 | N | 25 |
| 9 | MISSING | 17 |
| | Panel F | |
| (AR) | SERIES: BILL RETURNS (3-M | IONTH) |
| | STATISTIC | |
| 0.00 | MINIMUM | 0.00 |
| 4.00 | LOWER QUARTILE | 2.53 |
| 4.95 | MEDIAN | 3.00 |
| 5.20 | UPPER QUARTILE | 3.70 |
| 6.00 | MAXIMUM | 2.25 |
| 4.52 | MEAN | 3.09 |
| 1.18 | STD. DEV. | 1.06 |
| 30 | N | 30 |
| 12 | MISSING | 12 |
| | 2.12 2.39 2.56 4.50 2.39 0.60 36 6 TH 1.30 1.70 2.00 2.10 3.50 1.99 0.46 33 9 2.AR) 0.00 4.00 4.95 5.20 6.00 4.52 1.18 30 | SERIES: REAL GDP GROWTH STATISTIC |

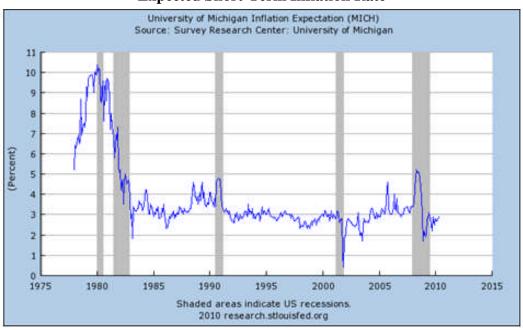
Source: Philadelphia Federal Researve Bank, Survey of Professional Forecasters, February 12, 2010.

Case No. 2010-00036 Exhibit JRW-11 CAPM Study Page 9 of 11

Exhibit JRW-11

Kentucky-American Water Company

University of Michigan Survey Research Center Expected Short-Term Inflation Rate



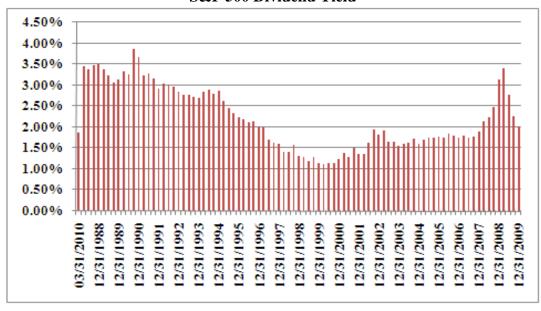
Data Source: http://research.stlouisfed.org/fred2/series/MICH?cid=98

Case No. 2010-00036 Exhibit JRW-11 CAPM Study Page 10 of 11

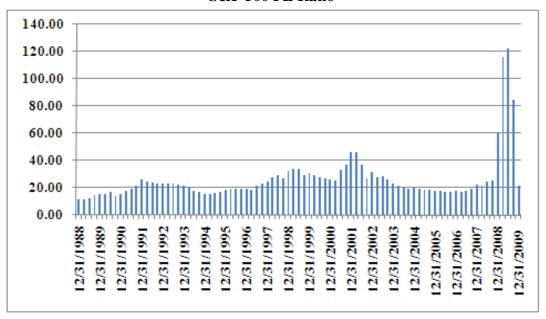
Exhibit JRW-11

Kentucky-American Water Company Decomposing Equity Market Returns The Building Blocks Methodology

S&P 500 Dividend Yield



S&P 500 PE Ratio



Kentucky-American Water Company CAPM

Real S&P 500 EPS Growth Rate

| | Real S&P 500 EPS Growth Rate | | | | | | | |
|---------|------------------------------|-------------------------|------------|-----------------|---------|--|--|--|
| | | | Inflation | Real | | | | |
| | S&P 500 | Annual Inflation | Adjustment | S&P 500 | | | | |
| Year | EPS | CPI | Factor | EPS | | | | |
| 1960 | 3.10 | 1.48 | | 3.10 | | | | |
| 1961 | 3.37 | 0.07 | 1.01 | 3.35 | | | | |
| 1962 | 3.67 | 1.22 | 1.02 | 3.59 | | | | |
| 1963 | 4.13 | 1.65 | 1.04 | 3.99 | | | | |
| 1964 | 4.76 | 1.19 | 1.05 | 4.55 | | | | |
| 1965 | 5.30 | 1.92 | 1.07 | 4.97 | | | | |
| 1966 | 5.41 | 3.35 | 1.10 | 4.90 | | | | |
| 1967 | 5.46 | 3.04 | 1.14 | 4.80 | | | | |
| 1968 | 5.72 | 4.72 | 1.19 | 4.81 | | | | |
| 1969 | 6.10 | 6.11 | 1.26 | 4.83 | 10-Year | | | |
| 1970 | 5.51 | 5.49 | 1.34 | 4.13 | 2.89% | | | |
| 1971 | 5.57 | 3.36 | 1.38 | 4.04 | | | | |
| 1972 | 6.17 | 3.41 | 1.43 | 4.33 | 1 | | | |
| 1973 | 7.96 | 8.80 | 1.55 | 5.13 | 1 | | | |
| 1974 | 9.35 | 12.20 | 1.74 | 5.37 | - | | | |
| 1975 | 7.71 | 7.01 | 1.86 | 4.14 | | | | |
| 1976 | 9.75 | 4.81 | 1.95 | 4.99 | 1 | | | |
| 1977 | 10.87 | 6.77 | 2.08 | 5.22 | 1 | | | |
| 1978 | 11.64 | 9.03 | 2.27 | 5.13 | - | | | |
| 1979 | 14.55 | 13.31 | 2.57 | 5.66 | 10-Year | | | |
| 1980 | 14.99 | 12.40 | 2.89 | 5.18 | 2.30% | | | |
| 1981 | | ł | | + | 2.30% | | | |
| 1981 | 15.18 | 8.94 | 3.15 | 4.82 | - | | | |
| | 13.82 | 3.87 | 3.27 | 4.23 | - | | | |
| 1983 | 13.29 | 3.80 | 3.40 | 3.91 | _ | | | |
| 1984 | 16.84 | 3.95 | 3.53 | 4.77 | | | | |
| 1985 | 15.68 | 3.77 | 3.66 | 4.28 | | | | |
| 1986 | 14.43 | 1.13 | 3.70 | 3.90 | | | | |
| 1987 | 16.04 | 4.41 | 3.87 | 4.15 | | | | |
| 1988 | 22.77 | 4.42 | 4.04 | 5.64 | 10.37 | | | |
| 1989 | 24.03 | 4.65 | 4.22 | 5.69 | 10-Year | | | |
| 1990 | 21.73 | 6.11 | 4.48 | 4.85 | -0.65% | | | |
| 1991 | 19.10 | 3.06 | 4.62 | 4.14 | | | | |
| 1992 | 18.13 | 2.90 | 4.75 | 3.81 | | | | |
| 1993 | 19.82 | 2.75 | 4.88 | 4.06 | | | | |
| 1994 | 27.05 | 2.67 | 5.01 | 5.40 | | | | |
| 1995 | 35.35 | 2.54 | 5.14 | 6.88 | | | | |
| 1996 | 35.78 | 3.32 | 5.31 | 6.74 | | | | |
| 1997 | 39.56 | 1.70 | 5.40 | 7.33 | | | | |
| 1998 | 38.23 | 1.61 | 5.48 | 6.97 | | | | |
| 1999 | 45.17 | 2.68 | 5.63 | 8.02 | 10-Year | | | |
| 2000 | 52.00 | 3.39 | 5.82 | 8.93 | 6.29% | | | |
| 2001 | 44.23 | 1.55 | 5.92 | 7.48 |] | | | |
| 2002 | 47.24 | 2.38 | 6.06 | 7.80 |] | | | |
| 2003 | 54.15 | 1.88 | 6.17 | 8.77 |] | | | |
| 2004 | 67.01 | 3.26 | 6.37 | 10.51 | 5-Year | | | |
| 2005 | 68.32 | 3.42 | 6.60 | 10.35 | 3.00% | | | |
| 2006 | 81.96 | 2.54 | 6.77 | 12.11 |] | | | |
| 2007 | 87.51 | 4.08 | 7.04 | 12.43 |] | | | |
| 2008 | 65.39 | 0.09 | 7.05 | 9.28 | 1 | | | |
| 2009 | 59.65 | 2.72 | 7.24 | 8.24 | 1 | | | |
| Data Sc | | ages.stern.nyu.edu/~ad | amodar/ | Real EPS Growth | 2.0% | | | |

Panel A
Authorized ROEs for Publicly-Held Water Companies

Authorized

| | ROE | Date |
|----------------------------------|--------|--------|
| American States Water | 10.50% | May-09 |
| American Water Works | 9.51% | |
| Aqua America, Inc. | 10.31% | |
| Artesian Resources Corp. | 10.25% | May-06 |
| California Water Service Group | 10.20% | May-09 |
| Connecticut Water Services, Inc. | 10.13% | Jan-07 |
| Middlesex Water Company | 10.00% | |
| Pennichuck Corporation | 9.75% | |
| SJW Corp. | 10.13% | Jan-08 |
| Southwest Water Company | 10.00% | Jun-07 |
| York Water Company | 10.00% | |
| Average | 10.07% | |

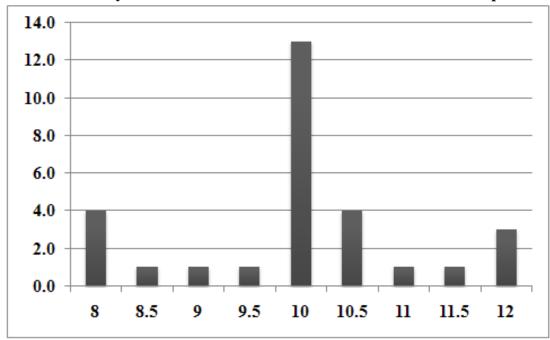
Data Source: AUS Utility Reports, June, 2010.

Panel B
Summary of Authorized ROEs for Investor-Owned Water Companies
NAWC

| Company | | SMBL | Revenues | ROE |
|--------------------------|-----------------------|------------------------|----------------|------|
| 1 Aqua | Maine | AA | \$ 9,244,642 | 10.0 |
| 2 Aqua | Ohio | $\mathbf{A}\mathbf{A}$ | \$ 38,016,102 | 10.0 |
| 3 Aquarion | Connecticutt | \mathbf{AQ} | \$ 113,173,791 | 9.8 |
| 4 Artesian | Water | AR | \$ 45,144,386 | 10.3 |
| 5 Chaparral | City | AS | \$ 7,755,907 | 11.0 |
| 6 College | Util Corp | FS | \$ 2,163,569 | 11.7 |
| 7 CT Water | Company | CT | \$ 46,944,682 | 10.1 |
| 8 Golden Heart | Utilities | FS | \$ 6,513,083 | 11.7 |
| 9 Golden | State | AS | \$ 211,310,197 | 9.8 |
| 10 Illinois | American | \mathbf{AM} | \$ 170,146,421 | 10.0 |
| 11 Indiana | American | \mathbf{AM} | \$ 137,235,006 | 9.3 |
| 12 Iowa | American | \mathbf{AM} | \$ 23,736,492 | 10.0 |
| 13 Middlesex | Water Co | MW | \$ 54,160,492 | 7.4 |
| 14 Missouri | American | \mathbf{AM} | \$ 170,853,331 | 10.0 |
| 15 Monarch | Utilities | SWC | \$ 14,904,800 | 7.0 |
| 16 New Jersey | American | \mathbf{AM} | \$ 281,304,625 | 10.0 |
| 17 Ohio | American | \mathbf{AM} | \$ 28,991,393 | 9.9 |
| 18 San Jose | Water Co | SJ | \$ 180,619,665 | 9.9 |
| 19 Shore- | lands | IN | \$ 9,440,064 | 9.8 |
| 20 Suburban | Water Sys | SWC | \$ 48,320,066 | 10.0 |
| 21 Tidewater | Utilities | MW | \$ 15,345,781 | 8.3 |
| 22 United | Arkansas | $\mathbf{U}\mathbf{W}$ | \$ 8,409,475 | 7.9 |
| 23 United | Connecticutt | $\mathbf{U}\mathbf{W}$ | \$ 3,261,984 | 10.1 |
| 24 United | Idaho | UW | \$ 35,055,726 | 10.3 |
| 25 United | New York | $\mathbf{U}\mathbf{W}$ | \$ 47,968,223 | 9.6 |
| 26 United | Pennsylvania | $\mathbf{U}\mathbf{W}$ | \$ 25,569,508 | 9.0 |
| 27 Valley | Water Sys | NE | \$ 3,065,539 | 11.5 |
| 28 Washington | Water Serv | \mathbf{CW} | \$ 6,503,151 | 12.0 |
| 29 West Va | American | \mathbf{AM} | \$ 101,906,824 | 9.9 |
| 30 York | Water Co | IN | \$ 28,658,139 | 10.0 |
| Data Source: National As | sociation of Water | Mean | \$ 62,524,102 | 9.9 |
| Companies, 2006 Financia | al and Operating Data | Median | \$ 32,023,560 | |
| • ' | | | , , | |

Case No. 2010-00036 Exhibit JRW-12 Summary of Water Company Authorized ROEs Page 3 of 3

Panel D
Summary of Authorized ROEs for Investor-Owned Water Companies



Data Source: National Association of Water Companies, 2006 Financial and Operating Data.

Case No. 2010-00036 Exhibit JRW-13 KAWC Weighted Average Cost of Capital Page 1 of 4

Exhibit JRW-13 Kentucky-American Water Company Cost of Capital

| | Capitalization | Cost | Weighted |
|-----------------|----------------|--------|-----------|
| Capital Source | Ratio | Rate | Cost Rate |
| Short-Term Debt | 2.32% | 2.08% | 0.05% |
| Long-Term Debt | 52.06% | 6.41% | 3.34% |
| Preferred Stock | 1.65% | 7.75% | 0.13% |
| Common Equity | 43.97% | 11.50% | 5.06% |
| Total Capital | 100.00% | | 8.57% |

Panel A

Summary of Dr. Vander Weide's Equity Cost Rate Approaches and Results

| Approach | Cost of Equity |
|-------------------------------|----------------|
| DCF - Water | 12.10% |
| Ex Ante Risk Premium | 11.40% |
| Ex Post Risk Premium | 11.20% |
| Equity Cost Rate Range | 10.80%-12.10% |

Panel B

Summary of Dr. Vander Weide's DCF - Water Results

| | Utility Proxy Group |
|----------------------------------|---------------------|
| Average Adjusted Dividend Yield* | 4.10% |
| Growth** | 8.00% |
| DCF Result | 12.10% |

^{*} Includes adjustments for quarterly payments and flotation costs

Summary of Dr. Vander Weide's DCF - Gas Results

| | Utility Proxy Group |
|----------------------------------|---------------------|
| Average Adjusted Dividend Yield* | 4.60% |
| Growth** | 6.80% |
| DCF Result | 11.40% |

^{*} Includes adjustments for quarterly payments and flotation costs

Panel C

Summary of Dr. Vander Weide's Ex Ante Risk Premium Results

| building of D1. Valider VVelde B Ex Time High I Telliam Results | | | |
|---|----------------------|--|--|
| | Ex Ante Risk Premium | | |
| 'A' Rated PU Yield | 6.30% | | |
| Ex Ante Risk Premium* | 4.90% | | |
| Equity Cost Rate | 11.20% | | |

^{*} Flotation Cost included in risk premium

Panel D

Summary of Dr. Vander Weide's Ex Post Risk Premium Results

| | Ex Ante Risk Premium |
|---------------------------|----------------------|
| 'A' Rated PU Yield | 6.30% |
| Historic Risk Premium* | 4.30% |
| Equity Cost Rate | 10.60% |
| Flotation Cost Adjustment | <u>0.19%</u> |
| Adjusted CAPM Result | 10.79% |

^{*} Midpoint of 4.6% and 5.0%

Panel E

Summary of Dr. Vander Weide's Historical CAPM Results

| | Utility Proxy Group |
|----------------------------|---------------------|
| Risk-Free Rate | 4.70% |
| Beta | 0.73 |
| Equity Risk Premium | <u>6.50%</u> |
| CAPM Result | 9.45% |
| Flotation Cost Adjustment | <u>0.19%</u> |
| Adjusted CAPM Result | 9.64% |

Panel F

Summary of Dr. Vander Weide's Expected CAPM Results

| - | Utility Proxy Group |
|---------------------------|---------------------|
| Risk-Free Rate | 4.70% |
| Beta | 0.73 |
| Equity Risk Premium | 8.40% |
| CAPM Result | 10.83% |
| Flotation Cost Adjustment | 0.19% |
| Adjusted CAPM Result | 11.02% |

^{**} Expected EPS Growth from IBES and Value Line

^{**} Expected EPS Growth from IBES and Value Line

Primarily Non- Regulated Gas Distribution Companies Business Activities

BUSINESS: Energen Corporation is a holding company. Alabama Gas Corporation (Alagasco), a subsidiary, sells to around 450,000 customers in central and northern Alabama, including Birmingham and Montgomery. 2008 utility revenues: residential, 62.4%; commercial and industrial, 27.1%; transportation and other, 10.5%. 2008 deliveries: 79.4 MMcf. Energen Resources, a subsidiary, engages primarily in exploration and production of natural gas. 2008 proved reserves: gas, 1,038.5 MMcf; oil, 62.0 MBbl; NGL, 29.0 MBbl. Estimated pretax present value of 2008 reserves: \$1.9 billion.

BUSINESS: EQT Corporation, Inc. markets natural gas products and energy services. Distributes natural gas to 275,000 customers, mainly residential, in parts of PA, WV, and KY. EQT Production has 3.4 million acres, 13,000 productive wells, with total proved reserves of 3,110 Bcfe (in the Appalachia Basin). The Midstream segment has 10,450 miles of gathering and transmission pipeline (in parts of WV, KY, VA, and PA) and 63 bcf of storage capacity.

BUSINESS: MDU Resources Group, Inc. is a diversified energy company. Segments, regulated: electric (4.7% of '09 revs; 7.9% of '09 op. inc.), natural gas distribution (25.7%, 16.5%), pipeline and energy services (5.6%, 14.9%); unregulated: construction services (19.6%, 9.5%), gas and oil production (8.1%, 31.4%), and construction materials and contracting (36.3%, 20%). Utilities sell gas & electricity in northwest and upper midwest U.S. Construction materials has 1.1 bill. tons of construction aggregate reserves. Acq'd Cascade Natural Gas 7/07: Intermountain Gas 10/08.

BUSINESS: NiSource Inc. is a holding company for Northern Indiana Public Service Company (NIPSCO), which supplies electricity and gas to the northern third of Indiana. Customers: 457,000 electric in Indiana, 3.3 million gas in IN, OH, PA, KY, VA, MD, MA. Acquired IWC Resources 3/97; Bay State Gas 2/99; Columbia Energy 11/00. Electric revenue breakdown, '08: residential, 27%; commercial, 27%; industrial, 39%; other, 7%. Generating sources, '08: coal, 82%; purchased & other, 18%.

BUSINESS: ONEOK, Inc. is a diversified energy company that purchases, transports, and distributes natural gas. ONEOK has over 2 million distribution customers in Oklahoma, Kansas, and Texas. Sold production segment, 9/05. Sold gathering and processing, natural gas liquids, and pipelines and storage assets to ONEOK Partners, 4/06. Sold Spring Creek power plant, 10/06. Currently has 45.1% ownership interest in ONEOK Partners. Has 4,742 employees.

BUSINESS: Questar Corp. is a diversified natural gas holding company. Major subsidiaries include Questar Gas, a natural gas utility in Utah, Wyoming, and Idaho, serving over 885,000 customers; Questar Pipeline, owns storage facilities and over 2,500 miles of transmission lines serving Rocky Mountain producing basins; and Exploration & Production ('08 non-utility production: 171.4 bcfe; reserves at 12/31/08: 2218.1 bcfe). Est'd pretax present value of reserves: \$2.6 bill.

Data Source: Value Line Investment Survey, 2010.

Panel A
Primarily Non-Regulated Gas Companies

| | Operating | Percent | | | Value |
|--------------------------------------|------------------|---------|------------------|----------|-------|
| | Revenue | Reg Gas | Net Plant | S&P Bond | Line |
| Company | (\$mil) | Revenue | (\$mil) | Rating | Beta |
| Energen Corporation (NYSE-EGN) | 1,440.4 | 43 | 721.7 | BBB | 1.15 |
| EQT Corporation (NYSE-EQT) | 1,269.8 | 74 | 4,914.7 | BBB | 1.15 |
| MDU Resources Group, Inc. (NYSE-MDU) | 4,176.5 | 26 | 3,894.1 | NR | 1.00 |
| NiSource Inc. (NYSE-NI) | 6,649.4 | | 10,683.9 | BBB- | 0.85 |
| ONEOK, Inc. (NYSE-OKE) | 11,111.7 | 17 | 7,793.7 | BBB | 0.95 |
| Questar Corporation (NYSE-STR) | 3,038.0 | 30 | 7,804.9 | BBB+ | 1.20 |
| Mean | 4,614.3 | 38 | 5,968.8 | BBB | 1.05 |
| Median | 3,607.3 | 30 | 6,354.2 | BBB | 1.08 |

Panel B
Primarily Regulated Gas Companies

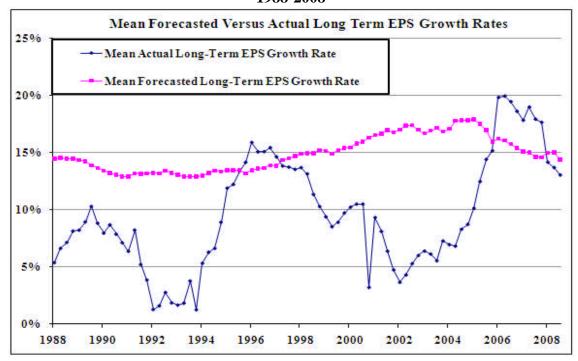
| | Operating Revenue | Percent Reg Gas | Net Plant | S&P Bond | Value Line |
|---|----------------------|--------------------|-----------|------------|---------------|
| Company | (\$mil) | Revenue | (\$mil) | Rating | Beta |
| AGL Resources Inc. (NYSE-AGL) | 2,317.0 | 64 | 4,146.0 | A- | 0.75 |
| Atmos Energy Corporation (NYSE-ATO) | 4,545.6 | 60 | 4,523.2 | BBB+ | 0.65 |
| NICOR Inc. (NYSE-GAS) | 2,652.1 | 81 | 2,939.1 | AA | 0.70 |
| Northwest Natural Gas Co. (NYSE-NWN) | 1,012.7 | 98 | 1,670.1 | AA- | 0.60 |
| Piedmont Natural Gas Co., Inc. (NYSE-PNY) | 1,532.2 | 86 | 2,317.5 | A | 0.65 |
| Southwest Gas Corporation (NYSE-SWX) | 1,893.8 | 85 | 3,034.5 | BBB | 0.75 |
| Mean | 2,508.7 | 72 | 3,569.2 | A + | 0.74 |
| Median | 2,317.0 | 81 | 3,034.5 | A | 0.70 |

Panel C Water Proxy Group

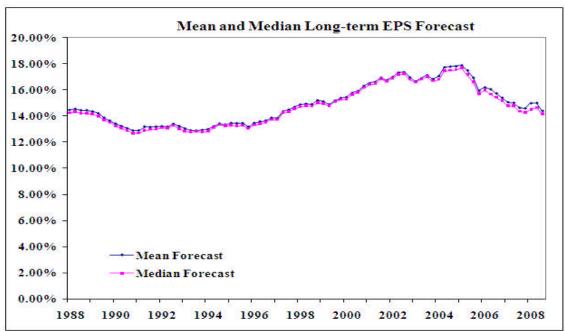
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|---|------------------|---------|------------------|-----------|-------|
| | | Percent | | | |
| | Operating | Reg | | | Value |
| | Revenue | Water | Net Plant | S&P Bond | Line |
| Company | (\$mil) | Revenue | (\$mil) | Rating | Beta |
| American States Water Co. (NYSE-AWR) | 361.0 | 76 | 762.1 | A | 0.80 |
| Aqua America, Inc. (NYSE-WTR) | 670.5 | 98 | 2790.5 | AA- | 0.65 |
| Artesian Resources Corp. (NDQ-ARTNA) | 60.9 | 88 | 255.7 | NR | |
| California Water Service Group (NYSE-CWI | 449.4 | 99 | 1079.9 | AA- | 0.75 |
| Connecticut Water Service, Inc. (NDQ-CTWS | 67.5 | 90 | 273.1 | A | 0.80 |
| Middlesex Water Company (NDQ-MSEX) | 91.2 | 89 | 329.7 | A | 0.75 |
| Pennichuck Corporation (NDQ-PNNW) | 32.8 | 92 | 123.2 | NR | 0.50 |
| SJW Corporation (NYSE-SJW) | 216.1 | 96 | 523.7 | NR | 0.95 |
| York Water Company (NDQ-YORW) | 37.0 | 92 | 196.5 | A- | 0.65 |
| Mean | 220.7 | 91 | 703.8 | A | 0.73 |
| Median | 91.2 | 92 | 329.7 | A | 0.75 |

Data Source: AUS Utility Reports, May, 2010, Value Line Investment Survey, 2010.

Panel A
Long-Term Forecasted Versus Actual EPS Growth Rates
1988-2008



Panel B Long-Term Forecasted EPS Growth Rates 1988-2008



Source: Patrick J. Cusatis and J. Randall Woolridge, "The Accuracy of Analysts' Long-Term Earnings Per Share Growth Rate Forecasts," (July, 2008).

Case No. 2010-00036 Exhibit JRW-14 DCF Growth Rate Analysis Page 2 of 4

THE WALL STREET JOURNAL.

Study Suggests Bias in Analysts' Rosy Forecasts

By ANDREW EDWARDS

March 21, 2008; Page C6

Despite an economy teetering on the brink of a recession -- if not already in one -- analysts are still painting a rosy picture of earnings growth, according to a study done by Penn State's Smeal College of Business.

The report questions analysts' impartiality five years after then-New York Attorney General Eliot Spitzer forced analysts to pay \$1.5 billion in damages after finding evidence of bias.

"Wall Street analysts basically do two things: recommend stocks to buy and forecast earnings," said J. Randall Woolridge, professor of finance. "Previous studies suggest their stock recommendations do not perform well, and now we show that their long-term earnings-per-share growth-rate forecasts are excessive and upwardly biased."

The report, which examined analysts' long-term (three to five years) and one-year pershare earnings expectations from 1984 through 2006 found that companies' long-term earnings growth surpassed analysts' expectations in only two instances, and those came right after recessions.

Over the entire time period, analysts' long-term forecast earnings-per-share growth averaged 14.7%, compared with actual growth of 9.1%. One-year per-share earnings expectations were slightly more accurate: The average forecast was for 13.8% growth and the average actual growth rate was 9.8%.

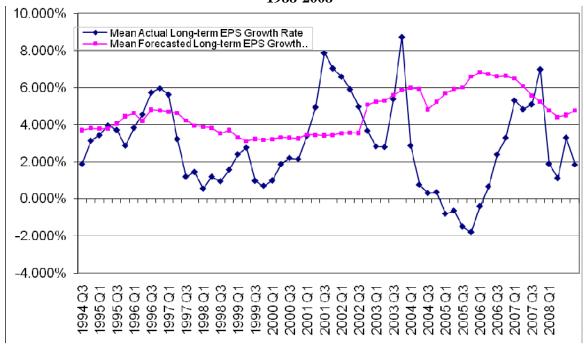
"A significant factor in the upward bias in long-term earnings-rate forecasts is the reluctance of analysts to forecast" profit declines, Mr. Woolridge said. The study found that nearly one-third of all companies experienced profit drops over successive three-to-five-year periods, but analysts projected drops less than 1% of the time.

The study's authors said, "Analysts are rewarded for biased forecasts by their employers, who want them to hype stocks so that the brokerage house can garner trading commissions and win underwriting deals."

They also concluded that analysts are under pressure to hype stocks to generate trading commissions, and they often don't follow stocks they don't like.

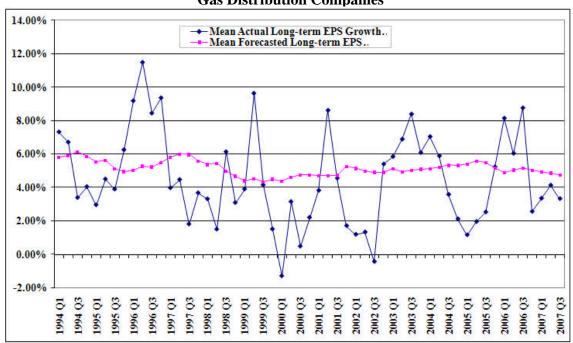
Write to Andrew Edwards at andrew.edwards@dowjones.com

Long-Term Forecasted Versus Actual EPS Growth Rates Electric Utility Companies 1988-2008



Data Source: IBES

Long-Term Forecasted Versus Actual EPS Growth Rates Gas Distribution Companies



Panel A
Value Line 3-5 year EPS Growth Rate Forecasts

| | Average | Number of Negative | Percent of Negative EPS Growth | |
|-----------------|---------------|--------------------|-----------------------------------|--|
| | Projected EPS | EPS Growth | | |
| | Growth rate | Projections | Projections | |
| 2,339 Companies | 12.00% | 114 | 4.87% | |

Panel B
Historical Five-Year EPS Growth Rates for Value Line Companies

| | Average | Number with Negative | Percent with | |
|-----------------|-----------------------|------------------------------|---------------------|--|
| | Historical EPS | Historical EPS Growth | Negative Historical | |
| | Growth rate | | EPS Growth | |
| 2,139 Companies | 11.53% | 515 | 24.08% | |

Source: Value Line Investment Analyzer, April 2010.

Growth Rates GNP, S&P 500 Price, EPS, and DPS

| GNP, S&P 500 Price, EPS, and DPS | | | | | | |
|----------------------------------|---------|---------|----------|-----------|---------|--|
| | GDP | S&P 500 | Earnings | Dividends |] | |
| 1960 | 526.4 | 58.11 | 3.10 | 1.98 |] | |
| 1961 | 544.8 | 71.55 | 3.37 | 2.04 | | |
| 1962 | 585.7 | 63.1 | 3.67 | 2.15 | | |
| 1963 | 617.8 | 75.02 | 4.13 | 2.35 | | |
| 1964 | 663.6 | 84.75 | 4.76 | 2.58 | | |
| 1965 | 719.1 | 92.43 | 5.30 | 2.83 | | |
| 1966 | 787.7 | 80.33 | 5.41 | 2.88 | | |
| 1967 | 832.4 | 96.47 | 5.46 | 2.98 | | |
| 1968 | 909.8 | 103.86 | 5.72 | 3.04 | | |
| 1969 | 984.4 | 92.06 | 6.10 | 3.24 | | |
| 1970 | 1038.3 | 92.15 | 5.51 | 3.19 | | |
| 1971 | 1126.8 | 102.09 | 5.57 | 3.16 | | |
| 1972 | 1237.9 | 118.05 | 6.17 | 3.19 | | |
| 1973 | 1382.3 | 97.55 | 7.96 | 3.61 | 1 | |
| 1974 | 1499.5 | 68.56 | 9.35 | 3.72 | 1 | |
| 1975 | 1637.7 | 90.19 | 7.71 | 3.73 | 1 | |
| 1976 | 1824.6 | 107.46 | 9.75 | 4.22 | | |
| 1977 | 2030.1 | 95.1 | 10.87 | 4.86 | 1 | |
| 1978 | 2293.8 | 96.11 | 11.64 | 5.18 | 1 | |
| 1979 | 2562.2 | 107.94 | 14.55 | 5.97 | | |
| 1980 | 2788.1 | 135.76 | 14.99 | 6.44 | 1 | |
| 1981 | 3126.8 | 122.55 | 15.18 | 6.83 | 1 | |
| 1982 | 3253.2 | 140.64 | 13.82 | 6.93 | | |
| 1983 | 3534.6 | 164.93 | 13.29 | 7.12 | 1 | |
| 1984 | 3930.9 | 167.24 | 16.84 | 7.83 | 1 | |
| 1985 | 4217.5 | 211.28 | 15.68 | 8.20 | 1 | |
| 1986 | 4460.1 | 242.17 | 14.43 | 8.19 | 1 | |
| 1987 | 4736.4 | 247.08 | 16.04 | 9.17 | 1 | |
| 1988 | 5100.4 | 277.72 | 22.77 | 10.22 | | |
| 1989 | 5482.1 | 353.4 | 24.03 | 11.73 | | |
| 1990 | 5800.5 | 330.22 | 21.73 | 12.35 | 1 | |
| 1991 | 5992.1 | 417.09 | 19.10 | 12.97 | | |
| 1992 | 6342.3 | 435.71 | 18.13 | 12.64 | | |
| 1993 | 6667.4 | 466.45 | 19.82 | 12.69 | | |
| 1994 | 7085.2 | 459.27 | 27.05 | 13.36 | | |
| 1995 | 7414.7 | 615.93 | 35.35 | 14.17 | | |
| 1996 | 7838.5 | 740.74 | 35.78 | 14.89 | | |
| 1997 | 8332.4 | 970.43 | 39.56 | 15.52 | | |
| 1998 | 8793.5 | 1229.23 | 38.23 | 16.20 | | |
| 1999 | 9353.5 | 1469.25 | 45.17 | 16.71 | | |
| 2000 | 9951.5 | 1320.28 | 52.00 | 16.27 | | |
| 2001 | 10286.2 | 1148.09 | 44.23 | 15.74 | | |
| 2002 | 10642.3 | 879.82 | 47.24 | 16.08 | | |
| 2003 | 11142.1 | 1111.91 | 54.15 | 17.88 | | |
| 2004 | 11867.8 | 1211.92 | 67.01 | 19.41 |] | |
| 2005 | 12638.4 | 1248.29 | 68.32 | 22.38 |] | |
| 2006 | 13398.9 | 1418.3 | 81.96 | 25.05 | 1 | |
| 2007 | 14077.6 | 1468.36 | 87.51 | 27.73 |] | |
| 2008 | 14441.4 | 903.25 | 65.39 | 28.05 | 1 | |
| 2009 | 14258.7 | 1115.10 | 59.65 | 22.31 | Average | |
| Growth | 6.96% | 6.21% | 6.22% | 5.07% | 6.12% | |

Data Sources: GDPA - http://research.stlouisfed.org/fred2/categories/106 S&P 500, EPS and DPS - http://pages.stern.nyu.edu/~adamodar/