Exhibit No.:	
Issue:	**Fair Rate of Return**
Witness:	**Pauline M. Ahern**
Type of Exhibit:	**Direct**
Sponsoring Party:	**Missouri Gas Energy, a Division of Laclede Gas Company**
Case No.:	**GR-2014-0007**
Date Testimony Prepared:	**September 16, 2013**

MISSOURI PUBLIC SERVICE COMMISSION

MISSOURI GAS ENERGY

CASE NO. GR-2014-0007

DIRECT TESTIMONY OF

PAULINE M. AHERN, CRRA
PRINCIPAL
AUS CONSULTANTS

SEPTEMBER 2013

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Introduction

Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.

A. My name is Pauline M. Ahern. I am a Principal of AUS Consultants. My business address is 155 Gaither Drive, Suite A, Mt. Laurel, New Jersey 08054.

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE AND EDUCATIONAL BACKGROUND.

A. I have offered expert testimony on behalf of investor-owned utilities before twenty-nine state regulatory commissions in the United States as well as one provincial regulatory commission in Canada on rate of return issues, including but not limited to common equity cost rate, fair rate of return, capital structure issues, and credit quality issues. I am a graduate of Clark University, Worcester, MA, where I received a Bachelor of Arts degree with honors in Economics. I have also received a Master of Business Administration with high honors and a concentration in finance from Rutgers University. The details of my educational background, expert witness appearances, presentations I have given and articles I have co-authored are shown in Appendix A supplementing this testimony.

On behalf of the American Gas Association ("A.G.A."), I calculate the A.G.A. Gas Index, which serves as the benchmark against which the performance of the American Gas Index Fund ("AGIF") is measured monthly. The A.G.A. Gas Index and AGIF are a market capitalization weighted index and mutual fund, respectively, comprised of the common stocks of the publicly traded corporate members of the A.G.A.

I am also the Publisher of AUS Utility Reports, and am responsible for supervising the production, publication, distribution and marketing of its reports. I am responsible for

overseeing the production of the annual Financial & Operating Statistics Report for the National Association of Water Companies ("NAWC").

I am a member of the Society of Utility and Regulatory Financial Analysts ("SURFA") where I serve on its Board of Directors, having served two terms as President, from 2006 – 2008 and 2008 – 2010. Previously, I held the position of Secretary/Treasurer from 2004 – 2006. In 1992, I was awarded the professional designation "Certified Rate of Return Analyst" ("CRRA") by SURFA, which is based upon education, experience and the successful completion of a comprehensive written examination.

I am also an associate member of the National Association of Water Companies, serving on its Finance/Accounting/Taxation and Rates and Regulation Committees; a member of the Energy Association of Pennsylvania, formerly the Pennsylvania Gas Association; and a member of the American Finance, Financial Management and Energy Bar Associations. I am also a member of Edison Electric Institute's Cost of Capital Working Group, the Advisory Board of the Financial Research Institute of the University of Missouri and the Advisory Council of New Mexico State University's Center for Public Utilities.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose is to provide testimony on behalf of Missouri Gas Energy ("MGE" or "the Company") relative to the appropriate overall rate of return, including capital structure ratios, long-term debt cost rate and the common equity cost rate which it should be afforded the opportunity to earn on its jurisdictional rate base.

Q. HAVE YOU PREPARED AN EXHIBIT WHICH SUPPORTS YOUR RECOMMENDED COMMON EQUITY COST RATE?

A. Yes. It has been designated as Schedules PMA-1 through 10.

Summary

Q. WHAT IS YOUR RECOMMENDED OVERALL FAIR RATE OF RETURN?

A. I recommend that the Missouri Public Service Commission ("MO PSC" or "the Commission") authorize the Company the opportunity to earn an overall rate of return of 8.80% relative to the consolidated *pro forma* capital structure of The Laclede Group, Inc. ("LG" or "the Parent") at July 31, 2013, which consisted of 46.40% long-term debt at a cost rate of 4.35% and 53.60% common equity at my recommended common equity cost rate of 10.25%. The overall rate of return is summarized in Table 1 below:

Table 1

Type of Capital	Ratios	Cost Rate	Weighted Cost Rate
Long-Term Debt	46.40%	4.350%	2.018%
Common Equity	53.60%	10.250%	5.494%
Total	100.00%		7.512%

Q. PLEASE SUMMARIZE YOUR RECOMMENDED COMMON EQUITY COST RATE.

A. My recommended common equity cost rate of 10.25% is summarized on Schedule PMA-1. MGE is a division of Laclede Gas Company ("Laclede"), which does not have publicly traded stock. Hence, a market-based common equity cost rate cannot be determined directly for MGE. Therefore, in arriving at my recommended common equity cost rate of 10.25%, I have assessed the market-based common equity cost rates of

companies of relatively similar, but not necessarily identical, risk, *i.e.*, a proxy group, for insight into a recommended common equity cost rate applicable to MGE. Using companies of relatively comparable similar risk as proxies is consistent with the principles of fair rate of return established in the *Hope*[1] and *Bluefield*[2] cases, adding reliability to the informed expert judgment necessary to arrive at a recommended common equity cost rate. However, no proxy group can be selected to be identical in risk to MGE. Therefore, the proxy group's results must be adjusted, if necessary, to reflect the unique relative financial (credit) and/or business risks of the Company.

My recommendation results from the application of market-based cost of common equity models, the Discounted Cash Flow ("DCF") approach, the Risk Premium Model ("RPM") and the Capital Asset Pricing Model ("CAPM") to the market data of the proxy group of eight gas distribution companies whose selection will be discussed below. In addition, I also applied the DCF, RPM and CAPM to the market data of domestic, non-price regulated companies comparable in total risk to the eight gas distribution companies.

The results derived from each are as follows:

[1] Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944).

[2] Bluefield Water Works Improvement Co. v. Public Serv. Comm'n, 262 U.S. 679 (1922).

Table 2

	Proxy Group of Eight Gas Distribution Companies
Discounted Cash Flow Model	8.66%[3]
Risk Premium Model	11.60
Capital Asset Pricing Model	10.16
Cost of Equity Models Applied to Comparable Risk, Non-Price Regulated Companies	10.31
Indicated Common Equity Cost Rate	10.25%

After reviewing the cost rates based upon these models, I conclude that a common equity cost rate of 10.25% is indicated before any adjustment for MGE's credit and business risks relative to the proxy group of eight gas distribution companies which will be discussed below. Since MGE's ratemaking capital structure is based upon LG, whose Moody's bond rating of A2 is identical to the average Moody's bond rating of the proxy group, MGE's credit risk is identical to that of the proxy group, as will be discussed below. Thus, no credit risk adjustment is warranted. Likewise, as will be discussed, the estimated market capitalization of MGE relative to that of the proxy group indicates a de minimis size premium, so no business risk adjustment is warranted. Therefore, my recommended common equity cost rate is 10.25% based upon the proxy group.

[3] As discussed later in my testimony, the current DCF model understates the required return on common equity by as much as 350 basis points due to a highly unusual and, in all likelihood temporary, convergence of historically anomalous market conditions. Accordingly, the results of that model should be given only very limited weight in deriving a reasonable return on equity in this proceeding.

General Principles

Q. WHAT GENERAL PRINCIPLES HAVE YOU CONSIDERED IN ARRIVING AT YOUR RECOMMENDED COMMON EQUITY COST RATE OF 10.25%?

A. In unregulated industries, the competition of the marketplace is the principal determinant of the price of products or services. For regulated public utilities, regulation must act as a substitute for marketplace competition. Assuring that the utility can fulfill its obligations to the public while providing safe and reliable service at all times requires a level of earnings sufficient to maintain the integrity of presently invested capital as well as permitting the attraction of needed new capital at a reasonable cost in competition with other firms of comparable risk. This is consistent with the fair rate of return standards established by the U.S. Supreme Court in the *Hope* and *Bluefield* cases. Consequently, marketplace data must be relied upon in assessing a common equity cost rate appropriate for ratemaking purposes. Therefore, my recommended common equity cost rate is based upon marketplace data for a proxy group of utilities as similar in risk as possible to MGE, based upon selection criteria which will be discussed subsequently. Just as the use of the market data for the proxy group adds reliability to the informed expert judgment used in arriving at a recommended common equity cost rate, the use of multiple common equity cost rate models also adds reliability when arriving at a recommended common equity cost rate.

Business Risk

Q. PLEASE DEFINE BUSINESS RISK AND EXPLAIN WHY IT IS IMPORTANT TO THE DETERMINATION OF A FAIR RATE OF RETURN.

A. Business risk is the riskiness of a company's common stock without the use of debt and/or preferred capital. Examples of such general business risks to all utilities, *i.e.*, electric, natural gas distribution and water, include the quality of management, the regulatory environment, customer mix and concentration of customers, service territory growth, capital intensity, size, which have a direct bearing on earnings.

Business risk is important to the determination of a fair rate of return because the greater the level of risk, the greater the rate of return investors demand, consistent with the basic financial principle of risk and return.

Q. DOES A COMPANY'S SIZE HAVE A BEARING ON BUSINESS RISK?

A. Yes. Company size is a significant element of business risk for which investors expect to be compensated through greater returns. Smaller companies are simply less able to cope with significant events that affect sales, revenues and earnings. For example, smaller companies face more risk exposure to business cycles and economic conditions, both nationally and locally. Additionally, the loss of revenues from a few larger customers would have a greater effect on a small company than on a much larger company with a larger, more diverse, customer base. Moreover, smaller companies are generally less diverse in their operations and have less financial flexibility.

Further evidence of the risk effects of size include the fact that investors demand greater returns to compensate for the lack of marketability and liquidity of the securities of smaller firms. It is a basic financial principle that it is the use of funds invested and not the source of those funds that gives rise to the risk of any investment.[4] Therefore, the

[4] Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance (McGraw-Hill Book Company, 1996) 204-205, 229.

Commission should authorize a cost of common equity in this proceeding that reflects MGE's relevant risk, including the impact of its smaller size, which will subsequently be discussed.

Consistent with the financial principle of risk and return discussed above, such increased risk due to small size must be taken into account in the allowed rate of return on common equity.

Q. PLEASE DISCUSS MGE'S SIZE RELATIVE TO THAT OF THE PROXY GROUP.

A. MGE is slightly smaller than the average company in the proxy group of eight gas distribution companies based upon estimated market capitalization, as will be discussed subsequently. As shown on Schedule PMA-9, page 1, MGE's estimated market capitalization of $1.114 billion is lower than the average market capitalization of the gas distribution proxy group, $2.291 billion on September 6, 2013. However, as will be discussed below, based upon Ibbotson Associates' size risk premium study, no adjustment to my recommended common equity cost rate due to size is warranted.

Financial Risk

Q. PLEASE DEFINE FINANCIAL RISK AND EXPLAIN WHY IT IS IMPORTANT TO THE DETERMINATION OF A FAIR RATE OF RETURN.

A. Financial risk is the additional risk created by the introduction of senior capital, *i.e.*, debt and preferred stock, into the capital structure. The higher the proportion of senior capital in the capital structure, the higher the financial risk which must be factored into the common equity cost rate, consistent with the previously mentioned basic financial

principle of risk and return, *i.e.*, investors demand a higher common equity return as compensation for bearing higher investment risk.

Standard &Poor's, or S&P, initially published its electric, gas, and water utility ratings rankings in a framework consistent with the manner in which it presents its rating conclusions across all other corporate sectors in November 2007. S&P then stated[5]:

> Incorporating utility ratings into a shared framework to communicate the fundamental credit analysis of a company furthers the goals of transparency and comparability in the ratings process.
>
> * * *
>
> The utilities rating methodology remains unchanged, and the use of the corporate risk matrix has not resulted in any changes to ratings or outlooks. The same five factors that we analyzed to produce a business risk score in the familiar 10-point scale are used in determining whether a utility possesses an "Excellent," "Strong," "Satisfactory," "Weak," or "Vulnerable" business risk profile.

In September 2012, S&P refined and expanded its Business Risk / Financial Risk Matrix in an effort to provide greater transparency to its corporate rating methodology without changing its rating criteria or standards (see Tables 1 and 2, pages 2 and 3 of Schedule PMA-2). Notwithstanding the metrics published in Table 2, S&P stated:

> We do not have any predetermined weights for these categories. The significance of specific factors varies from situation to situation.
>
> * * *
>
> The rating matrix indicative outcomes are what we typically observe – but are not meant to be precise indications or guarantees of future rating opinions. Positive and negative nuances in our analysis may lead to a notch higher or lower than the outcomes indicated in the various cells of the matrix.

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[5] Standard & Poor's – Ratings Direct – "U.S. Utilities Ratings Analysis Now Portrayed In The S&P Corporate Ratings Matrix" (November, 30, 2007) 2.

As shown on Schedule PMA-6, page 4, the average S&P bond rating (issuer credit rating), business risk profile and financial risk profile of the eight gas distribution companies are split A (A-), Excellent business and Intermediate/Significant financial risk while LG's are A (A-), Excellent and Significant.

Q. NEVERTHELESS, CAN THE COMBINED BUSINESS RISKS, *I.E.*, INVESTMENT RISK OF AN ENTERPRISE, BE PROXIED BY BOND AND CREDIT RATINGS?

A. Yes, similar bond ratings/issuer credit (bond/credit) ratings reflect and are representative of similar combined business and financial risks, *i.e.*, total risk faced by bond investors. Although specific business or financial risks may differ between companies, the same bond/credit rating indicates that the combined risks are similar, albeit not necessarily equal, as the purpose of the bond/credit rating process is to assess credit quality or credit risk and not common equity risk. Risk distinctions within S&P's bond rating categories are recognized by a plus or minus, *i.e.*, within the A category, an S&P rating can be at A+, A, or A-. Similarly, risk distinctions for Moody's ratings are distinguished by numerical rating gradations, *i.e.*, within the A category, a Moody's rating can be A1, A2 and A3. For S&P, additional risk distinctions are reflected in the assignment of one of the six business risk profiles and six financial risk profiles, shown in Tables 1 and 2 on pages 2 and 3 of Schedule PMA-2.

In summary, it is clear that S&P's bond/credit rating process encompasses a qualitative analysis of business and financial risks (see page 3 of Schedule PMA-2). While not a means by which one can specifically quantify the differential in common equity risk between companies, bond/credit ratings provide a useful means by which to

compare/differentiate investment risk between companies because they are the result of a thorough and comprehensive analysis of all diversifiable business risks, *i.e.*, investment risk.

Capital Structure Ratios and Long-Term Debt Cost Rate

Q. WHAT CAPITAL STRUCTURE RATIOS DO YOU RECOMMEND FOR USE IN DETERMINING THE OVERALL COST OF CAPITAL FOR MGE AND WHY?

A. I recommend that the *pro forma* consolidated capital structure ratios and embedded long-term debt cost rate of LG at July 31, 2013 be used to establish an allowed overall rate of return for MGE. These ratios, as well as corresponding cost rates, are shown on Schedule PMA-1. They consist of 46.40%, long-term debt at an embedded cost rate of 4.350% and 53.60% common equity with my recommended common equity cost rate of 10.25%.

Q. ARE THE *PRO FORMA* CONSOLIDATED PARENT ACTUAL CAPITAL STRUCTURE RATIOS AT JULY 31, 2013 APPROPRIATE FOR USE IN A COST OF CAPITAL DETERMINATION?

A. Yes. The Company's current capital structure contains 100% common equity and is not appropriate for ratemaking purposes. Because there would be no income tax shield resulting from interest expense deduction, a common equity ratio of 100% would result in an unreasonably high revenue cost of capital and, consequently, higher than necessary rates for customers. The *pro forma* consolidated Parent capital structure ratios at July 31, 2013 are reasonable to use for MGE because they are consistent with, though slightly more financially risky than, the capital structure ratios maintained on average by the proxy group of eight gas distribution companies upon whom I relied in deriving my recommended common equity cost rate.

Q. HOW DOES THE PARENT'S LONG-TERM DEBT RATIO OF 46.40% *PRO FORMA* AT JULY 31, 2013, COMPARE WITH THE LONG-TERM DEBT RATIOS MAINTAINED ON AVERAGE BY THE COMPANIES IN THE PROXY GROUP?

A. The Parent's long-term debt ratio of 46.40% *pro forma* at July 31, 2013 is similar to, but slightly greater than, the long-term debt ratio (based upon permanent capital excluding short-term debt) of 45.25% maintained on average in 2012 by the companies in the proxy group of eight gas distribution companies. In addition, the long-term debt ratios based upon permanent capital of the eight gas distribution companies ranged from 31.23% to 50.85% in 2012, as shown on page 2 of Schedule PMA-3.

Missouri Gas Energy

Q. HAVE YOU REVIEWED INFORMATION FOR MGE?

A. Yes. MGE provides natural gas distribution service to approximately 510,000 customers in 31 counties throughout Missouri. As a division of Laclede, the Company's common stock is not publicly traded.

Proxy Group

Q. PLEASE EXPLAIN HOW YOU CHOSE THE PROXY GROUP OF EIGHT GAS DISTRIBUTION COMPANIES.

A. I chose the proxy group by selecting those companies which meet the following criteria: 1) they are included in the Natural Gas Distribution and Integrated Natural Gas Company Group of AUS Utility Reports (September 2013); 2) they have 60% or greater of 2012 total operating income derived from, and 60% or greater of 2012 total assets devoted to, regulated gas distribution operations; 3) at the time of the preparation of this

testimony, they had not publicly announced that they were involved in any major merger or acquisition activity, *i.e.*, one publicly-traded utility merging with or acquiring another; 4) they have not cut or omitted their common dividends during the five years ending 2012 or through the time of the preparation of this testimony; 5) they have a *Value Line* adjusted beta; 6) they have a positive *Value Line* five-year dividends per share (DPS) growth rate projection; and 7) they have *Value Line*, Reuters, Zacks or Yahoo! Finance, consensus five-year earnings per share (EPS) growth rate projections.

The following eight companies met these criteria: AGL Resources, Inc., Atmos Energy Corporation, New Jersey Resources Corp., Northwest Natural Gas Co., Piedmont Natural Gas Co., South Jersey Industries, Inc., Southwest Gas Corporation and WGL Holdings, Inc. Although Delta Natural Gas Co. met these criteria, because of its size (only approximately 36,000 customers), its thinly traded common stock, and its lack of security analyst following, in my opinion, it is not a suitable proxy for MGE.

Q. HAVE YOU REVIEWED FINANCIAL DATA FOR THE PROXY GROUP?

A. Yes. Page 1 of Schedule PMA-3 contains comparative capitalization and financial statistics for the eight proxy group gas distribution companies for the years 2008-2012.

As shown on page 1, during the five-year period ending 2012, the historically achieved average earnings rate on book common equity for the group averaged 10.93%. The average common equity ratio based upon permanent capital (excluding short-term debt) was 54.34%, and the average dividend payout ratio was 64.03%.

Total debt as a percent of EBITDA for the years 2008-2012 ranged between 3.42 and 4.37 times, averaging 3.86 times, while funds from operations relative to total debt ranged from 9.49% to 27.18%, averaging 21.62%.

Common Equity Cost Rate Models

Q. ARE THE COST OF COMMON EQUITY MODELS YOU USE MARKET-BASED MODELS?

A. Yes. It is important to use market-based models because the cost of common equity is a function of investors' perception of risk, which is embodied in the market prices they pay. The DCF model is market-based in that market prices are utilized in developing the dividend yield component of the model. The RPM is market-based in that the bond ratings and expected bond yields used in the application of the RPM reflect the market's assessment of bond/credit risk. In addition, the use of betas to determine the equity risk premium also reflects the market's assessment of market/systematic risk as betas are derived from regression analyses of market prices. The CAPM is market-based for many of the same reasons that the RPM is market-based, *i.e.*, the use of expected bond (Treasury bond) yields and betas. Finally, the process of selecting the comparable risk non-price regulated companies is market-based in that it is based upon statistics which result from regression analyses of market prices and reflect the market's assessment of total risk.

Discounted Cash Flow Model (DCF)

Q. WHAT IS THE THEORETICAL BASIS OF THE DCF MODEL?

A. The theory underlying the DCF model is that the present value of an expected future stream of net cash flows during the investment holding period can be determined by discounting those cash flows at the cost of capital, or the investors' capitalization rate. DCF theory indicates that an investor buys a stock for an expected total return rate, which is derived from cash flows received in the form of dividends plus appreciation in market

price (the expected growth rate). Mathematically, the dividend yield on market price plus a growth rate equals the capitalization rate, *i.e.*, the total common equity return rate expected by investors.

Q. WHICH VERSION OF THE DCF MODEL DO YOU USE?

A. I utilize the single-stage constant growth DCF model because, in my experience, it is the most widely utilized version of the DCF used in public utility rate regulation. In my opinion, it is widely utilized because utilities are generally in the mature stage of their lifecycles and not transitioning from one growth stage to another.

Q. PLEASE DESCRIBE THE DIVIDEND YIELD YOU USED IN YOUR APPLICATION OF THE DCF MODEL.

A. The unadjusted dividend yields are based upon a recent (September 6, 2013) indicated dividend divided by the average of closing market prices for the 60 days ending September 6, 2013, as shown in Column 1 on page 1 of Schedule PMA-4.

Q. PLEASE EXPLAIN THE ADJUSTED DIVIDEND YIELD SHOWN ON PAGE 1 OF SCHEDULE PMA-4, COLUMN 6.

A. Because dividends are paid periodically (quarterly), as opposed to continuously (daily), an adjustment must be made to the dividend yield. This is often referred to as the discrete, or the Gordon Periodic, version of the DCF model.

DCF theory calls for the use of the full growth rate, or D_1, in calculating the dividend yield component of the model. However, since the various companies in the proxy group increase their quarterly dividend at various times during the year, a reasonable assumption is to reflect one-half the annual dividend growth rate in the dividend yield component, or $D_{1/2}$. This is a conservative approach that does not

overstate the dividend yield, which should be representative of the next twelve-month period. Therefore, the actual average dividend yields in Column 1 on page 1 of Schedule PMA-4 have been adjusted upward to reflect one-half the average projected growth rate shown in Column 6.

Q. PLEASE EXPLAIN THE BASIS OF THE GROWTH RATES OF THE PROXY GROUP WHICH YOU USE IN YOUR APPLICATION OF THE DCF MODEL.

A. Schedule PMA-5 shows that approximately 38% of the common shares of the eight gas distribution companies are held by individuals as opposed to institutional investors. Institutional investors tend to have more extensive informational resources than most individual investors. Individual investors, with more limited resources, are therefore likely to place great significance on the opinions expressed by financial information services, such as *Value Line*, Reuters, Zacks and Yahoo! Finance, which are easily accessible and/or available on the Internet and through public libraries. Investors realize that analysts have significant insight into the dynamics of the industries and individual companies they analyze, as well as company's historical and future abilities to effectively manage the effects of changing laws and regulations and ever changing economic and market conditions.

Security analysts' earnings expectations have a more significant, but not sole, influence on market prices than dividend expectations, and on market price appreciation or the "growth" experienced by investors.[6] This should be evident even to relatively unsophisticated investors just by listening to financial news reports on radio, TV or

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[6] Roger A. Morin, New Regulatory Finance (Public Utility Reports, Inc., 2006) 298-303.

reading the newspapers. Moreover, over the long run, there can be no growth in dividends per share without growth in EPS. Thus, the use of earnings growth rates in a DCF analysis provides a better matching between investors' market price appreciation expectations and the growth rate component of the DCF.

Q. PLEASE SUMMARIZE YOUR DIRECT DCF MODEL RESULTS.

A. As shown on page 1 of Schedule PMA-4, the average result of the application of the single-stage DCF model is 8.68% while the median result is 8.66%. In arriving at a conclusion of a DCF-indicated common equity cost rate for the proxy group, I have relied upon the median of the results of the DCF, due to the wide range of DCF results as well as the continuing volatile capital market conditions in light of the continuing fragile economic recovery, and to not give undue weight to outliers on either the high or the low side. In my opinion, the median is a more accurate and reliable measure of central tendency, and provides recognition of all the DCF results.

Q. PLEASE COMMENT UPON THE APPLICABILITY OF THE DCF MODEL IN ESTABLISHING A COST OF COMMON EQUITY FOR MGE.

A. The DCF model has a tendency to mis-specify investors' required common equity return rate when the market value of common stock differs significantly from its book value. Mathematically, because the "simplified" DCF model traditionally used in rate regulation assumes a market-to-book ratio of one, it understates/overstates investors' required return rate when market value exceeds or is less than book value. It does so because, in many instances, market prices reflect investors' assessments of long-range market price growth potentials (consistent with the infinite investment horizon implicit in the standard regulatory version of the DCF model) not fully reflected in analysts' shorter range

forecasts of future growth in earnings per share (EPS), an accounting proxy. Thus, the market-based DCF model will result in a total annual dollar return on book common equity equal to the total annual dollar return expected by investors only when market and book values are equal, a rare and unlikely situation. In recent years, the market values of gas utilities' common stocks have been well in excess of their book values as shown on page 1 of Schedule PMA-3 ranging between 139.25% and 172.94% for the five years ending 2012.

Under DCF theory, the rate of return investors require is related to the market price paid for a security. Thus, market prices form the basis of investment decisions and investors' expected rates of return. In contrast, a regulated utility is generally limited to earning on a net book value (depreciated original cost) rate base. Although market prices are significantly influenced by analysts' EPS growth forecasts, market values can diverge from book values for a myriad of macroeconomic reasons including, but not limited to, EPS and DPS expectations, merger or acquisition expectations, interest rates, investor sentiment, unemployment levels, monetary policy, fiscal policy, etc.

Traditional rate base/rate of return regulation, where a market-based common equity cost rate is applied to a book value rate base, presumes that market-to-book ratios are at unity or 1.00. However, there is ample empirical evidence over sustained periods that demonstrates that this is an incorrect presumption. Since market-to-book ratios of unity or 1.00 are rarely the case as discussed above, regulatory allowed ROEs, *i.e.*, earnings, have a limited effect on utilities' market/book ratios as the market prices of utility common stocks are also influenced by factors beyond the direct influence of the regulatory process.

As noted by Phillips:[7]

> Many question the assumption that market price should equal book value, believing that 'the earnings of utilities should be sufficiently high to achieve market-to-book ratios which are consistent with those prevailing for stocks of unregulated companies.'

In addition, Bonbright[8] states:

> In the first place, commissions cannot forecast, except within wide limits, the effect their rate orders will have on the market prices of the stocks of the companies they regulate. In the second place, *whatever the initial market prices may be, they are sure to change not only with the changing prospects for earnings, but with the changing outlook of an inherently volatile stock market.* In short, market prices are beyond the control, though not beyond the influence of rate regulation. Moreover, even if a commission did possess the power of control, any attempt to exercise it ... would result in harmful, uneconomic shifts in public utility rate levels. (italics added)

Q. IS IT REASONABLE TO EXPECT THE MARKET VALUES OF UTILITIES' COMMON STOCKS TO CONTINUE TO SELL WELL ABOVE THEIR BOOK VALUES?

A. Yes. Market-to-book ratios of regulated utilities vary from year to year, due to such influences as the effects on the "Great Recession," subsequent economic and capital market turmoil, the fledgling recovery and the like. In my opinion, the common stocks of utilities will continue to sell substantially above their book values, on average, because many investors will likely continue to commit a greater percentage of their available capital to common stocks in view of lower interest rate alternative investment opportunities. The recent past and current capital market environment is in stark and

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[7] Phillips, Charles F., The Regulation of Public Utilities – Theory and Practice (Public Utility Reports, Inc., 1993) 395.

[8] James C. Bonbright, Albert L. Danielsen and David R. Kamerschen, Principles of Public Utility Rates (Public Utilities Reports, Inc., 1988) 334.

historical contrast to the late 1970's and early 1980's when very high (by historical standards) yields on secured debt instruments in public utilities were available. Despite the fact that the market declined significantly during late 2001 through 2003, following the September 11, 2001 tragedy and dipped to a low in March 2009 as the "Great Recession" unfolded and the U.S. has begun to recover from the "Great Recession" at a slow pace, the majority of utility stocks, on average, have continued to sell at market prices well above their book value. In addition, as previously discussed, such sustained high market-to-book ratios have been influenced by factors other than fundamentals, such as actual and reported growth in EPS and DPS.

Q. HAVE ANY REGULATORY COMMISSIONS RECOGNIZED THIS TENDENCY OF THE DCF MODEL TO UNDERSTATE/OVERSTATE INVESTORS' REQUIRED RETURN RATE WHEN MARKET-TO-BOOK RATIOS ARE GREATER/LESS THAN UNITY?

A. In 1994, the Indiana Utility Regulatory Commission (IURC) recognized the tendency of the DCF model to understate the cost of equity when market value exceeds book value noting that[9]:

> [u]nder the traditional DCF model . . . the appropriate earnings level of the utility would not be derived by applying the DCF result to the market price of the Company's stock . . . it would be applied to the utility's net original cost rate base. *If the market price of the stock exceeds its book value, . . . the investor will not achieve the return which the model finds is necessary.* (italics added)

[9] Re: Indiana-American Water Company, Inc. 150 PUR4th 141, 167-168 (IN URC 1994).

Q. CAN THE UNDER- OR OVERSTATEMENT OF THE INVESTORS' REQUIRED RATE OF RETURN ON THE MARKET BY THE DCF MODEL BE DEMONSTRATED MATHEMATICALLY?

A. Yes. Page 2 of Schedule PMA-4 demonstrates how a market-based DCF cost rate of 8.68% applied to a book value which is below market value will understate the investors' required return on market value. As shown, there is no realistic opportunity to earn the expected market-based rate of return on book value. In Column 1, investors expect an 8.68%, the average DCF result for the proxy group, return on a market price of $42.65. Column 2 shows that when the 8.68% return rate on market value is applied to book value, which is approximately 177.63% of market value, the total annual return opportunity is just $2.084 on book value. With an annual dividend of $1.580, there is an opportunity for growth of $0.504, which is just 1.18%, in contrast to the 4.97% growth in market price expected by investors.

The converse is also true. When the market-to-book value is below 1, the DCF cost rate will overstate the investors' required return on market value.

Hence, it is clear that the DCF model misspecifies; that is, it either understates/overstates investors' required cost of common equity capital when market values exceed/are less than their underlying book values. Therefore, as stated above, in order to add reliability to the estimation of the cost of common equity, multiple cost of common equity models should be relied upon, rather than exclusive reliance upon the DCF model, when estimating investors' expectations.

Q. HAVE ANY COMMISSIONS EXPLICITLY STATED THAT THE DCF MODEL SHOULD NOT BE RELIED UPON EXCLUSIVELY?

A. Yes. In my experience, the majority of regulatory commissions rely upon a combination of the various cost of common equity models available.

Specifically, the Iowa Utilities Board ("IUB") has recognized the tendency of the DCF model to understate investors' expected cost of common equity capital when market values are significantly above their book values. In its June 17, 1994 Final Decision and Order in Re U.S. West Communications, Docket No. RPU-93-9 the IUB stated:[10]

> While the Board has relied in the past on the DCF model, in *Iowa Electric Light and Power Company*, Docket No. RPU-89-9, "Final Decision and Order" (October 15, 1990), the Board stated: '[T]he DCF model may understate the return on equity in some circumstances. This is particularly true when the market is relatively volatile and the company in question has a market-to-book ratio in excess of one." Those conditions exist in this case and the Board will not rely on the DCF return. (Consumer Advocate Ex. 367, See Tr. 2208, 2250, 2277, 2283-2284). *The DCF approach underestimates the cost of equity needed to assure capital attraction during this time of market uncertainty and volatility*. *The board will, therefore, give preference to the risk premium approach.* (italics added)

Also, the Hawaii Public Utilities Commission (HPUC) recognized this phenomenon in a decision dated June 30, 1992[11] in a case regarding Hawaiian Electric Company, Inc., when it stated:

> In this docket, as in other rate proceedings, experts disagree on the relative merits of the various methods of determining the cost of common equity. In this docket, HECO is particularly critical of the use of the constant growth DCF methodology. It asserts that method is imbued with downward bias and, thus, its use will understate common equity cost. *We are cognizant of the shortcomings of the DCF method.* There are, however, shortcomings to be found with the use of CAPM and the RP methods as well. We reiterate that, despite the problems with the use of any methodology, *all methods should be considered and that the DCF method*

[10] Re: U.S. West Communications, Inc. 152 PUR4th 446, 459 (IA UB 1994).

[11] Re: Hawaiian Electric Company, Inc., 134 PUR4th 418, 479 (HI PUC 1992).

and the combined CAPM and RP methods should be given equal weight. (italics added)

In view of all of the foregoing, at this time the traditional application of the DCF mis-specifies investors' required return. Specifically it understates investors' required return because of the confluence of recently rising market prices, the use of accounting measures as proxies for capital appreciation in the DCF, the recent dramatic rise in interest rates in response to recent Federal Reserve comments and the expected continued rise in interest rates and capital costs discussed below. The magnitude of this understatement can be found in the difference between the 4.97% growth in market values, *i.e.*, growth in EPS shown in column 1 on page 2 of Schedule PMA-4, and the growth in market value of 1.18%, shown in column 2, when the 8.68% DCF cost rate is applied to book value, a difference that is up to approximately 350 basis points. Coupled with the added reliability and accuracy that the use of multiple cost of common equity models provide in the estimation of the cost of common equity, it is more imperative than ever to not give exclusive or even primary reliance to the DCF analysis at this time. In fact, in my opinion, it would be inappropriate to give any greater weight to the DCF analysis than I already have in deriving my multi-model return on equity recommendation.

The Risk Premium Model (RPM)

Q. PLEASE DESCRIBE THE THEORETICAL BASIS OF THE RPM.

A. The RPM is based upon the basic financial principle of risk and return, namely, that investors require greater returns for bearing greater risk. The RPM recognizes that common equity capital has greater investment risk than debt capital, as common equity shareholders are last in line in any claim on a company's assets and earnings, with debt

holders being first in line. Therefore, investors require higher returns from common stocks than from investment in bonds to compensate them for bearing the additional risk.

While the investors' required common equity return cannot be directly determined or observed, it is possible to directly observe bond returns and yields. According to RPM theory, one can assess a common equity risk premium over bonds, either historically or prospectively, and then use that premium to derive a cost rate of common equity.

In summary, according to RPM theory, the cost of common equity equals the expected cost rate for long-term debt capital plus a risk premium over that cost rate to compensate common shareholders for the added risk of being unsecured and last-in-line for any claim on the corporation's assets and earnings.

Q. PLEASE EXPLAIN HOW YOU DERIVED YOUR INDICATED COST OF COMMON EQUITY BASED UPON THE RPM.

A. I relied upon the results from the application of two risk premium methods. The first method is the Predictive Risk Premium Model™ (PRPM™), while the second method is a risk premium model using a total market approach.

Q. PLEASE EXPLAIN THE PRPM™.

A. The PRPM™, published in the *Journal of Regulatory Economics (JRE)*[12], was developed from the work of Robert F. Engle, who shared the Nobel Prize in Economics in 2003 "for methods of analyzing economic time series with time-varying volatility ("ARCH")[13]" with "ARCH" standing for autoregressive conditional heteroskedasticity. In other words,

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[12] "A New Approach for Estimating the Equity Risk Premium for Public Utilities", Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. The Journal of Regulatory Economics (December 2011), 40:261-278.

[13] www.nobelprize.org

volatility changes over time and is related from one period to the next, especially in financial markets. Engle discovered that because the volatility in prices and returns also clusters over time, it is therefore highly predictable and can be used to predict future levels of risk and risk premiums. The PRPM™ estimates the risk / return relationship directly by analyzing the actual results of investor behavior rather than using subjective judgment as to the inputs required for the application of other cost of common equity models. In addition, the PRPM™ is not based upon an estimate of investor behavior, but rather upon the evaluation of the results of that behavior, *i.e.*, the variance of historical equity risk premiums. In other words, the predicted equity risk premium is generated by the prediction of volatility (risk). Also, in the derivation of the premiums, greater weight is given to more recent time periods, in contrast to reliance upon the arithmetic mean premium which gives equal weight to each observed premium.

The inputs to the model are the historical returns on the common shares of each company in the proxy group minus the historical monthly yield on long-term U.S. Treasury securities through August 2013. Using a generalized form of ARCH, known as GARCH, each gas distribution company's projected equity risk premium was determined using Eviews© statistical software. The forecasted 30-year U.S. Treasury Bond (Note) yield based upon the consensus forecast for the six quarters ending with the fourth quarter of 2014 derived from the September 1, 2013 *Blue Chip Financial Forecasts (Blue Chip)*, was averaged with the long-range forecasts for 2015-2019 and 2020-2024 from the June 1, 2013 *Blue Chip* as discussed below, to derive a risk free rate of 4.31%. The risk free rate of 4.31% was then added to each company's PRPM™-derived equity risk premium to arrive at a PRPM™ derived cost of common equity as shown on page 2 of Schedule

PMA-6 which presents the results for each proxy company as well as the average and median results. As shown on page 2, the average PRPM™ indicated common equity cost rate is 12.14%. The median is 12.08%.

Q. PLEASE EXPLAIN THE TOTAL MARKET APPROACH RPM.

A. The total market approach RPM adds a prospective public utility bond yield to an equity risk premium, which is derived from a beta-adjusted total market equity risk premium and an equity risk premium based upon the S&P Utilities Index.

Q. PLEASE EXPLAIN THE BASIS OF THE EXPECTED BOND YIELD OF 5.35% APPLICABLE TO THE EIGHT GAS DISTRIBUTION COMPANIES SHOWN ON PAGE 3 OF SCHEDULE PMA-6.

A. The first step in the total market approach RPM analysis is to determine the expected bond yield. Because both ratemaking and the cost of capital, including common equity cost rate, are prospective in nature, a prospective yield on similarly-rated long-term debt is essential. Hence, I rely upon a consensus forecast of about 50 economists of the expected yield on Aaa rated corporate bonds for the six calendar quarters ending with the fourth calendar quarter of 2014, which is derived from the September 1, 2013 *Blue Chip*, averaged with the long-range forecasts for 2015-2019 and 2020-2024, from the June 1, 2013 *Blue Chip* (shown on pages 9 and 10 of Schedule PMA-6). As shown on Line No. 1 of page 3 of Schedule PMA-6, the average expected yield on Moody's Aaa rated corporate bonds is 5.08%. An adjustment of 0.27% is necessary to adjust that average Aaa corporate bond yield to be equivalent to a Moody's A rated public utility bond, as shown on Line No. 2 and explained in Note 2, resulting in an expected bond yield applicable to a Moody's A rated public utility bond of 5.35% as shown on Line No. 3.

Since the eight gas distribution companies' average Moody's bond rating is A2, no adjustment is necessary to make the prospective bond yield applicable to a proxy group-specific bond yield. Therefore, the expected bond yield is 5.35% for the eight gas distribution companies as shown on Line No. 5.

Q. PLEASE EXPLAIN THE METHOD UTILIZED TO ESTIMATE THE EQUITY RISK PREMIUM.

A. I evaluated the results of two different market equity risk premium studies based upon Ibbotson Associates' data, *Value Line's* forecasted total annual market return in excess of the prospective yield on Moody's Aaa corporate bonds, and two different studies of the equity risk premium for public utilities with Moody's A rated bonds as detailed on pages 8 and 11 of Schedule PMA-6. As shown on Line No. 3, page 7, the mean equity risk premium applicable to the eight gas distribution companies is 4.80%. This estimate is the result of an average of a beta-derived equity risk premium as well as the average public utility equity risk premium relative to bonds rated A by Moody's based upon holding period returns.

Q. PLEASE EXPLAIN THE BASIS OF THE BETA-DERIVED EQUITY RISK PREMIUM.

A. The basis of the beta-derived equity risk premium applicable to the proxy group is shown on page 8 of Schedule PMA-6. The beta-determined equity risk premium should receive substantial weight because betas are derived from the market prices of common stocks over a recent five-year period. Beta is a meaningful measure of prospective relative risk to the market as a whole and a logical means by which to allocate a company's/proxy group's share of the market's total equity risk premium relative to corporate bond yields.

The total market equity risk premium utilized is 6.99%, based upon an average of the long-term arithmetic mean historical market equity risk premium, a predicted market equity risk premium based upon the PRPM™ and a forecasted market risk premium based upon *Value Line's* projected market appreciation and dividend yield.

Q. HOW DID YOU DERIVE THE LONG-TERM HISTORICAL MARKET EQUITY RISK PREMIUM?

A. To derive the historical (expectational) market equity risk premium, I used the most recent Morningstar data on holding period returns for the large company common stocks from the Ibbotson® SBBI® 2013 Valuation Yearbook – Market Results for Stocks, Bonds, Bills and Inflation ("SBBI – 2013")[14] and the average historical yield on Moody's Aaa and Aa rated corporate bonds for the period 1926-2012. The use of holding period returns over a very long period of time is useful because it is consistent with the long-term investment horizon presumed by the DCF model.

Consequently, as explained in note 1 on page 8 of Schedule PMA-6, the long-term arithmetic mean monthly total return rate on large company common stocks of 11.83% and the long-term arithmetic mean monthly yield on Moody's Aaa and Aa rated corporate bonds of 6.23% were used. As shown on Line No. 1, the resultant long-term historical equity risk premium on the market as a whole is 5.60%.

I used arithmetic mean monthly total return rates for the large company stocks and yields (income returns) for the Moody's Aaa/Aa corporate bonds, because they are appropriate for cost of capital purposes as noted in the SBBI – 2013. Arithmetic mean

[14] Ibbotson® SBBI® - 2013 Valuation Yearbook – Market Results for Stocks, Bonds, Bills and Inflation (Morningstar, Inc., 2013) .

return rates and yields are appropriate because ex-post (historical) total returns and equity risk premiums differ in size and direction over time, providing insight into the variance and standard deviation of returns. Because the arithmetic mean captures the prospect for variance in returns and equity risk premiums, it provides the valuable insight needed by investors in estimating future risk when making a current investment. Absent such valuable insight into the potential variance of returns, investors cannot meaningfully evaluate prospective risk. If investors alternatively relied upon the geometric mean of ex-post equity risk premiums, they would have no insight into the potential variance of future returns because the geometric mean relates the change over many periods to a constant rate of change, thereby obviating the year-to-year fluctuations, or variance, *critical to risk analysis.*

Only the arithmetic mean takes into account all of the returns / premiums, hence, providing meaningful insight into the variance and standard deviation of those returns / premiums.

Q. PLEASE EXPLAIN THE DERIVATION OF PRPM^{TM} MARKET EQUITY RISK PREMIUM.

A. The inputs to the model are the historical monthly returns on large company common stocks from minus the monthly yields on Aaa corporate bonds during the period from January 1928 through June 2013 (the latest available at the time of the preparation of this testimony). Using the previously discussed generalized form of ARCH, known as GARCH, the market's projected equity risk premium was determined using Eviews© statistical software. The resulting predicted market equity risk premium based upon the PRPM^{TM} of 9.20% is shown on Line No. 2 on page 8 of Schedule PMA-6.

Q. PLEASE EXPLAIN HOW YOU INCORPORATED *VALUE LINE'S* FORECASTED TOTAL ANNUAL MARKET RETURN MINUS THE PROSPECTIVE YIELD ON AAA RATED CORPORATE BONDS IN YOUR DEVELOPMENT OF AN EQUITY RISK PREMIUM FOR YOUR RPM ANALYSIS?

A. Once again, because both ratemaking and the cost of capital, including the cost rate of common equity are prospective, a prospective market equity risk premium is essential. The derivation of the forecasted, or prospective, market equity risk premium can be found in note 3 on page 8 of Schedule PMA-6. Consistent with the development of the dividend yield component of my DCF analysis, it is derived from an average of the most recent thirteen weeks ending September 13, 2013 3-5 year median market price appreciation potential by *Value Line* plus an average of the median estimated dividend yield for the common stocks of the 1,700 firms covered in *Value Line*'s Standard Edition, as explained in detail in Note 1 on page 2 of Schedule PMA-7.

The average median expected price appreciation is 42%, which translates to a 9.16% annual appreciation and, when added to the average (similarly calculated) median dividend yield of 2.08%, equates to a forecasted annual total return rate on the market as a whole of 11.24%. The forecasted total market equity risk premium of 6.16%, shown on Line No. 3, page 8 of Schedule PMA-6, is derived by deducting the September 1, 2013 *Blue Chip* consensus estimate of about 50 economists of the expected yield on Moody's Aaa rated corporate bonds (for the six calendar quarters ending with the fourth calendar quarter 2014) averaged with the projected long-range forecasts for 2015-2019 and 2020-2024, from the June 1, 2013 *Blue Chip* of 5.08% (6.16% = 11.24% - 5.08%).

In arriving at my conclusion of equity risk premium of 6.99% on Line No. 4 on page 8, I have given equal weight to the historical market equity risk premium of 5.60%, the PRPM^{TM} based market equity risk premium of 9.20% and the forecasted market equity risk premium of 6.16%, as shown on Line Nos. 1, 2 and 3, respectively (6.99% = (5.60% + 9.20% + 6.16%)/3).

Q. WHAT IS YOUR CONCLUSION OF A BETA-DERIVED EQUITY RISK PREMIUM FOR USE IN YOUR RPM ANALYSIS?

A. As shown on page 1 of Schedule PMA-7, the most current median *Value Line* beta for the eight gas distribution companies is 0.70. Applying the median beta of the proxy group of 0.70 (consistent with my reliance upon the median PRPM^{TM} results as previously discussed) to the market equity risk premium of 6.99% results in a beta adjusted equity risk premium of 4.89% for the eight gas distribution companies.

Q. HOW DID YOU DERIVE THE 4.70% EQUITY RISK PREMIUM BASED UPON THE S&P UTILITY INDEX AND MOODY'S A RATED PUBLIC UTILITY BONDS?

A. First, I derived the long-term monthly arithmetic mean equity risk premium between the S&P Utility Index total returns of 10.69% and monthly A rated public utility bond yields of 6.53% (for the period from 1928-2012) to arrive at an equity risk premium of 4.16%, as shown on Line No. 3 on page 11 of Schedule PMA-6. I then performed the PRPM^{TM} using the same historical monthly equity risk premiums to arrive at the PRPM^{TM} derived equity risk premium of 5.24% for the S&P Utility Index, as shown on Line No. 4, on page 10. The average of these equity risk premiums is 4.70%, shown on Line No. 5 (4.70% = (4.16% + 5.24%)/2).

Q. WHAT IS YOUR CONCLUSION OF AN EQUITY RISK PREMIUM FOR USE IN YOUR TOTAL MARKET APPROACH RPM ANALYSIS?

A. The equity risk premium applicable to the proxy group of eight gas distribution companies is the average of the beta-derived premium, 4.80%, and the premium based upon the holding period returns of public utilities with A rated bonds, 4.70%, as summarized on Line No. 3 on Schedule PMA-6, page 7, *i.e.*, 4.80% (4.80% = (4.89% + 4.70%)/2).

Q. WHAT IS THE INDICATED RPM COMMON EQUITY COST RATE BASED UPON THE TOTAL MARKET APPROACH?

A. It is 10.15% for the eight gas distribution companies as shown on Line No. 7 on Schedule PMA-6, page 3.

Q. WHAT ARE THE RESULTS OF YOUR APPLICATION OF THE PRPM™ AND THE TOTAL MARKET APPROACH RPM?

A. As shown on page 1 of Schedule PMA-8, the indicated RPM-derived common equity cost rate is 11.60%, which is derived by giving greater weight to the PRPM™ results because the PRPM™ is based upon a minimum of restrictive assumptions.[15] In addition, the PRPM™ is "not based upon an estimate of investor behavior, but rather, upon a statistical analysis of actual investor behavior" because it evaluates the results of that behavior, *i.e.*, the volatility of historical equity risk premiums.[16]

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15 Ahern, Hanley, Michelfelder 277.

16 "Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model:, co-authored with Richard A. Michelfelder, Ph.D., Rutgers University, Dylan W. D'Ascendis, Frank J. Hanley, *The Electricity Journal*, May 2013.

The Capital Asset Pricing Model (CAPM)

Q. PLEASE EXPLAIN THE THEORETICAL BASIS OF THE CAPM.

A. CAPM theory defines risk as the covariability of a security's returns with the market's returns as measured by beta (β). A beta less than 1.0 indicates lower variability while a beta greater than 1.0 indicates greater variability than the market.

The CAPM assumes that all other risk, *i.e.*, all non-market or unsystematic risk, can be eliminated through diversification. The risk that cannot be eliminated through diversification is called market, or systematic, risk. In addition, the CAPM presumes that investors require compensation only for these systematic risks which are the result of macroeconomic and other events that affect the returns on all assets. The model is applied by adding a risk-free rate of return to a market risk premium, which is adjusted proportionately to reflect the systematic risk of the individual security relative to the total market as measured by beta. The traditional CAPM model is expressed as:

$$R_s = R_f + \beta(R_m - R_f)$$

Where: R_s = Return rate on the common stock

R_f = Risk-free rate of return

R_m = Return rate on the market as a whole

β = Adjusted beta (volatility of the security relative to the market as a whole)

Numerous tests of the CAPM have measured the extent to which security returns and betas are related as predicted by the CAPM confirming its validity. The empirical CAPM (ECAPM) reflects the reality that while the results of these tests support the

notion that beta is related to security returns, the empirical Security Market Line (SML) described by the CAPM formula is not as steeply sloped as the predicted SML.[17]

In view of theory and practical research, I have applied both the traditional CAPM and the ECAPM to the companies in the proxy group and averaged the results.

Q. PLEASE DESCRIBE YOUR SELECTION OF A RISK-FREE RATE OF RETURN.

A. As shown in column 3 on page 1 of Schedule PMA-7, the risk-free rate adopted for both applications of the CAPM is 4.31%. The risk-free rate for my CAPM analysis is based upon the average of the consensus forecast of the reporting economists (in the September 1, 2013 *Blue Chip)* of the expected yields on 30-year U.S. Treasury bonds for the six quarters ending with the fourth calendar quarter of 2014 of 3.85% and the long-range projected yields on 30-year U.S. Treasury bonds for 2015-2019 and 2020-2024 (from the June 1, 2013 *Blue Chip)* as derived in note 2, page 2 of Schedule PMA-7.

Q. WHY HAVE YOU AVERAGED THE SHORT-TERM (NEXT SIX QUARTERS) AND LONG-RANGE PROJECTED YIELDS ON U.S. TREASURY SECURITIES?

A. I have averaged the short-term (next six quarters) and long-range projected yields on U.S. Treasury Securities because in the current U.S. Treasury securities market, the Federal Reserve Bank is artificially and indefinitely keeping interest rates low until certain economic thresholds are met; *i.e.*, unemployment falls to 6.5% and inflation rises to 2.5%, amid concerns over the struggling U.S. economy. As a result, current 30-year U.S. Treasury Bond yields and the short-term (next six quarters) consensus forecasted yields

[17] Morin 175.

are still near historical and unprecedented lows. As such, they are not currently representative of the long-term cost of capital.

Q. WHY ARE CURRENT AND CONSENSUS FORECASTED YIELDS FOR THE NEXT SIX QUARTERS ON 30-YEAR U.S. TREASURY BONDS NOT REPRESENTATIVE OF EXPECTED LONG-TERM CAPITAL COSTS?

A. On May 24, 2013, *Value Line* published its Quarterly Forecast for the U.S. Economy. *Value Line* projects interest rates to rise significantly by 2017. Specifically, the yield on the 3-month Treasury Bill is expected to rise from a current (September 6, 2013) 0.08%[18] to 3.0% in 2017; the yield on long-term Treasury securities to rise from a current (September 6, 2013) 3.87%[19] to 4.5% in 2017; the yield on Aaa Corporate Bonds to rise from 4.72%[20] (September 6, 2013) to 5.8% in 2017; and the prime rate to rise from a recent (September 6, 2013) 3.25%[21] to 7.0% in 2017. These are significant increases in interest rates, representing a range from approximately 120% to 3,750%, and indicate increasing capital costs in the next few years.

The minutes of the Federal Open Market Committee (FOMC) on July 30 and 31, 2013, indicate that the Federal Reserve's (Fed) policy makers "were 'broadly comfortable' Chairman Ben S. Bernanke's plan to taper this year if the economy strengthens, with a few saying a reduction may be needed soon"[22] While the market is currently (at the time of the writing of this testimony) responding to the crisis in Syria, the stock market reeled immediately after a similar sentiment was express by Chairman

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18 Federal Reserve Statistical Release, September 9, 2013.
19 Federal Reserve, September 9, 2013.
20 Federal Reserve, September 9, 2013.
21 Federal Reserve September 9, 2013.
22 www.bloomberg.com/new/print/2013-08-21/fomc-minutes-show-broad-support-for-bernanke-tapering-timeline.html.

Bernanke following the June 18 and 19, 2013 meeting of the FOMC, when Chairman Bernanke hinted that the easing would be coming to a close sooner rather than later. Following the June FOMC meeting, the DJI fell approximately 520 points by week's end and another approximately 140 points on June 24, 2013. Since then, and before the market's current reaction to the Syrian crisis, the stock market recovered somewhat as Chairman Bernanke clarified that while the Fed may begin to taper down its quantitative easing, it does not necessarily mean a rise in the target Fed funds rate over the near-term.

> The Chairman has his work cut out for him. He has already indicated his intention to taper and tied it to the economic outlook. Markets haven't fully believed him, bringing forward their expectations of the increase in interest rates, interpreting the taper as the beginning of the end. Bernanke will have to work hard to convince markets that's not the case.[23]

Clearly the market believes interest rates are poised to rise sooner rather than later.

The bond markets have also reacted strongly following the FOMC meeting in June 2013, with the yield on 10-year U.S. Treasury bonds rising more than 85 basis points since the close of the last FOMC meeting on May 1, 2013, *i.e.*, rising from 1.66%[24] on May 1, 2013 to 2.52%[25] on June 21, 2013, and rising another 42 basis points to 2.94%[26] on September 6, 2013, while the yield on 30-year U.S. Treasury Bonds rose 73 basis points from 2.83%[27] on May 1, 2013 to 3.56%[28] on June 21, 2013, before rising another 31 basis points to 3.87%[29] on September 6, 2013. Public utility bond yields have

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23 "The End is Near: Fed Minutes Reveal Much of the FOMC Backs Tapering Q3 'Soon'", www.forbes.com.
24 *Value Line Selection & Opinion*, Value Line Investment Survey, May 10, 2013, 973.
25 Federal Reserve, June 24, 2013.
26 Federal Reserve Statistical Release, September 9, 2013.
27 *Value Line* 973.
28 Federal Reserve Statistical Release, June 24, 2013.
29 Federal Reserve Statistical Release, September 9, 2013.

also risen since May 1, 2013 with Moody's A rated public utility bond yields rising 61 basis points from 3.78%[30] on May 1, 2013, to 4.39%[31] on June 19, 2013 and rising another 23 basis points to 4.62%[32] on August 28, 2013, while Moody's Baa public utility bond yields rose 66 basis points from 4.15%[33] on May 1, 2013 to 4.81%[34] on June 19, 2013 and rose another 32 basis points to 5.13%[35] on August 28, 2013. *Value* Line notes[36]:

> **Meantime, Wall Street is focused on the Federal Reserve,** and eagerly awaiting the lead bank's next FOMC meeting on September 17th and 18th for some hint as to when the popular bond-buying program will be curbed and by how much **and the situation in Syria,** where military action by the West was being contemplated as we went to press.
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> * * *
>
> **The stock market has bent, but not broken,** as investors ponder the outlook for earnings, the economy, the Fed, world events, and budget dealings in Washington. Given how far and how fast equities have come, and the uncertainties now in place, the recent pullback on Wall Street is understandable. (bold type in original)

Clearly, the capital markets are beginning to reflect an expectation of rising interest rates. In my opinion, the end of the low interest rate environment of the last five years or so, a product of Fed policy, is coming to a close sooner rather than later and capital costs will continue to rise in general in the months and years to come. Hence, current and short-term consensus forecasted yields are not representative of current expected long-term capital costs.

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30 *Value Line* 973.
31 *Value Line Selection and Opinion,* Value Line Investment Survey, June 28, 2013, 889.
32 *Value Line* 769.
33 *Value Line* 973.
34 *Value Line* 889.
35 *Value Line* 769.
36 *Value Line* 761.

Q. WHY IS THE YIELD ON LONG-TERM U.S. TREASURY BONDS APPROPRIATE FOR USE AS THE RISK-FREE RATE?

A. The yield on long-term U.S. Treasury T-Bonds is almost risk-free and its term is consistent with the long-term cost of capital to public utilities measured by the yields on A rated public utility bonds, the long-term investment horizon inherent in utilities' common stocks, the long-term investment horizon presumed in the standard DCF model employed in regulatory ratemaking, and the long-term life of the jurisdictional rate base to which the allowed fair rate of return, *i.e.*, cost of capital, will be applied. In contrast, short-term U.S. Treasury yields are more volatile and largely a function of Federal Reserve monetary policy.

Q. PLEASE EXPLAIN THE ESTIMATION OF THE EXPECTED EQUITY RISK PREMIUM FOR THE MARKET.

A. The basis of the market equity risk premium is explained in detail in Note 1 on page 2 of Schedule PMA-7. It is derived from an average of the most recent thirteen weeks ending September 13, 2013 3-5 year median total market price appreciation projections from *Value Line;* the PRPM^{TM} predicted market equity risk premium using monthly equity risk premiums for large company common stocks relative to long-term U.S. Treasury securities from January 1926 through June 2013; and the arithmetic mean monthly equity risk premiums of large company common stocks relative to long-term U.S. Treasury bond income yields from SBBI-2013 from 1926-2012.

The *Value Line*-derived forecasted total market equity risk premium is derived by deducting the 4.31% average of the September 1, 2013 *Blue Chip* consensus estimate of the expected yield on U.S. Treasury Notes and the long-range forecasts for 2015-2019

and 2020-2024 from the June 1, 2013 *Blue Chip* on long-term government bonds discussed above. The *Value Line* projected total annual market return of 11.24% results in a forecasted total market equity risk premium of 6.93%. The PRPM™ market equity risk premium is 10.30%, which is derived using the PRPM™, discussed above, relative to the yields on long-term U.S. Treasury securities from June 1926 through June 2013 (the latest available at the time of the preparation of this testimony). The long-term income return on U.S. Government Securities of 5.28% was deducted from the SBBI-2013 monthly historical total market return of 11.83% resulting in an historical market equity risk premium of 6.55%.

These three market equity risk premiums, when averaged, result in an average total market equity risk premium of 7.93% (7.93% = (6.93% + 10.30% + 6.55%)/3).

Q. WHAT ARE THE RESULTS OF YOUR APPLICATION OF THE TRADITIONAL AND EMPIRICAL CAPM TO THE PROXY GROUP?

A. As shown on Schedule PMA-7, page 1, the average traditional CAPM cost rate is 9.76%, while the median is 9.86% for the eight gas distribution companies. The average ECAPM cost rate is 10.38%, while the median is 10.46%. Consistent with my reliance upon the median PRPM™ results discussed above, I rely upon the median results of the traditional CAPM and ECAPM for the proxy group, 9.86% and 10.46%, respectively. Thus, as shown on column 6 on page 1, the CAPM cost rate applicable to the proxy group is 10.16%[37], the average of the traditional CAPM and ECAPM results for the proxy group.

[37] 10.16% = (9.86% + 10.46%)/2.

Common Equity Cost Rates For The Proxy Group Of Domestic, Non-Price Regulated Companies Based Upon the DCF, RPM and CAPM

Q. PLEASE DESCRIBE THE BASIS OF APPLYING COST OF COMMON EQUITY MODELS TO COMPARABLE RISK, NON-PRICE REGULATED COMPANIES.

A. Applying cost of common equity models to non-price regulated companies, comparable in total risk, is derived from the "*corresponding risk*" standard of the landmark cases of the U.S. Supreme Court, *i.e.*, *Hope* and *Bluefield*, previously discussed. Therefore, it is consistent with the *Hope* doctrine that the return to the equity investor should be commensurate with returns on investments in other firms having corresponding risks based upon the fundamental economic concept of opportunity cost, which maintains that the true cost of an investment is equal to the cost of the best available alternative use of the funds to be invested. The opportunity cost principle is also consistent with one of the fundamental principles upon which regulation rests: that regulation is intended to act as a surrogate for competition and to provide a fair rate of return to investors.

The first step in determining such an opportunity cost of common equity based upon a group of non-price regulated companies comparable in total risk to the eight gas distribution companies is to choose an appropriate broad-based proxy group of non-price regulated firms comparable in total risk to the proxy group of eight gas distribution companies which excludes utilities to avoid circularity.

The selection criteria for the non-price regulated firms of comparable risk are based upon statistics derived from the market prices paid by investors. *Value Line* betas were used as a measure of systematic risk. The standard error of the regression was used as a measure of each firm's unsystematic or specific risk, with the standard error of the

regression reflecting the extent to which events specific to a company's operations affect its stock price. In essence, companies which have similar betas and standard errors of the regression have similar total investment risk. Using a *Value Line* proprietary database dated June 15, 2013, the application of these criteria based upon the eight gas distribution companies results in a proxy group of non-price regulated firms comparable in total risk to the average gas distribution company in the proxy group of eight gas distribution companies, as explained on page 4 of Schedule PMA-8.

Q. DID YOU CALCULATE COMMON EQUITY COST RATES USING THE DCF, RPM AND CAPM FOR THE PROXY GROUP OF DOMESTIC, NON-PRICE REGULATED COMPANIES THAT ARE COMPARABLE IN TOTAL RISK TO THE UTILITY PROXY GROUP?

A. Yes. Because the DCF, RPM and CAPM have been applied in an identical manner as described above relative to the market data of the eight gas distribution companies, I will not repeat the details of the rationale and application of each model shown on page 1 of Schedule PMA-8. An exception is that, in the application of the RPM, I did not use public utility-specific equity risk premiums nor applied the PRPM^{TM} to the individual companies. Pages 2 through 4 of Schedule PMA-8 present the basis of selection, the identities of the companies in the proxy group of non-price regulated companies as well as relevant notes.

Page 5 of Schedule PMA-8 contains the derivation of the DCF cost rates. As shown, the median DCF cost rate for the proxy group of nine non-price regulated companies comparable in total risk to the eight gas distribution companies, is 11.21%.

Pages 6 through 8 contain information relating to the 9.92% RPM cost rate for the proxy group of nine non-price regulated companies summarized on page 6. As shown on Line No. 1 of page 6 of Schedule PMA-8, the consensus prospective yield on Moody's Aaa rated corporate bonds for the six quarters ending with the fourth quarter of 2014 (from the September 1, 2013 *Blue Chip*) averaged with the long-range forecasted yields for 2015-2019 and 2020-2024 (from the June 1, 2013 *Blue Chip*), is 5.08%. Since the nine non-price regulated companies comparable in total risk to the eight gas distribution companies have an average Moody's bond rating of A2 as shown on page 7 of Schedule PMA-8, an adjustment of 0.30% is necessary to make the prospective bond yield applicable to an A2 corporate bond yield, as derived in Note 2. Thus, the expected specific bond yield is 5.38% for the nine non-price regulated companies, as shown on Line No. 3 on page 6 of Schedule PMA-8. When the beta-adjusted risk premium of 4.54% relative to the proxy group of non-price regulated companies, as derived on page 8, is added to the prospective A2 rated corporate bond yield of 5.08%, the indicated RPM cost rate is 9.92%.

Page 9 contains the details of the application of the traditional CAPM and ECAPM to the proxy group of nine non-price regulated companies comparable in total risk to the eight gas distribution companies. As shown, the median traditional CAPM and ECAPM cost rates are 9.46% and 10.16%, respectively, for the nine non-price regulated companies which, when averaged, result in an indicated CAPM cost rate of 9.81%.

Q. WHAT IS YOUR CONCLUSION OF THE COST RATE OF COMMON EQUITY BASED UPON THE PROXY GROUP OF NON-PRICE REGULATED

COMPANIES COMPARABLE IN TOTAL RISK TO THE EIGHT GAS DISTRIBUTION COMPANIES?

A. As shown on page 1 of Schedule PMA-8, the results of the DCF, RPM and CAPM applied to the non-price regulated group comparable in total risk to the eight gas distribution companies are 11.21%, 9.74% and 10.02%, respectively. Based upon these results, I will rely upon the average DCF, RPM and CAPM result of 10.32% for the proxy group of non-price regulated companies as summarized on page 1 of Schedule PMA-8.

Conclusion of Common Equity Cost Rate

Q. WHAT IS YOUR RECOMMENDED COMMON EQUITY COST RATE?

A. It is 10.25% based upon the indicated common equity cost rate resulting from the application of multiple cost of common equity models to the eight gas distribution companies adjusted for MGE's business risk.

I employ multiple cost of common equity models as primary tools in arriving at my recommended common equity cost rate because; 1) no single model is so inherently precise that it can be relied upon solely to the exclusion of other theoretically sound models; 2) all of the models are market-based; 3) the use of multiple models adds reliability to the estimation of the common equity cost rate; and, and 4) as demonstrated above, the prudence of using multiple cost of common equity models is supported in both the financial literature and regulatory precedent. Therefore, no single model should be relied upon exclusively to estimate investors' required rate of return on common equity.

The results of the cost of common equity models applied to the eight gas distribution companies are shown on Schedule PMA-1, page 2 and summarized below:

Table 3

	Proxy Group of Eight Gas Distribution Companies
Discounted Cash Flow Model	8.66%
Risk Premium Model	11.60
Capital Asset Pricing Model	10.16
Cost of Equity Models Applied to Comparable Risk, Non-Price Regulated Companies	10.31
Indicated Common Equity Cost Rate	10.25%

Based upon these common equity cost rate results, I conclude that a common equity cost rate of 10.25% is indicated for the eight gas distribution companies before any necessary credit and business risk adjustments as previously discussed.

Credit Risk Adjustment

Q. IS A CREDIT RISK ADJUSTMENT WARRANTED DUE TO MGE'S RATEMAKING CAPITAL STRUCTURE RATIOS?

A. No. As previously discussed, MGE's ratemaking capital structure is based upon LG's consolidated *pro forma* capital structure at July 31, 2013. As also noted previously, LG's Moody's bond rating of A2 is identical to the average Moody's bond rating for the proxy group of eight gas distribution companies. Therefore, a credit risk adjustment is not necessary.

Business Risk Adjustment

Q. IS THERE A WAY TO QUANTIFY A BUSINESS RISK ADJUSTMENT DUE TO MGE'S SMALL SIZE RELATIVE TO THE PROXY GROUP?

A. Yes. As discussed above, increased risk due to small size must be taken into account in the cost of common equity consistent with the financial principles of risk and return. Since the Company is smaller in size relative to the proxy group measured by the estimated market capitalization of common equity for MGE, whose common stock is not traded, it has greater business risk than the average company in the proxy group. However, based upon SBBI – 2013's Size Premium Study discussed below, the size risk premium between MGE and the proxy group is de minimis. Hence, no business risk adjustment is warranted.

Table 4

	Market Capitalization (1) ($ Millions)	Times Greater than the Company
MGE	$1,113.563	
Proxy Group of Eight Gas Distribution Cos.	2,491.086	2.2x

(1) From page 1 of Schedule PMA-9.

Because the Company's common stock is not publicly traded, I have assumed that if it were, the common shares would be selling at the same market-to-book ratio as the average market-to-book ratio for the proxy group, 183.1%, on September 6, 2013, as shown on page 2 of Schedule PMA-9. Since my recommended common equity cost rate is based upon the market data of the proxy group, it is reasonable to use the market-to-book ratios of the proxy group to estimate MGE's market capitalization. Hence, the Company's market capitalization is estimated at $1.114 billion based upon the average market-to-book ratio of the proxy group. In contrast, the market capitalization of the

average gas distribution company was $2.491 billion on September 6, 2013, or 2.2 times the size of MGE's estimated market capitalization.

Therefore, it would be necessary to upwardly adjust the common equity cost rate of 10.25% based upon the eight gas distribution companies to reflect MGE's greater risk due to its smaller relative size. The determination is based upon the size premiums for decile portfolios of New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and NASDAQ listed companies for the 1926-2012 period and related data from SBBI® – 2013. The average size premium for the 5th decile, in which the eight gas distribution companies fall, has been compared with the average size premium for the 6h and 7th deciles, between which the market capitalization of MGE would fall if its stock were traded and sold at the September 6, 2013 average market/book ratio of 183.1% experienced by the eight gas distribution companies. As shown on page 1, the size premium spread between the 6th and 7th deciles and the 5th decile is 0.03%. In view of the foregoing, no upward adjustment is necessary.

Consequently, in my opinion, a common equity cost rate of 10.25% which results in an overall rate of return of 7.512% is both reasonable and conservative. A common equity cost rate of 10.25% is also reasonable, if not extremely conservative, in light of current and expected economic and capital market conditions given the previous discussion of rising interest rates and capital costs. Company Witness Glenn W. Buck's proposed common equity cost rate of 9.70% is supported by my review of the current cost of equity of 10.25% for MGE and current and expected market conditions. Therefore, the Company's position on common equity cost rate, 9.70%, is both reasonable and conservative.

Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

APPENDIX A

PROFESSIONAL QUALIFICATIONS

OF

PAULINE M. AHERN, CRRA
PRINCIPAL

AUS CONSULTANTS

PROFESSIONAL QUALIFICATIONS
OF
PAULINE M. AHERN, CRRA
PRINCIPAL
AUS CONSULTANTS

PROFESSIONAL EXPERIENCE

1994-Present

In 1996, I became a Principal of AUS Consultants, continuing to offer testimony as an expert witness on the subjects of fair rate of return, cost of capital and related issues before state public utility commissions. I provide assistance and support to clients throughout the entire ratemaking litigation process. In addition, I supervise the financial analyst and administrative staff in the preparation of fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. The team also assists in the preparation of interrogatory responses, as well as rebuttal exhibits.

As the Publisher of AUS Utility Reports (formerly C. A. Turner Utility Reports), I am responsible for the production, publishing, and distribution of the reports. AUS Utility Reports provides financial data and related ratios for about 80 public utilities, *i.e.*, electric, combination gas and electric, natural gas distribution, natural gas transmission, telephone, and water utilities, on a monthly, quarterly and annual basis. Among the subscribers of AUS Utility Reports are utilities, many state regulatory commissions, federal agencies, individuals, brokerage firms, attorneys, as well as public and academic libraries. The publication has continuously provided financial statistics on the utility industry since 1930.

I am also responsible for maintaining and calculating the performance of the AGA Index, a market capitalization weighted index of the common stocks of the approximately 70 corporate members of the AGA, which serves as the benchmark for the AGA Gas Utility Index Fund.

As an Assistant Vice President from 1994 - 1996, I prepared fair rate of return and cost of capital exhibits which were filed along with expert testimony before various state and federal public utility regulatory bodies. These supporting exhibits include the determination of an appropriate ratemaking capital structure and the development of embedded cost rates of senior capital. The exhibits also support the determination of a recommended return on common equity through the use of various market models, such as, but not limited to, Discounted Cash Flow analysis, Capital Asset Pricing Model and Risk Premium Methodology, as well as an assessment of the risk characteristics of the client utility. I also assisted in the preparation of responses to any interrogatories received regarding such testimonies filed on behalf of client utilities. Following the filing of fair rate of return testimonies, I assisted in the evaluation of opposition testimony in order to prepare interrogatory questions, areas of cross-examination, and rebuttal testimony. I also evaluated and assisted in the preparation of briefs and exceptions following the hearing process. I also submitted testimony before state public utility commissions regarding appropriate capital structure ratios and fixed capital cost rates.

1990-1994

As a Senior Financial Analyst, I supervised two analysts and assisted in the preparation of fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. The team also assisted in the preparation of interrogatory responses.

I evaluated the final orders and decisions of various commissions to determine whether further actions were warranted and to gain insight which assisted in the preparation of future rate of return studies.

I assisted in the preparation of an article authored by Frank J. Hanley and A. Gerald Harris entitled "Does Diversification Increase the Cost of Equity Capital?" published in the July 15, 1991 issue of Public Utilities Fortnightly.

In 1992, I was awarded the professional designation "Certified Rate of Return Analyst" (CRRA) by the National Society of Rate of Return Analysts (now the Society of Utility and Regulatory Financial Analysts

(SURFA)). This designation is based upon education, experience and the successful completion of a comprehensive examination.

As Administrator of Financial Analysis for AUS Utility Reports, which then reported financial data for over 200 utility companies with approximately 1,000 subscribers, I oversaw the preparation of this monthly publication, as well as the accompanying annual publication, Financial Statistics - Public Utilities.

1988-1990

As a Financial Analyst, I assisted in the preparation of fair rate of return studies including capital structure determination, development of senior capital cost rates, as well as the determination of an appropriate rate of return on equity. I also assisted in the preparation of interrogatory responses, interrogatory questions of the opposition, areas of cross-examination and rebuttal testimony. I also assisted in the preparation of the annual publication C. A. Turner Utility Reports - Financial Statistics -Public Utilities.

1973-1975

As a Research Assistant in the Research Department of the Regional Economics Division of the Federal Reserve Bank of Boston, I was involved in the development and maintenance of econometric models to simulate regional economic conditions in New England in order to study the effects of, among other things, the energy crisis of the early 1970's and property tax revaluations on the economy of New England. I was also involved in the statistical analysis and preparation of articles for the New England Economic Review. Also, I was Assistant Editor of New England Business Indicators.

1972

As a Research Assistant in the Office of the Assistant Secretary for International Affairs, U.S. Treasury Department, Washington, D.C., I developed and maintained econometric models which simulated the economy of the United States in order to study the results of various alternate foreign trade policies so that national trade policy could be formulated and recommended.

Clients Served

I have offered expert testimony before the following commissions:

Arkansas
Arizona
British Columbia
California
Canada
Connecticut
Delaware
Florida
Hawaii
Idaho
Illinois
Indiana
Iowa
Kentucky
Louisiana
Maine
Maryland
Michigan
Missouri
Nevada
New Hampshire
New Jersey
New York
North Carolina
Ohio
Pennsylvania
Rhode Island
South Carolina
Virginia
Washington

I have sponsored testimony on fair rate of return and related issues for:

Alpena Power Company
Apple Canyon Utility Company
Applied Wastewater Management, Inc.
Aqua Illinois, Inc.
Aqua New Jersey, Inc.
Aqua North Carolina, Inc.
Aqua Ohio, Inc.
Aqua Virginia, Inc.
Aquarion Water Company
Aquarion Water Co. of New Hampshire, Inc.

Rate of Return Testimony Clients Continued

Arizona Water Company
Artesian Water Company
Bermuda Water Company
The Atlantic City Sewerage Company
Audubon Water Company
The Borough of Hanover, PA
Carolina Pines Utilities, Inc.
Carolina Water Service, Inc. of NC
Carolina Water Service, Inc. of SC
Chaparral City Water Company
The Columbia Water Company
The Connecticut Water Company
Consumers Illinois Water Company
Consumers Maine Water Company
Consumers New Jersey Water Company
City of DuBois, Pennsylvania
Elizabethtown Water Company
Emporium Water Company
GTE Hawaiian Telephone Inc.
Greenridge Utilities, Inc.
Illinois American Water Company
Iowa American Water Company
Jersey Central Power & Light Co.
Water Services Corp. of Kentucky
Lake Wildwood Utilities Corp.
Land'Or Utility Company
Long Island American Water Company
Long Neck Water Company
Louisiana Water Service, Inc.
Massanutten Public Service Company
Middlesex Water Company
Missouri-American Water Company
Mt. Holly Water Company
Nero Utility Services, Inc.
New Jersey Utilities Association
The Newtown Artesian Water Company
NRG Energy Center Pittsburgh LLC
NRG Energy Center Harrisburg LLC
Ohio-American Water Company
Penn Estates Utilities
Pinelands Water Company
Pinelands Waste Water Company
Pittsburgh Thermal
San Gabriel Valley Water Company
San Jose Water Company
Southland Utilities, Inc.
Spring Creek Utilities, Inc.
Sussex Shores Water Company
Tega Cay Water Services, Inc.
Total Environmental Services, Inc. – Treasure Lake Water & Sewer Divisions
Thames Water Americas
Tidewater Utilities, Inc.
Transylvania Utilities, Inc.
Trigen – Philadelphia Energy Corporation
Twin Lakes Utilities, Inc.
United Utility Companies
United Water Arkansas, Inc.
United Water Arlington Hills Sewerage, Inc.
United Water Connecticut, Inc.
United Water Delaware, Inc.
United Water Great Gorge Inc. / United Water Vernon Transmission, Inc.
United Water Idaho, Inc.
United Water Indiana, Inc.
United Water New Jersey, Inc.
United Water New Rochelle, Inc.
United Water New York, Inc.
United Water Owego / Nichols, Inc.
United Water Pennsylvania, Inc.
United Water Rhode Island, Inc.
United Water South County, Inc.
United Water Toms River, Inc.
United Water Vernon Sewage Inc.
United Water Virginia, Inc.
United Water Westchester, Inc.
United Water West Lafayette, Inc.
United Water West Milford, Inc.
Utilities, Inc.
Utilities Inc. of Central Nevada
Utilities, Inc. of Florida
Utilities, Inc. of Louisiana
Utilities, Inc. of Nevada
Utilities, Inc. of Pennsylvania
Utilities, Inc. - Westgate
Utilities Services of South Carolina
Utility Center, Inc.
Valley Energy, Inc.
Wellsboro Electric Company
Western Utilities, Inc.

I have sponsored testimony on generic/uniform methodologies for determining the return on common equity for:

Aquarion Water Company
The Connecticut Water Company
Corix Multi-Utility Services, Inc.
United Water Connecticut, Inc.
Utilities, Inc.

I have sponsored testimony on the rate of return and capital structure effects of merger and acquisition issues for:

California-American Water Company
New Jersey-American Water Company

I have sponsored testimony on capital structure and senior capital cost rates for the following clients:

Alpena Power Company
Arkansas-Western Gas Company
Associated Natural Gas Company
PG Energy Inc.
United Water Delaware, Inc.
Washington Natural Gas Company

I have sponsored testimony on Distribution System Improvement Charges (DSIC):

Arizona Water Company

I have assisted in the preparation of rate of return studies on behalf of the following clients:

Algonquin Gas Transmission Company
Anadarko Petroleum Corporation
Arizona Water Company
Arkansas-Louisiana Gas Company
Arkansas Western Gas Company
Artesian Water Company
Associated Natural Gas Company
Atlantic City Electric Company
Bridgeport-Hydraulic Company
Cambridge Electric Light Company
Carolina Power & Light Company
Citizens Gas and Coke Utility
City of Vernon, CA
Columbia Gas/Gulf Transmission Cos.
Commonwealth Electric Company
Commonwealth Telephone Company
Conestoga Telephone & Telegraph Co.
Connecticut Natural Gas Corporation
Consolidated Gas Transmission Company
Consumers Power Company
CWS Systems, Inc.
Delmarva Power & Light Company
East Honolulu Community Services, Inc.
Equitable Gas Company
Equitrans, Inc.
Florida Power & Light Company
Gary Hobart Water Company
Gasco, Inc.
GTE Arkansas, Inc.
GTE California, Inc.
GTE Florida, Inc.
GTE Hawaiian Telephone
GTE North, Inc.
GTE Northwest, Inc.
GTE Southwest, Inc.
Great Lakes Gas Transmission L.P.
Hawaiian Electric Company
Hawaiian Electric Light Company
IES Utilities Inc.
Illinois Power Company
Interstate Power Company
Interstate Power & Light Co.
Iowa Electric Light and Power Company
Iowa Southern Utilities Company
Kentucky-West Virginia Gas Company
Lockhart Power Company
Middlesex Water Company
Milwaukee Metropolitan Sewer District
Mountaineer Gas Company
National Fuel Gas Distribution Corp.
National Fuel Gas Supply Corp.
Newco Waste Systems of NJ, Inc.
New Jersey Natural Gas Company
New Jersey-American Water Company
New York-American Water Company
North Carolina Natural Gas Corp.
Northumbrian Water Company
Ohio-American Water Company
Oklahoma Natural Gas Company
Orange and Rockland Utilities
Paiute Pipeline Company
PECO Energy Company
Penn Estates Utilities, Inc.
Penn-York Energy Corporation
Pennsylvania-American Water Co.
PG Energy Inc.
Philadelphia Electric Company
Providence Gas Company
South Carolina Pipeline Company
Southwest Gas Corporation
Stamford Water Company
Tesoro Alaska Petroleum Company
Tesoro Refining & Marketing Co.
United Telephone of New Jersey
United Utility Companies
United Water Arkansas, Inc.
United Water Delaware, Inc.
United Water Idaho, Inc.

Rate of Return Study Clients Continued

United Water Indiana, Inc.
United Water New Jersey, Inc.
United Water New York, Inc.
United Water Pennsylvania, Inc.
United Water Virginia, Inc.
United Water West Lafayette, Inc.
Utilities, Inc. of Pennsylvania
Utilities, Inc. - Westgate
Vista-United Telecommunications Corp.
Washington Gas Light Company
Washington Natural Gas Company
Washington Water Power Corporation
Waste Management of New Jersey – Transfer Station A
Wellsboro Electric Company
Western Reserve Telephone Company
Western Utilities, Inc.
Wisconsin Power and Light Company

EDUCATION:

1973 – Clark University – B.A. – Honors in Economics (Concentration: Econometrics and Regional/International Economics)
1991 – Rutgers University – M.B.A. – High Honors (Concentration: Corporate Finance)

PROFESSIONAL AFFILIATIONS:

Advisory Council – New Mexico State University Center for Public Utilities
Advisory Board – Financial Research Institute – University of Missouri's Trulaske School of Business
Edison Electric Institute – Cost of Capital Working Group
National Association of Water Companies – Member of the Finance/Accounting/Taxation and Rates and Regulation Committees
Society of Utility and Regulatory Financial Analysts
Member, Board of Directors – 2010-2014
President – 2006-2008 and 2008-2010
Secretary/Treasurer – 2004-2006
American Finance Association
Financial Management Association
Energy Bar Association
Energy Association of Pennsylvania

SPEAKING ENGAGEMENTS:

"Regulated Utilities – Access to Capital", (panelist) - Innovation: Changing the Future of Energy, 2013 Deloitte Energy Conference, Deloitte Center for Energy Solutions, May 22, 2013, Washington, DC.

"Comparative Evaluation of the Predictive Risk Premium Model, the Discounted Cash Flow Model and the Capital Asset Pricing Model for Estimating the Cost of Common Equity", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and Competition, 32nd Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 17, 2013, Rutgers University, Shawnee on the Delaware, PA.

"Decoupling: Impact on the Risk and Cost of Common Equity of Public Utility Stocks", before the Society of Utility and Regulatory Financial Analysts: 45th Financial Forum, April 17-18, 2013, Indianapolis, IN.

"Issues Surrounding the Determination of the Allowed Rate of Return", before the Staff Subcommittee on Electricity of the National Association of Regulatory Utility Commissioners, Winter 2013 Committee Meetings, February 3, 2013, Washington, DC.

"Leadership in the Financial Services Sector", Guest Professor – Cost of Capital, Business Leader Development Program, Rutgers University School of Business, February 1, 2013, Camden, NJ.

"Analyst Training in the Power and Gas Sectors", SNL Center for Financial Education, Downtown Conference Center at Pace University, New York City, December 12, 2012, Instructor (Financial Statement Analysis).

"Regulatory Training in Financing Planning, Strategies and Accounting Issues for Publicly and Privately Owned Water and Wastewater Utilities", New Mexico State University Center for Public Utilities, October 14-19, 2012, Instructor (Cost of Financial Capital).

"Application of a New Risk Premium Model for Estimating the Cost of Common Equity", Co-Presenter with Dylan W. D'Ascendis, CRRA, AUS Consultants, Edison Electric Institute Cost of Capital Working Group, October 3, 2012, Webinar.

"Application of a New Risk Premium Model for Estimating the Cost of Common Equity", Co-Presenter with Dylan W. D'Ascendis, CRRA, AUS Consultants, Staff Subcommittee on Accounting and Finance of the National Association of Regulatory Commissioners, September 10, 2012, St. Paul, MN.

"Analyst Training in the Power and Gas Sectors", SNL Center for Financial Education, Downtown Conference Center at Pace University, New York City, August 7, 2012, Instructor (Financial Statement Analysis).

"Advanced Regulatory Training in Financing Planning, Strategies and Accounting Issues for Publicly and Privately Owned Water and Wastewater Utilities", New Mexico State University Center for Public Utilities, May 13-17, 2012, Instructor (Cost of Financial Capital).

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", before the Finance and Regulatory Committees of the National Association of Water Companies, March 29, 2012, Telephonic Conference.

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", (co-presenter with Frank J. Hanley, Principal and Director, AUS Consultants) before the Water Committee of the National Association of Regulatory Utility Commissioners' Winter Committee Meetings, February 7, 2012, Washington, DC.

"A New Approach for Estimating the Equity Risk Premium Applied to Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University and Frank J. Hanley, Principal and Director, AUS Consultants) before the Wall Street Utility Group, December 19, 2011, New York City, NY.

"Advanced Cost and Finance Issues for Water", (co-presenter with Gary D. Shambaugh, Principal & Director, AUS Consultants), 2011 Advanced Regulatory Studies Program – Ratemaking, Accounting and Economics, September 29, 2011, Kellogg Center at Michigan State University – Institute for Public Utilities, East Lansing, MI.

"Public Utility Betas and the Cost of Capital", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and Competition, 30th Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 20, 2011, Rutgers University, Skytop, PA.

Moderator: Society of Utility and Regulatory Financial Analysts: 43rd Financial Forum – "Impact of Cost Recovery Mechanisms on the Perception of Public Utility Risk", April 14-15, 2011, Washington, DC.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Hot Topic Hotline Webinar, December 3, 2010, Financial Research Institute of the University of Missouri.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) before the Indiana Utility Regulatory Commission Cost of Capital Task Force, September 28, 2010, Indianapolis, IN

Tomorrow's Cost of Capital: Cost of Capital Issues 2010, Deloitte Center for Energy Solutions, 2010 Deloitte Energy Conference, "Changing the Great Game: Climate, Customers and Capital", June 7-8, 2010, Washington, DC.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Advanced Workshop in Regulation and Competition, 29th Annual

Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 20, 2010, Rutgers University, Skytop, PA

Moderator: Society of Utility and Regulatory Financial Analysts: 42nd Financial Forum – "The Changing Economic and Capital Market Environment and the Utility Industry", April 29-30, 2010, Washington, DC

"A New Model for Estimating the Equity Risk Premium for Public Utilities" (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) – Spring 2010 Meeting of the Staff Subcommittee on Accounting and Finance of the National Association of Regulatory Utility Commissioners, March 17, 2010, Charleston, SC

"New Approach to Estimating the Cost of Common Equity Capital for Public Utilities" (co-presenter with Richard A. Michelfelder, Ph.D., Rutgers University) - Advanced Workshop in Regulation and Competition, 28th Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 14, 2009, Rutgers University, Skytop, PA

Moderator: Society of Utility and Regulatory Financial Analysts: 41st Financial Forum – "Estimating the Cost of Capital in Today's Economic and Capital Market Environment", April 16-17, 2009, Washington, DC

"Water Utility Financing: Where Does All That Cash Come From?", AWWA Pre-Conference Workshop: Water Utility Ratemaking, March 25, 2008, Atlantic City, NJ

PAPERS:

"Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University, Dylan W. D'Ascendis, and Frank J. Hanley, The Electricity Journal, May, 2013.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", co-authored with Frank J. Hanley and Richard A. Michelfelder, Ph.D., Rutgers University, The Journal of Regulatory Economics (December 2011), 40:261-278.

"Comparable Earnings: New Life for Old Precept" co-authored with Frank J. Hanley, Financial Quarterly Review, (American Gas Association), Summer 1994.

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to the Financial Exhibit
of Pauline M. Ahern, CRRA

Missouri Gas Energy
Summary of Cost of Capital and Fair Rate of Return
Based upon the Pro Forma Capital Structure of the Laclede Group, Inc.
at July 31, 2013

Type of Capital	Ratios (1)	Cost Rate	Weighted Cost Rate
Long-Term Debt	46.40%	4.35% (1)	2.02%
Common Equity	53.60%	10.25% (2)	5.49%
Total	100.00%		7.51%

Notes:

(1) From Schedule GWB-1.

(2) Based upon informed judgment from the entire study, the principal results of which are summarized on page 2.

Missouri Gas Energy
Brief Summary of Common Equity Cost Rate

No.	Principal Methods	Proxy Group of Eight Gas Distribution Companies
1.	Discounted Cash Flow Model (DCF) (1)	8.66 %
2.	Risk Premium Model (RPM) (2)	11.60
3.	Capital Asset Pricing Model (CAPM) (3)	10.16
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	10.31
5.	Recommended Common Equity Cost Rate	10.25 %

Notes: (1) From Schedule PMA-4.
(2) From page 1 of Schedule PMA-6.
(3) From page 1 of Schedule PMA-7.
(4) From page 2 of Schedule PMA-8.

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Methodology: Business Risk/Financial Risk Matrix Expanded

Criteria Officer:
Mark Puccia, Managing Director, New York (1) 212-438-7233; mark_puccia@standardandpoors.com

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Criteria | Corporates | General:

Methodology: Business Risk/Financial Risk Matrix Expanded

1. Standard & Poor's Ratings Services is refining its methodology for corporate ratings related to its business risk/financial risk matrix, which we published as part of "2008 Corporate Ratings Criteria" on April 15, 2008. We subsequently updated this matrix in the article "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," published May 27, 2009. In order to provide greater transparency on the methodology used to evaluate corporate ratings, this article updates table 1 of the May 27, 2009, article to reflect how we analyze companies with an excellent business risk profile and minimal financial risk profile, as well as companies with a vulnerable business risk profile and a highly leveraged financial risk profile. This article amends and supersedes both the 2008 and 2009 articles mentioned above. This article is related to "Principles Of Credit Ratings," published on Feb. 16, 2011.

2. We introduced the business risk/financial risk matrix in 2005. The relationships depicted in the matrix represent an essential element of our corporate analytical methodology (see table 1).

Table 1

Business And Financial Risk Profile Matrix

Business Risk Profile	--Financial Risk Profile--					
	Minimal	**Modest**	**Intermediate**	**Significant**	**Aggressive**	**Highly Leveraged**
Excellent	AAA/AA+	AA	A	A-	BBB	--
Strong	AA	A	A-	BBB	BB	BB-
Satisfactory	A-	BBB+	BBB	BB+	BB-	B+
Fair	--	BBB-	BB+	BB	BB-	B
Weak	--	--	BB	BB-	B+	B-
Vulnerable	--	--	--	B+	B	B- or below

These rating outcomes are shown for guidance purposes only. Actual rating should be within one notch of indicated rating outcomes.

3. The rating outcomes refer to issuer credit ratings. The ratings indicated in each cell of the matrix are the midpoints of a range of likely rating possibilities. This range would ordinarily span one notch above and below the indicated rating.

Business Risk/Financial Risk Framework

4. Our corporate analytical methodology organizes the analytical process according to a common framework, and it divides the task into several categories so that all salient issues are considered. The first categories involve fundamental business analysis; the financial analysis categories follow.

5. Our ratings analysis starts with the assessment of the business and competitive profile of the company. Two companies with identical financial metrics can be rated very differently, to the extent that their business challenges and prospects differ. The categories underlying our business and financial risk assessments are:

Business risk

- Country risk
- Industry risk
- Competitive position
- Profitability/Peer group comparisons

Financial risk

- Accounting
- Financial governance and policies/risk tolerance
- Cash flow adequacy
- Capital structure/asset protection
- Liquidity/short-term factors

6. We do not have any predetermined weights for these categories. The significance of specific factors varies from situation to situation.

Updated Matrix

7. We developed the matrix to make explicit the rating outcomes that are typical for various business risk/financial risk combinations. It illustrates the relationship of business and financial risk profiles to the issuer credit rating.

8. We tend to weight business risk slightly more than financial risk when differentiating among investment-grade ratings. Conversely, we place slightly more weight on financial risk for speculative-grade issuers (see table 1, again).

9. This version of the matrix represents a refinement--not any change in rating criteria or standards--and, consequently, no rating changes are expected. However, the expanded matrix should enhance the transparency of the analytical process.

Financial Benchmarks

Table 2

Financial Risk Indicative Ratios (Corporates)

	FFO/Debt (%)	Debt/EBITDA (x)	Debt/Capital (%)
Minimal	greater than 60	less than 1.5	less than 25
Modest	45-60	1.5-2.0	25-35
Intermediate	30-45	2-3	35-45
Significant	20-30	3-4	45-50
Aggressive	12-20	4-5	50-60
Highly Leveraged	less than 12	greater than 5	greater than 60

How To Use The Matrix--And Its Limitations

10. The rating matrix indicative outcomes are what we typically observe--but are not meant to be precise indications or

guarantees of future rating opinions. Positive and negative nuances in our analysis may lead to a notch higher or lower than the outcomes indicated in the various cells of the matrix.

11. In certain situations there may be specific, overarching risks that are outside the standard framework, e.g., a liquidity crisis, major litigation, or large acquisition. This often is the case regarding issuers at the lowest end of the credit spectrum--i.e., the 'CCC' category and lower. These ratings, by definition, reflect some impending crisis or acute vulnerability, and the balanced approach that underlies the matrix framework just does not lend itself to such situations.

12. Similarly, some matrix cells are blank because the underlying combinations are highly unusual--and presumably would involve complicated factors and analysis.

13. The following hypothetical example illustrates how the tables can be used to better understand our rating process (see tables 1 and 2).

14. We believe that Company ABC has a satisfactory business risk profile, typical of a low investment-grade industrial issuer. If we believed its financial risk were intermediate, the expected rating outcome should be within one notch of 'BBB'. ABC's ratios of cash flow to debt (35%) and debt leverage (total debt to EBITDA of 2.5x) are indeed characteristic of intermediate financial risk.

15. It might be possible for Company ABC to be upgraded to the 'A' category by, for example, reducing its debt burden to the point that financial risk is viewed as minimal. Funds from operations (FFO) to debt of more than 60% and debt to EBITDA of only 1.5x would, in most cases, indicate minimal financial risk.

16. Conversely, ABC may choose to become more financially aggressive--perhaps it decides to reward shareholders by borrowing to repurchase its stock. It is possible that the company may fall into the 'BB' category if we view its financial risk as significant. FFO to debt of 20% and debt to EBITDA of 4x would, in our view, typify the significant financial risk category.

17. Still, it is essential to realize that the financial benchmarks are guidelines, neither gospel nor guarantees. They can vary in nonstandard cases: For example, if a company's financial measures exhibit very little volatility, benchmarks may be somewhat more relaxed.

18. Moreover, our assessment of financial risk is not as simplistic as looking at a few ratios. It encompasses:

    - A view of accounting and disclosure practices;
    - A view of corporate governance, financial policies, and risk tolerance;
    - The degree of capital intensity, flexibility regarding capital expenditures and other cash needs, including acquisitions and shareholder distributions; and
    - Various aspects of liquidity--including the risk of refinancing near-term maturities.

19. The matrix addresses a company's standalone credit profile, and does not take account of external influences, which would pertain in the case of government-related entities or subsidiaries that in our view may benefit or suffer from affiliation with a stronger or weaker group. The matrix refers only to local-currency ratings, rather than foreign-currency ratings, which incorporate additional transfer and convertibility risks. Finally, the matrix does not

apply to project finance or corporate securitizations.

Related Criteria And Research

- Principles Of Credit Ratings, Feb. 16, 2011
- Criteria Methodology: Business Risk/Financial Risk Matrix Expanded, May 27, 2009
- 2008 Corporate Ratings Criteria, April 15, 2008

20. These criteria represent the specific application of fundamental principles that define credit risk and ratings opinions. Their use is determined by issuer- or issue-specific attributes as well as Standard & Poor's Ratings Services' assessment of the credit and, if applicable, structural risks for a given issuer or issue rating. Methodology and assumptions may change from time to time as a result of market and economic conditions, issuer- or issue-specific factors, or new empirical evidence that would affect our credit judgment.

Proxy Group of Eight Gas Distribution Companies
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2008 - 2012, Inclusive

	2012	2011	2010	2009	2008	
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$2,744.223	$2,665.508	$2,190.952	$2,167.978	$2,073.388	
SHORT-TERM DEBT	$421.197	$279.371	$232.030	$200.800	$323.468	
TOTAL CAPITAL EMPLOYED	$3,165.420	$2,944.879	$2,422.982	$2,368.778	$2,396.856	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	4.21 %	4.71 %	4.99 %	4.74 %	5.21 %	
PREFERRED STOCK	4.69	4.69	4.69	4.69	4.69	
CAPITAL STRUCTURE RATIOS						5 YEAR AVERAGE
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	45.05 %	44.85 %	44.94 %	45.77 %	46.30 %	45.38 %
PREFERRED STOCK	0.22	0.22	0.27	0.33	0.34	0.28
COMMON EQUITY	54.73	54.93	54.79	53.90	53.36	54.34
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	52.25 %	49.79 %	50.73 %	51.13 %	54.04 %	51.59 %
PREFERRED STOCK	0.19	0.21	0.25	0.29	0.28	0.24
COMMON EQUITY	47.56	50.00	49.02	48.58	45.68	48.17
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	6.21 %	6.40 %	7.85 %	7.90 %	8.41 %	7.35 %
MARKET / AVERAGE BOOK RATIO	172.94	170.05	155.16	139.25	143.43	156.17
DIVIDEND YIELD	3.99	3.59	4.53	5.10	4.83	4.41
DIVIDEND PAYOUT RATIO	63.36	64.27	58.04	76.00	58.46	64.03
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	10.57 %	10.58 %	11.96 %	10.17 %	11.94 %	11.04 %
TOTAL DEBT / EBITDA (3)	4.37 X	3.93 X	3.42 X	4.00 X	3.57 X	3.86 X
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	25.96 %	27.18 %	9.49 %	25.69 %	19.77 %	21.62 %
TOTAL DEBT / TOTAL CAPITAL	52.25 %	49.79 %	50.73 %	51.13 %	54.04 %	51.59 %

Notes:

(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.

(2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.

(3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).

(4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Source of Information: I-Metrix Database
Company SEC Form 10-K

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Eight Gas Distribution Companies
2008 - 2012, Inclusive

	2012	2011	2010	2009	2008	5 YEAR AVERAGE
AGL Resources Inc.						
Long-Term Debt	50.85 %	51.72 %	51.80 %	52.04 %	49.87 %	51.25 %
Preferred Stock	0.31	0.30	0.60	1.03	0.95	0.64
Common Equity	48.84	47.98	47.60	46.93	49.18	48.11
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Atmos Energy Corporation						
Long-Term Debt	45.33 %	49.48 %	49.90 %	49.92 %	50.82 %	49.09 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	54.67	50.52	50.10	50.08	49.18	50.91
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
New Jersey Resources Corp.						
Long-Term Debt	39.57 %	35.88 %	38.81 %	40.11 %	41.48 %	39.17 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	60.43	64.12	61.19	59.89	58.52	60.83
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Northwest Natural Gas Co.						
Long-Term Debt	48.55 %	45.29 %	46.47 %	49.10 %	44.90 %	46.86 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	51.45	54.71	53.53	50.90	55.10	53.14
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Piedmont Natural Gas Co., Inc.						
Long-Term Debt	48.70 %	50.23 %	43.13 %	46.06 %	48.16 %	47.26 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	51.30	49.77	56.87	53.94	51.84	52.74
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
South Jersey Industries, Inc.						
Long-Term Debt	45.97 %	40.59 %	44.19 %	38.98 %	40.93 %	42.13 %
Preferred Stock	0.00	0.00	0.00	0.00	0.14	0.03
Common Equity	54.03	59.41	55.81	61.02	58.93	57.84
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Southwest Gas Corporation						
Long-Term Debt	50.19 %	50.55 %	50.68 %	53.55 %	55.48 %	52.09 %
Preferred Stock	-0.06	0.00	0.00	0.00	0.00	-0.01
Common Equity	49.87	49.45	49.32	46.45	44.52	47.92
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
WGL Holdings, Inc.						
Long-Term Debt	31.23 %	35.05 %	34.52 %	36.40 %	38.72 %	35.18 %
Preferred Stock	1.49	1.49	1.56	1.59	1.60	1.55
Common Equity	67.28	63.46	63.92	62.01	59.68	63.27
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Eight Gas Distribution Companies						
Long-Term Debt	45.05 %	44.85 %	44.94 %	45.77 %	46.30 %	45.38 %
Preferred Stock	0.22	0.22	0.27	0.33	0.34	0.28
Common Equity	54.73	54.93	54.79	53.90	53.36	54.34
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information
EDGAR Online's I-Metrix Database
Annual Forms 10-K

Missouri Gas Energy
Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for
the Proxy Group of Eight Gas Distribution Companies

	1	2	3	4	5	6	7	8
Proxy Group of Eight Gas Distribution Companies	Average Dividend Yield (1)	Value Line Projected Five Year Growth in EPS (2)	Reuters Mean Consensus Projected Five Year Growth Rate in EPS	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth in EPS (3)	Adjusted Dividend Yield (4)	Indicated Common Equity Cost Rate (5)
AGL Resources Inc.	4.26 %	9.00 %	5.00 %	4.00 %	NA %	6.00 %	4.39 %	10.39 %
Atmos Energy Corporation	3.36	5.50	6.20	6.10	6.20	6.00	3.46	9.46
New Jersey Resources Corp.	3.66	4.00	2.50	4.00	2.50	3.25	3.72	6.97
Northwest Natural Gas Co.	4.28	4.50	4.00	4.30	4.00	4.20	4.37	8.57
Piedmont Natural Gas Co., Inc.	3.68	4.00	5.00	4.30	5.00	4.58	3.76	8.34
South Jersey Industries, Inc.	3.03	7.50	6.00	6.00	6.00	6.38	3.13	9.51
Southwest Gas Corporation	2.75	8.00	3.50	3.50	3.53	4.63	2.81	7.44
WGL Holdings, Inc.	3.84	3.50	5.20	5.30	5.25	4.81	3.93	8.74
Average								8.68 %
Median								8.66 %

NA= Not Available
NMF = Not Meaningful Figure

Notes:

(1) Indicated dividend at 09/06/2013 divided by the average closing price of the last 60 trading days ending 09/06/2013 for each company.
(2) From pages 3 through 10 of this Schedule.
(3) Average of columns 2 through 5 excluding negative growth rates.
(4) This reflects a growth rate component equal to one-half the conclusion of growth rate (from column 6) x column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for AGL Resources Inc. , 4.26% x (1+(1/2 x 6.00%)) = 4.39%.
(5) Column 6 + column 7.

Source of Information:

Value Line Investment Survey
www.reuters.com Downloaded on 09/09/2013
www.zacks.com Downloaded on 09/09/2013
www.yahoo.com Downloaded on 09/09/2013

Missouri Gas Energy
Hypothetical Example of the Inadequacy of
A DCF Return Rate Related to Book Value
When Market Value is Greater / Less than Book Value

Line No.		Based on Ms. Ahern's Proxy Group of Gas Distrbution Companies	
		1	2
		Market Value	Book Value
1.	Per Share	$ 42.65 (1)	$ 24.01 (2)
2.	DCF Cost Rate (3)	8.68%	8.68%
3.	Return in Dollars	$ 3.702	$ 2.084
4.	Dividends (4)	$ 1.580	$ 1.580
5.	Growth in Dollars	$ 2.122	$ 0.504
6.	Return on Market Value (5)	8.68%	4.89%
7.	Rate of Growth on Market Value (6)	4.97%	1.18%

Notes:

(1) Average market price of Ms. Ahern's proxy group of gas distribution companies from column 4 on page 2 of Schedule PMA-9.
(2) Average book value of Ms. Ahern's proxy group of gas distribution companies from column 2 of Schedule PMA-9.
(3) Average DCF indicated common equity cost rate from page 1 of this Schedule.
(4) Dividends per share based upon a 3.70% dividend yield. $42.65 x 3.70% = $1.580
(5) Line 3 / market value per share (line 1 column (a)).
(6) Line 6 - average adjusted dividend yield from page 1 of this schedule.

AGL RESOURCES NYSE-GAS

RECENT PRICE **44.75** | P/E RATIO **15.0** (Trailing: 17.0, Median: 13.0) | RELATIVE P/E RATIO **0.88** | DIV'D YLD **4.2%** | **VALUE LINE**

TIMELINESS 2 Raised 6/28/13
SAFETY 1 Raised 9/9/11
TECHNICAL 3 Raised 9/6/13
BETA .75 (1.00 = Market)

2016-18 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+55%)	*15%*
Low	55	(+25%)	*9%*

Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	0	0	1	0	0	2	0
to Sell	0	0	0	0	2	0	1	2	0

Institutional Decisions

	4Q2012	1Q2013	2Q2013
to Buy	150	158	146
to Sell	141	136	154
Hld's(000)	71771	73402	74626

	2011	2012	2013
High:	25.0	29.3	33.7
Low:	17.3	21.9	26.5
High:	39.3	40.1	44.7
Low:	32.0	34.4	35.2
High:	39.1	37.5	40.1
Low:	24.0	24.0	34.2
High:	43.7	42.9	47.0
Low:	34.1	36.6	38.9

LEGENDS
1.10 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded areas indicate recessions

Target Price Range 2016 | 2017 | 2018

% TOT. RETURN 7/13

	THIS STOCK	VL ARITH.* INDEX
1 yr.	18.4	36.4
3 yr.	38.3	63.6
5 yr.	68.6	92.7

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	© VALUE LINE PUB. LLC	16-18
22.75	23.36	18.71	11.25	19.04	15.32	15.25	23.89	34.98	33.73	32.64	36.41	29.88	30.42	19.97	33.27	*36.75*	*38.45*	Revenues per sh [A]	*44.85*
2.42	2.65	2.29	2.86	3.31	3.39	3.47	3.29	4.20	4.50	4.65	4.68	4.90	5.05	3.06	5.82	*6.30*	*6.75*	"Cash Flow" per sh	*8.40*
1.37	1.41	.91	1.29	1.50	1.82	2.08	2.28	2.48	2.72	2.72	2.71	2.88	3.00	2.12	2.32	*2.60*	*2.90*	Earnings per sh [A B]	*4.10*
1.08	1.08	1.08	1.08	1.08	1.08	1.11	1.15	1.30	1.48	1.64	1.68	1.72	1.76	1.90	1.74	*1.88*	*1.92*	Div'ds Decl'd per sh [CF■]	*2.32*
2.59	2.05	2.51	2.92	2.83	3.30	2.46	3.44	3.44	3.26	3.39	4.84	6.14	6.54	3.65	6.63	*5.15*	*5.60*	Cap'l Spending per sh	*6.45*
10.99	11.42	11.59	11.50	12.19	12.52	14.66	18.06	19.29	20.71	21.74	21.48	22.95	23.24	28.33	28.76	*33.35*	*34.10*	Book Value per sh [D]	*36.05*
56.60	57.30	57.10	54.00	55.10	56.70	64.50	76.70	77.70	77.70	76.40	76.90	77.54	78.00	117.10	117.88	*117.00*	*117.00*	Common Shs Outst'g [E]	*117.00*
14.7	13.9	21.4	13.6	14.6	12.5	12.5	13.1	14.3	13.5	14.7	12.3	11.2	12.5	18.8	12.6	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*15.0*
.85	.72	1.22	.88	.75	.68	.71	.69	.76	.73	.78	.74	.75	.80	1.18	.82			Relative P/E Ratio	*1.00*
5.4%	5.5%	5.5%	6.2%	4.9%	4.7%	4.3%	3.9%	3.7%	4.0%	4.1%	5.0%	5.4%	4.7%	4.8%	4.8%			Avg Ann'l Div'd Yield	*3.3%*
983.7	1832.0	2718.0	2621.0	2494.0	2800.0	2317.0	2373.0	2338.0	3922.0	*4300*	*4500*	Revenues ($mill) [A]	*5250*
132.4	153.0	193.0	212.0	211.0	207.6	222.0	234.0	172.0	271.0	*305*	*340*	Net Profit ($mill)	*480*
35.9%	37.0%	37.7%	37.8%	37.6%	40.5%	35.2%	35.9%	40.2%	39.8%	*38.5%*	*37.0%*	Income Tax Rate	*32.5%*
13.5%	8.4%	7.1%	8.1%	8.5%	7.4%	9.6%	9.9%	7.4%	6.9%	*7.1%*	*7.6%*	Net Profit Margin	*9.1%*
50.3%	54.0%	51.9%	50.2%	50.2%	50.3%	52.6%	48.0%	51.8%	49.5%	*47.5%*	*48.5%*	Long-Term Debt Ratio	*51.5%*
49.7%	46.0%	48.1%	49.8%	49.8%	49.7%	47.4%	52.0%	48.2%	50.5%	*52.5%*	*51.5%*	Common Equity Ratio	*48.5%*
1901.4	3008.0	3114.0	3231.0	3335.0	3327.0	3754.0	3486.0	6879.0	6716.0	*7425*	*7725*	Total Capital ($mill)	*8670*
2352.4	3178.0	3271.0	3436.0	3566.0	3816.0	4146.0	4405.0	7900.0	8347.0	*8845*	*9380*	Net Plant ($mill)	*11170*
8.9%	6.3%	7.9%	8.0%	7.7%	7.4%	6.9%	7.6%	3.1%	5.4%	*5.5%*	*6.0%*	Return on Total Cap'l	*7.0%*
14.0%	11.0%	12.9%	13.2%	12.7%	12.6%	12.5%	12.9%	5.2%	8.0%	*8.0%*	*8.5%*	Return on Shr. Equity	*11.5%*
14.0%	11.0%	12.9%	13.2%	12.7%	12.6%	12.5%	12.9%	5.2%	8.0%	*8.0%*	*8.5%*	Return on Com Equity	*11.5%*
6.6%	5.6%	6.2%	6.3%	5.3%	5.1%	5.3%	5.6%	.7%	2.0%	*2.0%*	*3.0%*	Retained to Com Eq	*5.0%*
53%	49%	52%	52%	58%	60%	57%	57%	86%	75%	*72%*	*66%*	All Div'ds to Net Prof	*56%*

CAPITAL STRUCTURE as of 6/30/13
Total Debt $4968 mill. **Due in 5 Yrs** $2370 mill.
LT Debt $3819 mill. **LT Interest** $184 mill.
(Total interest coverage: 4.4x)

Leases, Uncapitalized Annual rentals $214.9 mill.
Pension Assets-12/12 $845.0 mill.
Oblig. $968.0 mill.
Pfd Stock None

Common Stock 118,592,240 shs.
as of 7/24/13

MARKET CAP: $5.3 billion (Large Cap)

CURRENT POSITION ($MILL.)	2011	2012	6/30/13
Cash Assets	69	131	184
Other	2677	2537	1879
Current Assets	2746	2668	2063
Accts Payable	294	334	344
Debt Due	1928	2214	1149
Other	862	790	856
Current Liab.	3084	3338	2349
Fix. Chg. Cov.	325%	330%	438%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '10-'12 to '16-'18
Revenues	5.0%	-3.0%	*8.0%*
"Cash Flow"	4.5%	1.5%	*10.5%*
Earnings	8.0%	1.5%	*9.0%*
Dividends	5.0%	6.5%	*4.5%*
Book Value	8.0%	5.0%	*5.0%*

Calendar	QUARTERLY REVENUES ($ mill.) [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2010	1003	359	346	665	2373
2011	878	375	295	790	2338
2012	1404	686	614	1218	3922
2013	1709	904	*560*	*1127*	*4300*
2014	*1840*	*710*	*610*	*1340*	*4500*

Calendar	EARNINGS PER SHARE [AB] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2010	1.73	.17	.29	.81	3.00
2011	1.59	.23	d.04	.37	2.12
2012	1.12	.28	.08	.84	2.32
2013	1.31	.41	*.14*	*.74*	*2.60*
2014	*1.70*	*.25*	*.15*	*.80*	*2.90*

Calendar	QUARTERLY DIVIDENDS PAID [CF■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2009	.43	.43	.43	.43	1.72
2010	.44	.44	.44	.44	1.76
2011	.45	.45	.45	.55	1.90
2012	.36	.46	.46	.46	1.74
2013	.47	.47	.47		

BUSINESS: AGL Resources Inc. is a public utility holding company. Distribution subsidiaries include Atlanta Gas Light, Chattanooga Gas, Elizabethtown Gas, Virginia Natural Gas, Florida City Gas and Elkton Gas. Acquired Nicor in 2011. The utilities have more than 4.4 million customers in Georgia, Virginia, Tennessee, New Jersey, Florida, and Illinois. Engaged in nonregulated natural gas marketing and other allied services. Deregulated subsidiaries: Georgia Natural Gas markets natural gas at retail. BlackRock Inc. owns 7.0% of common stock; officers/directors, less than 1.0% (3/13 Proxy). President & CEO: John W. Somerhalder II. Inc.: GA. Addr.: Ten Peachtree Place N.E., Atlanta, GA 30309. Telephone: 404-584-4000. Internet: www.aglresources.com.

AGL Resources continues to improve upon last year's earnings. The top line was $904 million, which was well above our estimate. Sales have been helped by a cooler second quarter, and increased retail operations. We accordingly increased our 2013 revenue estimate from $4.155 billion to $4.3 billion. Earnings came in above our estimate, as the Nicor merger-related expenses may finally be in the rear window. The company booked a $0.04-a-share on the sale of its Compass Energy subsidiary, and purchased a smaller retail business at the end of June, which should add $0.02 to share net in 2013. The interest expense remained stable even though the debt load is higher than last year. All told, we raised our share earnings estimate to $2.60 from $2.55, as growth should remain solid for the rest of the year.

New laws and base-rate cases are causing some variability in forecasts. The legislature in Illinois voted in a new law that allows for infrastructure investment surcharges to be collected by gas utilities serving over 700,000 customers in the state. This new program will allow for an advancement in capital expenditures, up to $150 million, and revenue growth, when a plan is accepted by the state. Meanwhile, the company seeks to file a new depreciation rate case, which could lower that expense by between $4 million and $6 million a year. These developments should help benefit the bottom line, if approved.

The expansion in cash flow may allow for longer-term dividend expansion. AGL Resources' dividend yield remains high for a natural gas utility, but could further expand alongside increasing cash flow. Too, the balance sheet remains in good shape, and the long-term debt ratio should remain within the historical range. The company continues to have a Financial Strength score of A.

The Timeliness rank for this issue is 2 (Above Average). The stock has good appreciation potential for a utility and a strong dividend. The company has considerable potential for earnings growth, and the longer-term trends look to be in its favor. Conservative investors and momentum-based traders may want to consider this issue.

John E. Seibert III *September 6, 2013*

(A) Fiscal year ends December 31st. Ended September 30th prior to 2002.
(B) Diluted earnings per share. Excl. nonrecurring gains (losses):'99, $0.39; '00, $0.13; '01, $0.13; '03, ($0.07); '08, $0.13. Next earnings report due late October.
(C) Dividends historically paid early March, June, Sept., and Dec. ■ Div'd reinvest. plan available. **(D)** Includes intangibles. In 2012: $1933 million, $17.91/share.
(E) In millions. **(F)** Excluding special dividends from the Nicor merger.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	60
Earnings Predictability	70

ATMOS ENERGY CORP. NYSE-ATO

RECENT PRICE **41.52** | P/E RATIO **16.2** (Trailing: 16.6 / Median: 14.0) | RELATIVE P/E RATIO **0.95** | DIV'D YLD **3.4%** | **VALUE LINE**

TIMELINESS 3 Lowered 7/12/13
SAFETY 2 Raised 12/16/05
TECHNICAL 3 Lowered 8/2/13
BETA .70 (1.00 = Market)

2016-18 PROJECTIONS

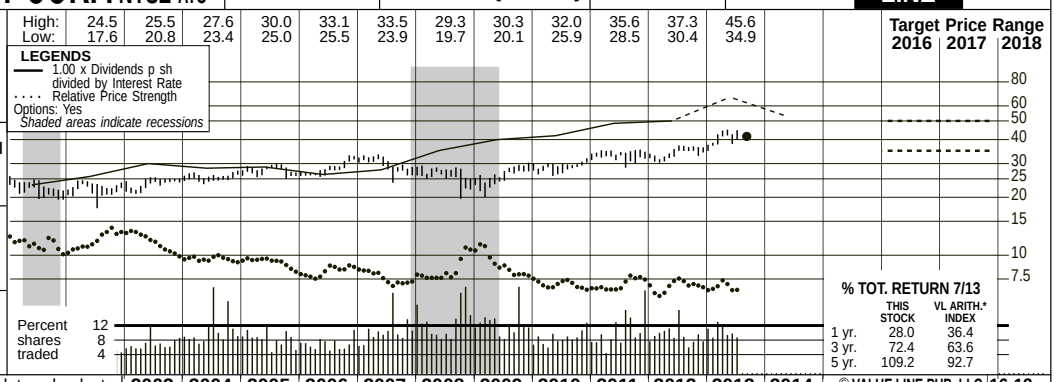
	Price	Gain	Ann'l Total Return
High	50	(+20%)	*8%*
Low	35	(-15%)	*Nil*

Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	1	0	0	0	0	5	0
to Sell	0	0	1	0	0	3	0	0	1

Institutional Decisions

	4Q2012	1Q2013	2Q2013
to Buy	118	125	126
to Sell	115	120	121
Hld's(000)	53879	56136	57357



Atmos Energy's history dates back to 1906 in the Texas Panhandle. Over the years, through various mergers, it became part of Pioneer Corporation, and, in 1981, Pioneer named its gas distribution division Energas. In 1983, Pioneer organized Energas as a separate subsidiary and distributed the outstanding shares of Energas to Pioneer shareholders. Energas changed its name to Atmos in 1988. Atmos acquired Trans Louisiana Gas in 1986, Western Kentucky Gas Utility in 1987, Greeley Gas in 1993, United Cities Gas in 1997, and others.

CAPITAL STRUCTURE as of 6/30/13
Total Debt $2597.6 mill. **Due in 5 Yrs** $1320.0 mill.
LT Debt $2455.6 mill. **LT Interest** $110.0 mill.
(LT interest earned: 3.1x; total interest coverage: 3.1x)
Leases, Uncapitalized Annual rentals $17.6 mill.
Pfd Stock None
Pension Assets-9/12 $343.1 mill.
Oblig. $480.0 mill.
Common Stock 90,640,211 shs.
as of 8/2/13
MARKET CAP: $3.8 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2011	2012	6/30/13
Cash Assets	131.4	64.2	32.0
Other	879.6	763.8	650.3
Current Assets	1011.0	828.0	682.3
Accts Payable	291.2	215.2	229.9
Debt Due	208.8	571.1	142.0
Other	367.6	489.7	348.7
Current Liab.	867.6	1276.0	720.6
Fix. Chg. Cov.	432%	448%	445%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '10-'12 to '16-'18
Revenues	5.0%	-7.0%	*3.5%*
"Cash Flow"	4.0%	3.0%	*4.5%*
Earnings	5.0%	3.0%	*5.5%*
Dividends	1.5%	1.5%	*1.5%*
Book Value	6.5%	4.0%	*5.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2010	1292.9	1940.3	770.2	786.3	4789.7
2011	1133.3	1581.5	843.6	789.2	4347.6
2012	1084.0	1225.5	576.4	552.6	3438.5
2013	1034.2	1309.0	857.9	***598.9***	***3800***
2014	***1050***	***1355***	***910***	***635***	***3950***

Fiscal Year Ends	EARNINGS PER SHARE A B E Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2010	1.00	1.17	d.03	.02	2.16
2011	.81	1.40	.04	.01	2.26
2012	.68	1.12	.31	- -	2.10
2013	.85	1.23	.36	***.01***	***2.45***
2014	***.82***	***1.37***	***.38***	***.03***	***2.60***

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2009	.33	.33	.33	.335	1.33
2010	.335	.335	.335	.34	1.35
2011	.34	.34	.34	.345	1.37
2012	.345	.345	.345	.35	1.39
2013	.35	.35	.35		

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	© VALUE LINE PUB. LLC	16-18
	54.39	46.50	61.75	75.27	66.03	79.52	53.69	53.12	48.15	38.10	***41.75***	***42.95***	Revenues per sh A	***56.30***
	3.23	2.91	3.90	4.26	4.14	4.19	4.29	4.64	4.72	4.76	***5.20***	***5.45***	"Cash Flow" per sh	***6.05***
	1.71	1.58	1.72	2.00	1.94	2.00	1.97	2.16	2.26	2.10	***2.45***	***2.60***	Earnings per sh A B	***3.00***
	1.20	1.22	1.24	1.26	1.28	1.30	1.32	1.34	1.36	1.38	***1.40***	***1.42***	Div'ds Decl'd per sh C■	***1.50***
	3.10	3.03	4.14	5.20	4.39	5.20	5.51	6.02	6.90	8.12	***8.80***	***9.00***	Cap'l Spending per sh	***10.00***
	16.66	18.05	19.90	20.16	22.01	22.60	23.52	24.16	24.98	26.14	***29.70***	***31.30***	Book Value per sh	***34.65***
	51.48	62.80	80.54	81.74	89.33	90.81	92.55	90.16	90.30	90.24	***91.00***	***92.00***	Common Shs Outst'g D	***103.00***
	13.4	15.9	16.1	13.5	15.9	13.6	12.5	13.2	14.4	15.9	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***14.0***
	.76	.84	.86	.73	.84	.82	.83	.84	.90	1.01			Relative P/E Ratio	***.95***
	5.2%	4.9%	4.5%	4.7%	4.2%	4.8%	5.3%	4.7%	4.2%	4.1%			Avg Ann'l Div'd Yield	***3.5%***
	2799.9	2920.0	4973.3	6152.4	5898.4	7221.3	4969.1	4789.7	4347.6	3438.5	***3800***	***3950***	Revenues ($mill) A	***5800***
	79.5	86.2	135.8	162.3	170.5	180.3	179.7	201.2	199.3	192.2	***225***	***240***	Net Profit ($mill)	***310***
	37.1%	37.4%	37.7%	37.6%	35.8%	38.4%	34.4%	38.5%	36.4%	33.8%	***37.5%***	***37.5%***	Income Tax Rate	***38.0%***
	2.8%	3.0%	2.7%	2.6%	2.9%	2.5%	3.6%	4.2%	4.6%	5.6%	***5.9%***	***6.1%***	Net Profit Margin	***5.3%***
	50.2%	43.2%	57.7%	57.0%	52.0%	50.8%	49.9%	45.4%	49.4%	45.3%	***49.0%***	***49.0%***	Long-Term Debt Ratio	***49.0%***
	49.8%	56.8%	42.3%	43.0%	48.0%	49.2%	50.1%	54.6%	50.6%	54.7%	***51.0%***	***51.0%***	Common Equity Ratio	***51.0%***
	1721.4	1994.8	3785.5	3828.5	4092.1	4172.3	4346.2	3987.9	4461.5	4315.5	***5300***	***5650***	Total Capital ($mill)	***7000***
	1516.0	1722.5	3374.4	3629.2	3836.8	4136.9	4439.1	4793.1	5147.9	5475.6	***5950***	***6340***	Net Plant ($mill)	***8000***
	6.2%	5.8%	5.3%	6.1%	5.9%	5.9%	5.9%	6.9%	6.1%	5.8%	***5.5%***	***5.5%***	Return on Total Cap'l	***6.0%***
	9.3%	7.6%	8.5%	9.8%	8.7%	8.8%	8.3%	9.2%	8.8%	8.1%	***8.5%***	***8.5%***	Return on Shr. Equity	***8.5%***
	9.3%	7.6%	8.5%	9.8%	8.7%	8.8%	8.3%	9.2%	8.8%	8.1%	***8.5%***	***8.5%***	Return on Com Equity	***8.5%***
	2.8%	1.7%	2.3%	3.6%	3.0%	3.1%	2.7%	3.5%	3.3%	2.8%	***3.5%***	***4.0%***	Retained to Com Eq	***4.5%***
	70%	77%	73%	63%	65%	65%	68%	62%	62%	65%	***57%***	***54%***	All Div'ds to Net Prof	***50%***

BUSINESS: Atmos Energy Corporation is engaged primarily in the distribution and sale of natural gas to more than three million customers through six regulated natural gas utility operations: Louisiana Division, West Texas Division, Mid-Tex Division, Mississippi Division, Colorado-Kansas Division, and Kentucky/Mid-States Division. Gas sales breakdown for 2012: 65%, residential; 28%, commercial; 3%, industrial; and 4% other. 2012 depreciation rate 3.3%. Has around 4,760 employees. Officers and directors own 1.2% of common stock (12/12 Proxy). President and Chief Executive Officer: Kim R. Cocklin. Incorporated: Texas. Address: Three Lincoln Centre, Suite 1800, 5430 LBJ Freeway, Dallas, Texas 75240. Telephone: 972-934-9227. Internet: www.atmosenergy.com.

Atmos Energy is about to close the books on a prosperous fiscal 2013, which ends on September 30th. Through the first nine monts, results for the core natural gas distribution segment were helped, in part, by higher rates in such service areas as Kentucky/Mid-States and Louisiana. Another contributing factor here was cooler temperatures within divisions like Mississippi and Colorado-Kansas. Meanwhile, the regulated transmission and storage operation benefited from higher revenues from two Gas Reliability Infrastructure Program filings that became effective in April, 2012 and May, 2013. Barring a fourth-quarter pullback, it appears that the company's full-year share net will soar about 16%, to $2.45, versus the fiscal 2012 tally. We anticipate a slower rate of bottom-line growth next year partly due to the difficult comparison.

Meanwhile, there has been much activity on the rate-filing front. During the first nine months of fiscal 2013, Atmos completed 12 rate-case proceedings, which ought to result in a $70.5 million rise in annual operating income. (Most of the increase was for the Mid-Tex division, where rates became effective last January.)

Finances appear decent. The total amount available under several credit facilities, net of outstanding letters of credit, was nearly $880 million for the first nine months. Too, long-term debt looks manageable and cash flow from operations is adequate. Consequently, the company ought to continue to be able to satisfy its working capital requirements and capital spending program.

The equity has climbed to a record high in recent months. Indeed, it seems that investors are quite pleased with the company's operating performance during fiscal 2013. Other positives include a 2 (Above Average) Safety rank and excellent score for Price Stability.

However, total return possibilities out to 2016-2018 are not impressive. That's mainly because these shares are trading well within our Target Price Range. The current dividend is healthy, although we think additional increases will remain moderate. Meanwhile, the stock is neutrally ranked for Timeliness.

Frederick L. Harris, III September 6, 2013

(A) Fiscal year ends Sept. 30th. **(B)** Diluted shrs. Excl. nonrec. items: '03, d17¢; '06, d18¢; '07, d2¢; '09, 12¢; '10, 5¢; '11, (1¢). Excludes discontinued operations: '11, 10¢; '12, 27¢; '13, 14¢. Next egs. rpt. due early Nov. **(C)** Dividends historically paid in early March, June, Sept., and Dec. ■ Div. reinvestment plan. Direct stock purchase plan avail. **(D)** In millions. **(E)** Qtrs may not add due to change in shrs outstanding.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	65
Earnings Predictability	90

NEW JERSEY RES. NYSE-NJR

RECENT PRICE **43.73** | P/E RATIO **16.0** (Trailing: 17.8 / Median: 16.0) | RELATIVE P/E RATIO **0.94** | DIV'D YLD **3.7%** | **VALUE LINE**

TIMELINESS 2 Raised 8/23/13
SAFETY 1 Raised 9/15/06
TECHNICAL 3 Lowered 8/30/13
BETA .70 (1.00 = Market)

2016-18 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(+15%)	7%
Low	40	(-10%)	2%

Insider Decisions

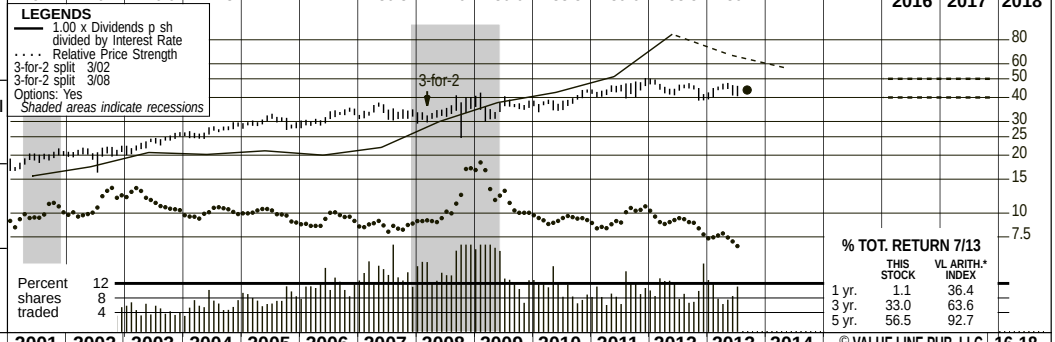
	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	1	0	0	0	0	0	1
to Sell	0	0	0	0	3	0	0	0	1

Institutional Decisions

	4Q2012	1Q2013	2Q2013
to Buy	84	72	75
to Sell	68	68	64
Hld's(000)	24376	24522	23432

	2012	2013
High:	22.4	26.4
Low:	16.2	20.0

LEGENDS
1.00 x Dividends p sh divided by Interest Rate
Relative Price Strength
3-for-2 split 3/02
3-for-2 split 3/08
Options: Yes
Shaded areas indicate recessions



Target Price Range 2016 | 2017 | 2018
80 60 50 40 30 25 20 15 10 7.5

% TOT. RETURN 7/13

	THIS STOCK	VL ARITH.* INDEX
1 yr.	1.1	36.4
3 yr.	33.0	63.6
5 yr.	56.5	92.7

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	© VALUE LINE PUB. LLC	16-18
17.31	17.73	22.65	29.42	51.22	44.11	62.29	60.89	76.19	79.63	72.62	90.74	62.34	64.10	72.60	54.16	*74.15*	*76.35*	Revenues per sh [A]	*83.45*
1.63	1.74	1.86	1.99	2.12	2.14	2.38	2.50	2.62	2.73	2.44	3.62	3.16	3.26	3.40	3.74	*3.65*	*3.85*	"Cash Flow" per sh	*4.35*
.99	1.04	1.11	1.20	1.30	1.39	1.59	1.70	1.77	1.87	1.55	2.70	2.40	2.46	2.58	2.71	*2.70*	*2.80*	Earnings per sh [B]	*3.30*
.71	.73	.75	.76	.78	.80	.83	.87	.91	.96	1.01	1.11	1.24	1.36	1.44	1.54	*1.60*	*1.64*	Div'ds Decl'd per sh [C]■	*1.72*
1.15	1.07	1.21	1.23	1.10	1.02	1.14	1.45	1.28	1.28	1.46	1.72	1.81	2.10	2.26	2.00	*2.00*	*2.00*	Cap'l Spending per sh	*2.00*
6.92	7.26	7.57	8.29	8.80	8.71	10.26	11.25	10.60	15.00	15.50	17.28	16.59	17.62	18.73	18.15	*18.80*	*20.05*	Book Value per sh [D]	*24.70*
40.23	40.07	39.92	39.59	40.00	41.50	40.85	41.61	41.32	41.44	41.61	42.06	41.59	41.17	41.45	41.53	*40.00*	*40.00*	Common Shs Outst'g [E]	*40.00*
13.5	15.3	15.2	14.7	14.2	14.7	14.0	15.3	16.8	16.1	21.6	12.3	14.9	15.0	16.8	16.8	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*14.0*
.78	.80	.87	.96	.73	.80	.80	.81	.89	.87	1.15	.74	.99	.95	1.05	1.08			Relative P/E Ratio	*.95*
5.3%	4.6%	4.5%	4.4%	4.2%	3.9%	3.7%	3.3%	3.1%	3.2%	3.0%	3.3%	3.5%	3.7%	3.3%	3.3%			Avg Ann'l Div'd Yield	*3.5%*
2544.4	2533.6	3148.3	3299.6	3021.8	3816.2	2592.5	2639.3	3009.2	2248.9	*2965*	*3055*	Revenues ($mill) [A]	*3335*
65.4	71.6	74.4	78.5	65.3	113.9	101.0	101.8	106.5	112.8	*110*	*115*	Net Profit ($mill)	*135*
39.4%	39.1%	39.1%	38.9%	38.8%	37.8%	27.1%	41.4%	30.2%	8.6%	*35.0%*	*35.0%*	Income Tax Rate	*35.0%*
2.6%	2.8%	2.4%	2.4%	2.2%	3.0%	3.9%	3.9%	3.5%	5.0%	*3.5%*	*3.7%*	Net Profit Margin	*4.0%*
38.1%	40.3%	42.0%	34.8%	37.3%	38.5%	39.8%	37.2%	35.5%	39.2%	*40.0%*	*38.5%*	Long-Term Debt Ratio	*33.5%*
61.9%	59.7%	58.0%	65.2%	62.7%	61.5%	60.2%	62.8%	64.5%	60.8%	*60.0%*	*61.5%*	Common Equity Ratio	*66.5%*
676.8	783.8	755.3	954.0	1028.0	1182.1	1144.8	1154.4	1203.1	1339.0	*1250*	*1300*	Total Capital ($mill)	*1490*
852.6	880.4	905.1	934.9	970.9	1017.3	1064.4	1135.7	1295.9	1484.9	*1515*	*1545*	Net Plant ($mill)	*1640*
10.7%	10.1%	11.2%	9.6%	7.7%	10.7%	9.7%	9.7%	9.7%	9.4%	*9.5%*	*9.5%*	Return on Total Cap'l	*10.0%*
15.6%	15.3%	17.0%	12.6%	10.1%	15.7%	14.6%	14.0%	13.7%	13.9%	*14.5%*	*14.0%*	Return on Shr. Equity	*13.5%*
15.6%	15.3%	17.0%	12.6%	10.1%	15.7%	14.6%	14.0%	13.7%	13.9%	*14.5%*	*14.0%*	Return on Com Equity	*13.5%*
7.7%	7.8%	8.5%	6.3%	3.6%	9.5%	7.2%	6.7%	6.2%	6.2%	*6.0%*	*6.0%*	Retained to Com Eq	*6.5%*
51%	49%	50%	50%	64%	40%	50%	52%	55%	56%	*59%*	*56%*	All Div'ds to Net Prof	*52%*

CAPITAL STRUCTURE as of 6/30/13
Total Debt $881.6 mill. **Due in 5 Yrs** $214.3 mill.
LT Debt $516.2 mill. **LT Interest** $19.6 mill.
Incl. $65.8 mill. capitalized leases.
(LT interest earned: 7.5x; total interest coverage: 7.5x)
Pension Assets-9/12 $207.8 mill.
Oblig. $332.2 mill.
Pfd Stock None

Common Stock 41,380,558 shs.
as of 8/5/13
MARKET CAP: $1.8 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2011	2012	6/30/13
Cash Assets	7.4	4.5	1.9
Other	725.0	642.8	748.4
Current Assets	732.4	647.3	750.3
Accts Payable	66.0	265.8	336.3
Debt Due	166.9	287.6	365.4
Other	470.5	99.7	93.8
Current Liab.	703.4	653.1	795.5
Fix. Chg. Cov.	700%	700%	700%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '10-'12 to '16-'18
Revenues	4.5%	-3.5%	*4.5%*
"Cash Flow"	5.0%	6.0%	*4.0%*
Earnings	7.0%	8.5%	*4.0%*
Dividends	6.5%	8.5%	*3.0%*
Book Value	8.0%	6.5%	*5.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) [A] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2010	609.6	918.4	479.8	631.5	2639.3
2011	713.2	977.0	648.1	670.9	3009.2
2012	642.4	612.9	425.1	568.5	2248.9
2013	736.0	960.9	767.5	*500.6*	*2965*
2014	*760*	*985*	*790*	*520*	*3055*

Fiscal Year Ends	EARNINGS PER SHARE [A B] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2010	.66	1.55	.28	d.03	2.46
2011	.71	1.62	.23	.02	2.58
2012	1.09	1.79	.10	d.27	2.71
2013	.85	1.64	.23	*d.02*	*2.70*
2014	*.87*	*1.66*	*.25*	*.02*	*2.80*

Cal-endar	QUARTERLY DIVIDENDS PAID [C]■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2009	.31	.31	.31	.31	1.24
2010	.34	.34	.34	.34	1.36
2011	.36	.36	.36	.36	1.44
2012	.38	.38	.38	.80	1.94
2013	- -	.40	.40	.40	

BUSINESS: New Jersey Resources Corp. is a holding company providing retail/wholesale energy svcs. to customers in New Jersey, and in states from the Gulf Coast to New England, and Canada. New Jersey Natural Gas had about 500,070 customers at 9/30/12 in Monmouth and Ocean Counties, and other N.J. Counties. Fiscal 2012 volume: 161 bill. cu. ft. (6% interruptible, 31% residential and commercial and electric utility, 63% incentive programs). N.J. Natural Energy subsidiary provides unregulated retail/wholesale natural gas and related energy svcs. 2012 dep. rate: 2.3%. Has 927 empls. Off./dir. own about 1.1% of common (12/12 Proxy). Chrmn., CEO & Pres. : Laurence M. Downes. Inc.: NJ Addr.: 1415 Wyckoff Road, Wall, NJ 07719. Tel.: 732-938-1480. Web: www.njresources.com.

New Jersey Resources posted solid financial results for the June interim. Indeed, the top line advanced more than 80% on a year-over-year basis. A good portion of that gain can be attributed to an almost doubling of nonutility volumes, thanks to solid contributions from the NJR Energy Services unit. Meanwhile, the regulated utility segment, New Jersey Natural Gas, added 5,301 new customer accounts during the first nine months of this year. Finally, the NJR Home Services division also logged nicely higher earnings contributions during the quarter. On balance, the bottom line more than doubled, to $0.23 a share. This was relatively in line with our previous expectation. However, management recently raised its guidance for fiscal 2013.

As a result, we have added a dime to our annual earnings estimates for this year and next to $2.70 and $2.80 a share, respectively. This ought to be supported by 13,000-15,000 additional customer accounts at the regulated utility division. Meanwhile, the wholesale energy subsidiary, NJR Energy Services, and the Home Services divisions have both been performing nicely this year, a trend that we expect to continue. These steady gains will likely be offset by diminished top- and bottom-line contributions at the Clean Energy Ventures segment. Overall, these factors ought to leave earnings relatively unchanged for 2013 and contribute to modest share-net advances in 2014 and beyond.

Meanwhile, the balance sheet is providing a firm underpinning. On the upside, the long-term debt load has decreased about 2%, and represents a relatively modest portion of the capital structure, especially for a utility company. Notably, the company made it through difficulties caused by Superstorm Sandy without a hitch, financially. What's more, the board recently approved a one-million-share increase to the existing stock-repurchase agreement, bringing potential buybacks to 9.75 million shares.

These high-quality shares may appeal to income-seeking accounts. Indeed, NJR is ranked to outpace the broader market averages in the year ahead, and offers a dividend yield that is comparable to the industry average.

Bryan J. Fong *September 6, 2013*

(A) Fiscal year ends Sept. 30th.
(B) Diluted earnings. Qtly egs may not sum to total due to change in shares outstanding. Next earnings report due late Oct.
(C) Dividends historically paid in early Jan., April, July, and October. 1Q '13 div'd paid in 4Q '12. ■ Dividend reinvestment plan available.
(D) Includes regulatory assets in 2012: $441.3 million, $10.63/share.
(E) In millions, adjusted for splits.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	60
Earnings Predictability	55

N.W. NAT'L GAS NYSE-NWN

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
41.74	19.0 (Trailing: 19.5 Median: 17.0)	1.11	4.4%	

TIMELINESS 3 Raised 7/5/13
SAFETY 1 Raised 3/18/05
TECHNICAL 3 Lowered 8/16/13
BETA .60 (1.00 = Market)

2016-18 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(+45%)	*13%*
Low	50	(+20%)	*8%*

Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	3	0	0	0	0	0

Institutional Decisions

	4Q2012	1Q2013	2Q2013
to Buy	72	75	79
to Sell	58	53	63
Hld's(000)	16052	16036	15076

	2010	2011	2012	2013	2014	2015	2016	2017	2018
High:	30.7	31.3	34.1	39.6	43.7	52.8	55.2	46.5	50.9	49.0	50.8	46.6
Low:	23.5	24.0	27.5	32.4	32.8	39.8	37.7	37.7	41.1	39.6	41.0	41.2

LEGENDS
1.10 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded areas indicate recessions

Target Price Range 2016 | 2017 | 2018

% TOT. RETURN 7/13

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-7.0	36.4
3 yr.	3.0	63.6
5 yr.	15.9	92.7

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	© VALUE LINE PUB. LLC	16-18
15.82	16.77	18.17	21.09	25.78	25.07	23.57	25.69	33.01	37.20	39.13	39.16	38.17	30.56	31.72	27.14	*27.20*	*27.80*	Revenues per sh	*28.95*
3.72	3.24	3.72	3.68	3.86	3.65	3.85	3.92	4.34	4.76	5.41	5.31	5.20	5.18	5.00	4.94	*4.10*	*4.30*	"Cash Flow" per sh	*5.30*
1.76	1.02	1.70	1.79	1.88	1.62	1.76	1.86	2.11	2.35	2.76	2.57	2.83	2.73	2.39	2.22	*2.15*	*2.30*	Earnings per sh [A]	*3.20*
1.21	1.22	1.23	1.24	1.25	1.26	1.27	1.30	1.32	1.39	1.44	1.52	1.60	1.68	1.75	1.79	*1.83*	*1.87*	Div'ds Decl'd per sh [B]■	*2.00*
5.07	4.02	4.78	3.46	3.23	3.11	4.90	5.52	3.48	3.56	4.48	3.92	5.09	9.35	3.76	4.91	*6.10*	*6.35*	Cap'l Spending per sh	*7.00*
16.02	16.59	17.12	17.93	18.56	18.88	19.52	20.64	21.28	22.01	22.52	23.71	24.88	26.08	26.70	27.23	*27.95*	*29.15*	Book Value per sh [D]	*31.65*
22.86	24.85	25.09	25.23	25.23	25.59	25.94	27.55	27.58	27.24	26.41	26.50	26.53	26.58	26.76	26.92	*27.00*	*27.00*	Common Shs Outst'g [C]	*28.00*
14.4	26.7	14.5	12.4	12.9	17.2	15.8	16.7	17.0	15.9	16.7	18.1	15.2	17.0	19.0	21.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.0*
.83	1.39	.83	.81	.66	.94	.90	.88	.91	.86	.89	1.09	1.01	1.08	1.19	1.35			Relative P/E Ratio	*1.15*
4.8%	4.5%	5.0%	5.6%	5.1%	4.5%	4.6%	4.2%	3.7%	3.7%	3.1%	3.3%	3.7%	3.6%	3.9%	3.8%			Avg Ann'l Div'd Yield	*3.3%*
611.3	707.6	910.5	1013.2	1033.2	1037.9	1012.7	812.1	848.8	730.6	*735*	*750*	Revenues ($mill)	*810*
46.0	50.6	58.1	65.2	74.5	68.5	75.1	72.7	63.9	59.9	*57.5*	*62.0*	Net Profit ($mill)	*90.0*
33.7%	34.4%	36.0%	36.3%	37.2%	36.9%	38.3%	40.5%	40.4%	42.4%	*37.5%*	*36.0%*	Income Tax Rate	*31.0%*
7.5%	7.1%	6.4%	6.4%	7.2%	6.6%	7.4%	8.9%	7.5%	8.2%	*7.9%*	*8.3%*	Net Profit Margin	*11.1%*
49.7%	46.0%	47.0%	46.3%	46.3%	44.9%	47.7%	46.1%	47.3%	48.5%	*48.5%*	*48.5%*	Long-Term Debt Ratio	*48.0%*
50.3%	54.0%	53.0%	53.7%	53.7%	55.1%	52.3%	53.9%	52.7%	51.5%	*51.5%*	*51.5%*	Common Equity Ratio	*52.0%*
1006.6	1052.5	1108.4	1116.5	1106.8	1140.4	1261.8	1284.8	1356.2	1424.7	*1470*	*1525*	Total Capital ($mill)	*1705*
1205.9	1318.4	1373.4	1425.1	1495.9	1549.1	1670.1	1854.2	1893.9	1973.6	*2055*	*2135*	Net Plant ($mill)	*2400*
5.7%	5.9%	6.5%	7.1%	8.5%	7.7%	7.3%	7.0%	6.2%	5.7%	*5.0%*	*5.0%*	Return on Total Cap'l	*6.5%*
9.1%	8.9%	9.9%	10.9%	12.5%	10.9%	11.4%	10.5%	8.9%	8.2%	*7.5%*	*8.0%*	Return on Shr. Equity	*10.0%*
9.0%	8.9%	9.9%	10.9%	12.5%	10.9%	11.4%	10.5%	8.9%	8.2%	*7.5%*	*8.0%*	Return on Com Equity	*10.0%*
2.6%	2.7%	3.7%	4.5%	6.0%	4.5%	5.0%	4.0%	2.4%	1.6%	*1.0%*	*1.5%*	Retained to Com Eq	*4.0%*
72%	69%	63%	59%	52%	59%	56%	61%	73%	80%	*85%*	*81%*	All Div'ds to Net Prof	*63%*

CAPITAL STRUCTURE as of 6/30/13
Total Debt $827.7 mill. **Due in 5 Yrs** $200 mill.
LT Debt $691.7 mill. **LT Interest** $45.0 mill.

(Total interest coverage: 3.3x)

Pension Assets-12/12 $249.6 mill.
Oblig. $435.9 mill.
Pfd Stock None

Common Stock 26,975,108 shares as of 7/26/13

MARKET CAP $1.1 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2011	2012	6/30/13
Cash Assets	5.8	8.9	12.2
Other	342.9	274.8	166.9
Current Assets	348.7	283.7	179.1
Accts Payable	86.3	85.6	63.5
Debt Due	181.6	190.3	136.0
Other	146.6	92.5	73.7
Current Liab.	414.5	368.4	273.2
Fix. Chg. Cov.	334%	329%	393%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '10-'12 to '16-'18
Revenues	2.0%	-4.0%	*-.5%*
"Cash Flow"	3.0%	1.0%	*1.0%*
Earnings	3.5%	0.5%	*4.5%*
Dividends	3.5%	4.5%	*2.5%*
Book Value	4.0%	4.0%	*3.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2010	286.5	162.4	95.1	268.1	812.1
2011	323.1	161.2	93.3	271.2	848.8
2012	309.6	104.0	87.5	229.5	730.6
2013	227.9	131.7	*95*	*280.4*	*735*
2014	*300*	*125*	*85*	*240*	*750*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2010	1.64	.26	d.28	1.11	2.73
2011	1.53	.08	d.31	1.09	2.39
2012	1.51	.05	d.39	1.05	2.22
2013	1.40	.08	*d.40*	*1.07*	*2.15*
2014	*1.45*	*.10*	*d.30*	*1.05*	*2.30*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2009	.395	.395	.395	.415	1.60
2010	.415	.415	.415	.435	1.68
2011	.435	.435	.435	.445	1.75
2012	.445	.445	.445	.455	1.79
2013	.455	.455	.455		

BUSINESS: Northwest Natural Gas Co. distributes natural gas to 90 communities, 681,000 customers, in Oregon (90% of customers) and in southwest Washington state. Principal cities served: Portland and Eugene, OR; Vancouver, WA. Service area population: 2.5 mill. (77% in OR). Company buys gas supply from Canadian and U.S. producers; has transportation rights on Northwest Pipeline system. Owns local underground storage. Rev. breakdown: residential, 59%; commercial, 29%; industrial, gas transportation, and other, 12%. Employs 1,092. BlackRock Inc. owns 8.2% of shares; officers and directors, 1.8% (4/13 proxy). CEO: Gregg S. Kantor. Inc.: Oregon. Address: 220 NW 2nd Ave., Portland, OR 97209. Telephone: 503-226-4211. Internet: www.nwnatural.com.

Northwest Natural Gas's results were mixed in the second quarter. Earnings per share were $0.08, helped by increased housing starts in the Portland housing market. Lower bad-debt expense also helped the bottom-line growth. That said, the company has delivered less gas thus far this year, hampering profit results in the first half when compared to last year. The base-rate cases should allow for more even revenue flow to cover fixed costs, likely helping in the third quarter. The company expects to file a case rate, concerning the rollout of compressed natural gas refueling. We expect this could be a good sector of growth over the longer term, as the move to natural gas vehicles accelerates. The pension base-rate case, which has been outstanding, will likely not be solved earlier than in 2014.

Management lowered fiscal earnings guidance on a settlement charge. As part of the settlement concerning its Site Remediation and Recovery Mechanism, Northwest Natural Gas agreed not to seek repayment of $7 million of deferred expenses, which will hit the income statement in the third quarter. Guidance from the company has accordingly declined to $2.02-$2.22 from $2.15-$2.35. We have lowered our earnings estimate to $2.15 from $2.30, and our revenue call from $735 million from $745 million, as well.

The company's financial position remains in good shape. Cash flow will likely be used to increase the dividend. Like clockwork, the dividend has been raised by one or two cents a share every fourth quarter. With the aforementioned hit to earnings, however, we expect a smaller raise to take place this year. The rest of cash flow will likely be used on capital projects.

Northwest Natural Gas stock has a Timeliness rank of 3 (Average). The dividend yield is among the highest in the industry. The payout ratio remains high, however. This company is leveraged and earnings could take a hit should longer-term rates rise significantly, increasing the associated interest expense. These shares have a top Price Stability score. The company's Financial Strength rating is A and this is a solid choice for income-minded investors.

John E. Seibert III *September 6, 2013*

(A) Diluted earnings per share. Excludes nonrecurring items: '98, $0.15; '00, $0.11; '06, ($0.06); '08, ($0.03); '09, 6¢; Next earnings report due in early November.
(B) Dividends historically paid in mid-February, May, August, and November.
■ Dividend reinvestment plan available.
(C) In millions.
(D) Includes intangibles. In 2012: $387.9 million, $14.41/share.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	55
Earnings Predictability	95

PIEDMONT NAT'L. GAS NYSE-PNY

RECENT PRICE **32.50** | P/E RATIO **18.3** (Trailing: 17.8) (Median: 18.0) | RELATIVE P/E RATIO **1.07** | DIV'D YLD **3.8%** | **VALUE LINE**

TIMELINESS 3 Raised 6/22/12
SAFETY 2 New 7/27/90
TECHNICAL 3 Lowered 6/14/13
BETA .70 (1.00 = Market)

2016-18 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	40	(+25%)	8%
Low	30	(-10%)	2%

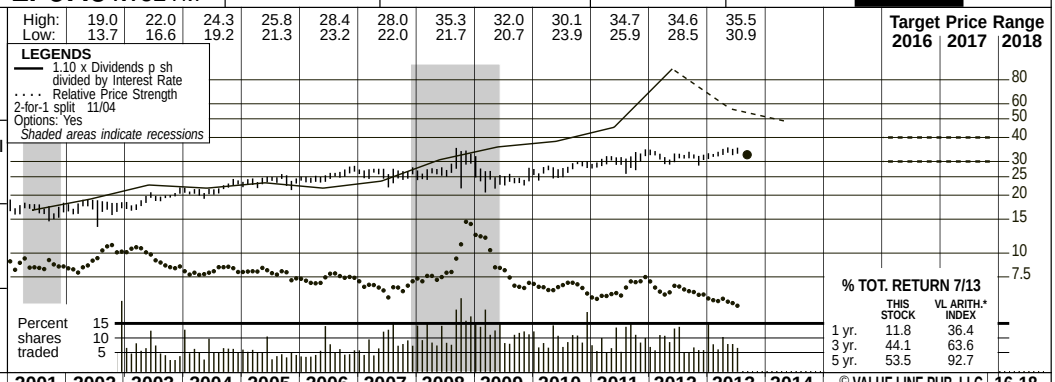
Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	0	1	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	1	0	0	0	0	1

Institutional Decisions

	4Q2012	1Q2013	2Q2013
to Buy	85	103	87
to Sell	78	63	83
Hld's(000)	33873	37241	38516

	2011	2012	2013
High:	19.0	22.0	24.3
Low:	13.7	16.6	19.2



Target Price Range 2016 | 2017 | 2018
80
60
50
40
30
25
20
15
10
7.5

% TOT. RETURN 7/13

	THIS STOCK	VL ARITH.* INDEX
1 yr.	11.8	36.4
3 yr.	44.1	63.6
5 yr.	53.5	92.7

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	© VALUE LINE PUB. LLC	16-18
	12.84	12.45	10.97	13.01	17.06	12.57	18.14	19.95	22.96	25.80	23.37	28.52	22.36	21.48	19.83	15.54	*17.10*	*17.75*	Revenues per sh [A]	*19.40*
	1.62	1.72	1.70	1.77	1.81	1.81	2.04	2.31	2.43	2.51	2.64	2.77	3.01	2.91	2.99	3.09	*3.15*	*3.20*	"Cash Flow" per sh	*3.45*
	.93	.98	.93	1.01	1.01	.95	1.11	1.27	1.32	1.28	1.40	1.49	1.67	1.55	1.57	1.66	*1.75*	*1.80*	Earnings per sh [AB]	*2.05*
	.61	.64	.68	.72	.76	.80	.82	.85	.91	.95	.99	1.03	1.07	1.11	1.15	1.19	*1.23*	*1.27*	Div'ds Decl'd per sh [C■]	*1.39*
	1.52	1.48	1.58	1.65	1.29	1.21	1.16	1.85	2.50	2.74	1.85	2.47	1.76	2.75	3.37	7.33	*7.25*	*7.25*	Cap'l Spending per sh	*7.25*
	6.95	7.45	7.86	8.26	8.63	8.91	9.36	11.15	11.53	11.83	11.99	12.11	12.67	13.35	13.79	14.21	*15.70*	*16.20*	Book Value per sh [D]	*18.05*
	60.39	61.48	62.59	63.83	64.93	66.18	67.31	76.67	76.70	74.61	73.23	73.26	73.27	72.28	72.32	72.25	*76.00*	*76.00*	Common Shs Outst'g [E]	*76.00*
	13.6	16.3	17.7	14.3	16.7	18.4	16.7	16.6	17.9	19.2	18.7	18.2	15.4	17.1	18.9	19.2	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
	.78	.85	1.01	.93	.86	1.01	.95	.88	.95	1.04	.99	1.10	1.03	1.09	1.19	1.22			Relative P/E Ratio	*1.20*
	4.8%	4.0%	4.1%	5.0%	4.5%	4.6%	4.4%	4.1%	3.8%	3.9%	3.8%	3.8%	4.1%	4.2%	3.9%	4.7%			Avg Ann'l Div'd Yield	*3.9%*
	1220.8	1529.7	1761.1	1924.6	1711.3	2089.1	1638.1	1552.3	1433.9	1122.8	*1300*	*1350*	Revenues ($mill) [A]	*1475*
	74.4	95.2	101.3	97.2	104.4	110.0	122.8	111.8	113.6	119.8	*130*	*135*	Net Profit ($mill)	*155*
	34.8%	35.1%	33.7%	34.2%	33.0%	36.3%	28.5%	23.4%	24.6%	29.7%	*25.0%*	*25.0%*	Income Tax Rate	*25.0%*
	6.1%	6.2%	5.8%	5.0%	6.1%	5.3%	7.5%	7.2%	7.9%	10.7%	*10.3%*	*10.2%*	Net Profit Margin	*10.5%*
	42.2%	43.6%	41.4%	48.3%	48.4%	47.2%	44.1%	41.0%	40.4%	48.7%	*45.5%*	*47.5%*	Long-Term Debt Ratio	*47.5%*
	57.8%	56.4%	58.6%	51.7%	51.6%	52.8%	55.9%	59.0%	59.6%	51.3%	*54.5%*	*52.5%*	Common Equity Ratio	*52.5%*
	1090.2	1514.9	1509.2	1707.9	1703.3	1681.5	1660.5	1636.9	1671.9	2002.0	*2200*	*2325*	Total Capital ($mill)	*2620*
	1812.3	1849.8	1939.1	2075.3	2141.5	2240.8	2304.4	2437.7	2627.3	3105.1	*3200*	*3300*	Net Plant ($mill)	*3600*
	8.6%	7.8%	8.2%	7.2%	7.8%	8.2%	9.1%	8.4%	8.2%	7.0%	*8.0%*	*8.0%*	Return on Total Cap'l	*8.0%*
	11.8%	11.1%	11.5%	11.0%	11.9%	12.4%	13.2%	11.6%	11.4%	11.7%	*11.0%*	*11.0%*	Return on Shr. Equity	*11.5%*
	11.8%	11.1%	11.5%	11.0%	11.9%	12.4%	13.2%	11.6%	11.4%	11.7%	*11.0%*	*11.0%*	Return on Com Equity	*11.5%*
	3.1%	3.7%	3.6%	2.8%	3.5%	3.9%	4.8%	3.3%	3.1%	3.3%	*3.5%*	*3.5%*	Retained to Com Eq	*3.5%*
	74%	66%	68%	74%	70%	69%	64%	72%	73%	72%	*70%*	*70%*	All Div'ds to Net Prof	*68%*

CAPITAL STRUCTURE as of 4/30/13
Total Debt $1320.0 mill. **Due in 5 Yrs** $175.0 mill.
LT Debt $875.0 mill. **LT Interest** $46.1 mill.
(LT interest earned: 4.1x; total interest coverage: 3.4x)

Pension Assets-10/12 $296.5 mill.
Oblig. $333.7 mill.
Pfd Stock None

Common Stock 75,746,114 shs.
as of 6/4/13
MARKET CAP: $2.5 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2011	2012	4/30/13
Cash Assets	6.8	2.0	14.9
Other	279.2	303.6	291.9
Current Assets	286.0	305.6	306.8
Accts Payable	129.7	142.0	148.1
Debt Due	331.0	365.0	445.0
Other	73.4	85.6	65.2
Current Liab.	534.1	592.6	658.3
Fix. Chg. Cov.	323%	325%	325%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '10-'12 to '16-'18
Revenues	3.0%	-4.5%	.5%
"Cash Flow"	5.0%	3.5%	*2.5%*
Earnings	5.0%	3.5%	*4.0%*
Dividends	5.0%	5.5%	*3.0%*
Book Value	5.0%	3.0%	*4.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) [A] Jan.31	Apr.30	Jul.31	Oct.31	Full Fiscal Year
2010	673.7	472.9	211.6	194.1	1552.3
2011	652.0	392.6	197.3	192.0	1433.9
2012	471.8	308.4	161.2	181.4	1122.8
2013	515.9	399.4	*180*	*204.7*	*1300*
2014	*530*	*410*	*195*	*215*	*1350*

Fiscal Year Ends	EARNINGS PER SHARE [A B] Jan.31	Apr.30	Jul.31	Oct.31	Full Fiscal Year
2010	1.14	.65	d.13	d.13	1.55
2011	1.16	.66	d.12	d.13	1.57
2012	1.05	.70	d.06	d.03	1.66
2013	1.18	.74	*d.09*	*d.08*	*1.75*
2014	*1.20*	*.75*	*d.08*	*d.07*	*1.80*

Cal-endar	QUARTERLY DIVIDENDS PAID [C■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2009	.26	.27	.27	.27	1.07
2010	.27	.28	.28	.28	1.11
2011	.28	.29	.29	.29	1.15
2012	.29	.30	.30	.60	1.49
2013	- -	.31	.31		

BUSINESS: Piedmont Natural Gas Company is primarily a regulated natural gas distributor, serving over 976,253 customers in North Carolina, South Carolina, and Tennessee. 2012 revenue mix: residential (48%), commercial (27%), industrial (9%), other (16%). Principal suppliers: Transco and Tennessee Pipeline. Gas costs: 48.7% of revenues. '12 deprec. rate: 2.9%. Estimated plant age: 10 years. Non-regulated operations: sale of gas-powered heating equipment; natural gas brokering; propane sales. Has about 1,752 employees. Off./dir. own about 1.2% of common stock, BlackRock; 7.5% (1/13 proxy). Chrmn., CEO, & Pres.: Thomas E. Skains. Inc.: NC. Addr.: 4720 Piedmont Row Drive, Charlotte, NC 28210. Telephone: 704-364-3120. Internet: www.piedmontng.com.

Piedmont Natural Gas posted good financial results for the first six months of fiscal 2013 (ends October 31st). In the April quarter (the most recent period for which financial information was available), the company's top line advanced almost 30% on a year-over-year basis. This reflects organic customer growth; new rates in Tennessee; increased volume deliveries in the residential, commercial, and industrial markets; and higher transportation services in the power generation markets. So far this year, PNY has added nearly 6,800 customers. Meanwhile, on the profitability front, cost of goods sold increased almost 10% as a function of revenues. This was partially offset by a decline in operating expenses of roughly 7%. Still, all told, the tighter margins offset a good portion of the top-line gains, and on balance the bottom line inched 5.7% higher, to $0.74 a share. This was a bit higher than we had previously anticipated.

Consequently, we have added a nickel to our 2013 and 2014 earnings estimates. This would equate to a gain of about 5.5% in the current fiscal year. The steady gains should be supported by rising customer accounts as well as capital expansion projects that are in the works to widen PNY's geographic reach and boost system integrity.

Capital projects and rate cases augur well for prospects. The company is slated to spend about $550 million to $600 million this year. This covered the completion of the Sutton project, which went into service back in June. At the same time, Piedmont recently filed a general rate case in North Carolina, something that has not been done since 2008. Over that period, the company has invested more than $1.2 billion in that state and is seeking to adjust its rates to account for those initial outlays.

The overall financial position has improved over the course of this year. The long-term debt load has been trimmed by 10.5% and represents a relatively modest portion of the capital structure.

At this juncture, we think these shares are fairly valued. Dividend growth should be steady, but a fairly high payout ratio will probably limit the rate of advance.

Bryan J. Fong *September 6, 2013*

(A) Fiscal year ends October 31st.
(B) Diluted earnings. Excl. extraordinary item: '00, 8¢. Excl. nonrecurring gains (losses): '97, (2¢); '10, 41¢. Next earnings report due mid Sept. Quarters may not add to total due to change in shares outstanding.
(C) Dividends historically paid early-January, April, July, October. 2013 Q1 dividend paid in Q4 of 2012. ■ Div'd reinvest. plan available; 5% discount. **(D)** Includes deferred charges. In 2012: $597.2 million, $8.27/share.
(E) In millions, adjusted for stock split.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	60
Earnings Predictability	95

SOUTH JERSEY INDS. NYSE-SJI

RECENT PRICE **57.99** | P/E RATIO **18.0** (Trailing: 19.7, Median: 16.0) | RELATIVE P/E RATIO **1.05** | DIV'D YLD **3.2%** | **VALUE LINE**

TIMELINESS 3 Lowered 11/23/12
SAFETY 2 Lowered 1/4/91
TECHNICAL 4 Lowered 8/30/13
BETA .65 (1.00 = Market)

2016-18 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+20%)	8%
Low	55	(-5%)	3%

Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	3	1	0	0	1	0	1	0
Options	0	0	0	0	0	0	0	0	0
to Sell	1	2	1	1	1	6	1	3	1

Institutional Decisions

	4Q2012	1Q2013	2Q2013
to Buy	69	76	76
to Sell	53	56	63
Hld's(000)	18794	19844	20301

	2011	2012	6/30/13
CURRENT POSITION ($MILL.)			
Cash Assets	7.5	4.6	2.3
Other	333.1	390.2	390.7
Current Assets	340.6	394.8	393.0
Accts Payable	153.7	193.3	192.4
Debt Due	323.6	363.9	320.7
Other	110.7	94.6	119.2
Current Liab.	588.0	651.8	632.3
Fix. Chg. Cov.	505%	579%	411%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '10-'12 to '16-'18
Revenues	.5%	-3.5%	*3.5%*
"Cash Flow"	8.5%	7.5%	*6.0%*
Earnings	9.5%	6.5%	*7.5%*
Dividends	7.5%	10.0%	*8.5%*
Book Value	10.0%	7.0%	*6.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2010	329.3	151.6	160.7	283.5	925.1
2011	331.9	160.5	137.6	198.6	828.6
2012	274.8	121.9	112.0	197.6	706.3
2013	255.6	122.6	***130***	***241.8***	***750***
2014	***275***	***145***	***150***	***270***	***840***

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2010	1.49	.24	.10	.87	2.70
2011	1.63	.20	.01	1.05	2.89
2012	1.65	.28	.13	.98	3.03
2013	1.52	.31	***.20***	***1.12***	***3.15***
2014	***1.60***	***.38***	***.22***	***1.15***	***3.35***

Calendar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2009	- -	.298	.298	.628	1.22
2010	- -	.330	.330	.695	1.36
2011	- -	.365	.365	.768	1.50
2012	- -	.403	.403	.845	1.65
2013	- -	.443	.443		

CAPITAL STRUCTURE as of 6/30/13
Total Debt $922.1 mill. **Due in 5 Yrs** $476.4 mill.
LT Debt $601.4 mill. **LT Interest** $12.0 mill.
(Total interest coverage: 4.9x)

Pension Assets-12/12 $150.2 mill.
Oblig. $224.4 mill.
Pfd Stock None

Common Stock 31,984,745 common shs.
as of 8/1/13

MARKET CAP: $1.9 billion (Mid Cap)

LEGENDS
1.00 x Dividends p sh divided by Interest Rate
Relative Price Strength
2-for-1 split 7/05
Options: Yes
Shaded areas indicate recessions

Target Price Range 2016 | 2017 | 2018

% TOT. RETURN 7/13

	THIS STOCK	VL ARITH.* INDEX
1 yr.	19.4	36.4
3 yr.	43.1	63.6
5 yr.	91.6	92.7

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	© VALUE LINE PUB. LLC	16-18
16.18	20.89	17.60	22.43	35.30	20.69	26.34	29.51	31.78	31.76	32.30	32.36	28.37	30.97	27.42	22.31	***23.10***	***25.05***	Revenues per sh	***33.35***
1.60	1.44	1.84	1.95	1.90	2.12	2.24	2.44	2.51	3.51	3.20	3.48	3.72	4.21	4.46	4.69	***4.60***	***4.95***	"Cash Flow" per sh	***6.40***
.86	.64	1.01	1.08	1.15	1.22	1.37	1.58	1.71	2.46	2.09	2.27	2.38	2.70	2.90	3.03	***3.15***	***3.35***	Earnings per sh A	***4.50***
.72	.72	.72	.73	.74	.75	.78	.82	.86	.92	1.01	1.11	1.22	1.36	1.50	1.65	***1.80***	***1.95***	Div'ds Decl'd per sh B■	***2.45***
2.30	3.06	2.19	2.21	2.82	3.47	2.36	2.67	3.21	2.51	1.88	2.08	3.67	5.59	6.39	8.02	***5.55***	***5.95***	Cap'l Spending per sh	***7.80***
6.43	6.23	6.74	7.25	7.81	9.67	11.26	12.41	13.50	15.11	16.25	17.33	18.24	19.08	20.66	23.26	***25.40***	***26.10***	Book Value per sh C	***30.55***
21.54	21.56	22.30	23.00	23.72	24.41	26.46	27.76	28.98	29.33	29.61	29.73	29.80	29.87	30.21	31.65	***32.50***	***33.50***	Common Shs Outst'g D	***36.00***
13.8	21.2	13.3	13.0	13.6	13.5	13.3	14.1	16.6	11.9	17.2	15.9	15.0	16.8	18.4	16.9	***Bold figures are Value Line estimates***		Avg Ann'l P/E Ratio	***14.0***
.80	1.10	.76	.85	.70	.74	.76	.74	.88	.64	.91	.96	1.00	1.07	1.15	1.08			Relative P/E Ratio	***.95***
6.1%	5.3%	5.4%	5.2%	4.7%	4.6%	4.3%	3.7%	3.0%	3.2%	2.8%	3.1%	3.4%	3.0%	2.8%	3.2%			Avg Ann'l Div'd Yield	***3.9%***
						696.8	819.1	921.0	931.4	956.4	962.0	845.4	925.1	828.6	706.3	***750***	***840***	Revenues ($mill)	***1200***
						34.6	43.0	48.6	72.0	61.8	67.7	71.3	81.0	87.0	93.3	***100***	***110***	Net Profit ($mill)	***160***
						40.6%	40.9%	41.5%	41.3%	41.9%	47.7%	23.0%	15.2%	22.4%	10.8%	***15.0%***	***20.0%***	Income Tax Rate	***25.0%***
						5.0%	5.2%	5.3%	7.7%	6.5%	7.0%	8.4%	8.8%	10.5%	13.2%	***13.3%***	***13.1%***	Net Profit Margin	***13.3%***
						50.8%	48.7%	44.9%	44.7%	42.7%	39.2%	36.5%	37.4%	40.5%	45.0%	***43.0%***	***42.5%***	Long-Term Debt Ratio	***42.0%***
						49.0%	51.0%	55.1%	55.3%	57.3%	60.8%	63.5%	62.6%	59.5%	55.0%	***57.0%***	***57.5%***	Common Equity Ratio	***58.0%***
						608.4	675.0	710.3	801.1	839.0	848.0	856.4	910.1	1048.3	1337.6	***1450***	***1525***	Total Capital ($mill)	***1900***
						748.3	799.9	877.3	920.0	948.9	982.6	1073.1	1193.3	1352.4	1578.0	***1700***	***1825***	Net Plant ($mill)	***2100***
						7.3%	7.9%	8.3%	10.1%	8.6%	8.9%	9.0%	9.5%	8.9%	7.4%	***7.5%***	***7.5%***	Return on Total Cap'l	***9.0%***
						11.5%	12.4%	12.4%	16.3%	12.8%	13.1%	13.1%	14.2%	13.9%	12.7%	***12.0%***	***12.5%***	Return on Shr. Equity	***14.5%***
						11.6%	12.5%	12.4%	16.3%	12.8%	13.1%	13.1%	14.2%	13.9%	12.7%	***12.0%***	***12.5%***	Return on Com Equity	***14.5%***
						5.0%	5.9%	6.2%	10.2%	6.7%	6.7%	6.4%	7.1%	6.7%	5.8%	***5.0%***	***5.0%***	Retained to Com Eq	***6.5%***
						57%	52%	50%	37%	48%	49%	51%	50%	52%	55%	***59%***	***59%***	All Div'ds to Net Prof	***55%***

BUSINESS: South Jersey Industries, Inc. is a holding company. Its subsidiary, South Jersey Gas Co., distributes natural gas to 347,725 customers in New Jersey's southern counties, which covers about 2,500 square miles and includes Atlantic City. Gas revenue mix '12: residential, 37%; commercial, 18%; cogeneration and electric generation, 21%; industrial, 24%. Non-utility operations include: South Jersey Energy, South Jersey Resources Group, Marina Energy, and South Jersey Energy Service Plus. Has 700 employees. Off./dir. control 1.0% of common shares; BlackRock Inc., 7.6% (3/13 proxy). Chrmn. & CEO: Edward Graham. Inc.: NJ. Address: 1 South Jersey Plaza, Folsom, NJ 08037. Telephone: 609-561-9000. Internet: www.sjindustries.com.

South Jersey Industries reported modest top-line growth and a solid share-net advance for the second quarter. Utility South Jersey Gas posted a solid bottom-line increase for the period, thanks to customer growth and investments made under accelerated infrastructure programs. The Retail Energy segment benefited from the strong performance of Marina Energy. However, results were less favorable at the Wholesale Energy line, due to difficult market conditions.

South Jersey Gas ought to generate healthy performance going forward. Natural gas remains the fuel of choice within its service territory. The utility should further gain from customer interest in converting from other sources of fuel. Spending on infrastructure projects under the Accelerated Infrastructure Replacement Program will improve service quality and allow the utility to earn a good return on these investments.

Marina Energy will likely continue to drive performance at the Retail Energy business. Marina should further benefit as new retail projects come on line. Such projects are highly profitable, and demand remains strong. Marina is primarily focused on the development of Combined Heat and Power projects, benefiting from their utility-like annuity income streams. It is also selectively adding solar projects to its portfolio.

The Wholesale Energy business may well continue to experience challenges related to lower storage and trading margins on its term provider contracts. However, several actions will likely help improve performance from 2014 onward. These include restructuring storage and transportation contracts, increasing core marketing volumes, and adding fuel-management contracts for large-scale generation facilities.

This issue offers some appeal for conservative, income-oriented investors. South Jersey earns favorable marks for Safety, Price Stability, and Earnings Predictability, and the stock offers a solid dividend yield. Nevertheless, SJI shares are neutrally ranked for year-ahead relative price performance, and total return potential appears somewhat limited from the recent quotation.

Michael Napoli, CFA *September 6, 2013*

(A) Based on GAAP egs. through 2006, economic egs. thereafter. GAAP EPS: '07, $2.10; '08, $2.58; '09, $1.94; '10, $2.22; '11, $2.97; '12, $2.97. Excl. nonrecur. gain (loss): '01, $0.13; '08, $0.31; '09, ($0.44); '10, ($0.47); '11, $0.08; '12, ($0.06). Earnings may not sum due to rounding. Next egs. report due in November. **(B)** Div'ds paid early April, July, Oct., and late Dec. ■ Div. reinvest. plan avail. **(C)** Incl. reg. assets. In 2012: $352.7 mill., $11.14 per shr. **(D)** In mill., adj. for split.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	80
Earnings Predictability	90

SOUTHWEST GAS NYSE-SWX

RECENT PRICE **47.38** | P/E RATIO **14.5** (Trailing: 14.8, Median: 16.0) | RELATIVE P/E RATIO **0.85** | DIV'D YLD **2.8%** | **VALUE LINE**

TIMELINESS 3 Lowered 11/16/12
SAFETY 3 Lowered 1/4/91
TECHNICAL 3 Lowered 8/9/13
BETA .75 (1.00 = Market)

2016-18 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+50%)	*13%*
Low	50	(+5%)	*5%*

Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	1	1	0	0	0	0	0	0
Options	0	0	1	0	0	7	1	0	0
to Sell	0	0	4	1	0	7	1	1	2

Institutional Decisions

	4Q2012	1Q2013	2Q2013
to Buy	78	95	89
to Sell	68	66	74
Hld's(000)	34487	35168	35299

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
High:	25.3	23.6	26.2	28.1	39.4	39.9	33.3	29.5	37.3	43.2	46.1	51.5						
Low:	18.1	19.3	21.5	23.5	26.0	26.5	21.1	17.1	26.3	32.1	39.0	42.0						

LEGENDS
1.50 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded areas indicate recessions

Target Price Range 2016 | 2017 | 2018

% TOT. RETURN 7/13

	THIS STOCK	VL ARITH.* INDEX
1 yr.	14.2	36.4
3 yr.	67.7	63.6
5 yr.	100.6	92.7

26.73	30.17	30.24	32.61	42.98	39.68	35.96	40.14	43.59	48.47	50.28	48.53	42.00	40.18	41.07	41.77	***41.30***	***42.70***
3.85	4.48	4.45	4.57	4.79	5.07	5.11	5.57	5.20	5.97	6.21	5.76	6.16	6.46	6.81	7.73	***8.20***	***8.55***
.77	1.65	1.27	1.21	1.15	1.16	1.13	1.66	1.25	1.98	1.95	1.39	1.94	2.27	2.43	2.86	***3.20***	***3.40***
.82	.82	.82	.82	.82	.82	.82	.82	.82	.82	.86	.90	.95	1.00	1.06	1.18	***1.32***	***1.40***
6.19	6.40	7.41	7.04	8.17	8.50	7.03	8.23	7.49	8.27	7.96	6.79	4.81	4.73	8.29	8.57	***6.40***	***7.30***
14.09	15.67	16.31	16.82	17.27	17.91	18.42	19.18	19.10	21.58	22.98	23.49	24.44	25.62	26.66	28.39	***30.85***	***32.30***
27.39	30.41	30.99	31.71	32.49	33.29	34.23	36.79	39.33	41.77	42.81	44.19	45.09	45.56	45.96	46.15	***47.00***	***48.00***
24.1	13.2	21.1	16.0	19.0	19.9	19.2	14.3	20.6	15.9	17.3	20.3	12.2	14.0	15.7	15.0		
1.39	.69	1.20	1.04	.97	1.09	1.09	.76	1.10	.86	.92	1.22	.81	.89	.98	.95		
4.4%	3.8%	3.1%	4.2%	3.8%	3.6%	3.8%	3.5%	3.2%	2.6%	2.6%	3.2%	4.0%	3.2%	2.8%	2.8%		

Bold figures are Value Line estimates

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Revenues per sh	***50.00***
"Cash Flow" per sh	***9.60***
Earnings per sh A	***4.00***
Div'ds Decl'd per sh B■†	***1.64***
Cap'l Spending per sh	***9.60***
Book Value per sh	***36.00***
Common Shs Outst'g C	***50.00***
Avg Ann'l P/E Ratio	***15.0***
Relative P/E Ratio	***1.00***
Avg Ann'l Div'd Yield	***2.7%***

CAPITAL STRUCTURE as of 6/30/13
Total Debt $1267.3 mill. **Due in 5 Yrs** $204.0 mill.
LT Debt $1256.3 mill. **LT Interest** $60.0 mill.
(Total interest coverage: 3.2x) (48% of Cap'l)
Leases, Uncapitalized Annual rentals $7.0 mill.
Pension Assets-12/12 $645.0 mill.
Oblig. $962.5 mill.
Pfd Stock None

Common Stock 46,336,769 shs.
as of 7/29/13

MARKET CAP: $2.2 billion (Mid Cap)

	1231.0	1477.1	1714.3	2024.7	2152.1	2144.7	1893.8	1830.4	1887.2	1927.8	***1940***	***2050***	Revenues ($mill)	***2500***
	38.5	58.9	48.1	80.5	83.2	61.0	87.5	103.9	112.3	133.3	***150***	***165***	Net Profit ($mill)	***200***
	30.5%	34.8%	29.7%	37.3%	36.5%	40.1%	34.0%	34.7%	36.2%	36.2%	***36.0%***	***35.0%***	Income Tax Rate	***35.0%***
	3.1%	4.0%	2.8%	4.0%	3.9%	2.8%	4.6%	5.7%	6.0%	6.9%	***7.7%***	***8.0%***	Net Profit Margin	***8.0%***
	66.0%	64.2%	63.8%	60.6%	58.1%	55.3%	53.5%	49.1%	43.2%	49.2%	***47.5%***	***47.5%***	Long-Term Debt Ratio	***48.5%***
	34.0%	35.8%	36.2%	39.4%	41.9%	44.7%	46.5%	50.9%	56.8%	50.8%	***52.5%***	***52.5%***	Common Equity Ratio	***51.5%***
	1851.6	1968.6	2076.0	2287.8	2349.7	2323.3	2371.4	2291.7	2155.9	2579	***2750***	***2950***	Total Capital ($mill)	***3500***
	2175.7	2336.0	2489.1	2668.1	2845.3	2983.3	3034.5	3072.4	3218.9	3343.8	***3425***	***3500***	Net Plant ($mill)	***3750***
	4.2%	5.0%	4.3%	5.5%	5.5%	4.5%	5.4%	6.1%	6.4%	6.5%	***6.5%***	***7.0%***	Return on Total Cap'l	***7.0%***
	6.1%	8.3%	6.4%	8.9%	8.5%	5.9%	7.9%	8.9%	9.2%	10.2%	***10.5%***	***10.5%***	Return on Shr. Equity	***11.0%***
	6.1%	8.3%	6.4%	8.9%	8.5%	5.9%	7.9%	8.9%	9.2%	10.2%	***10.5%***	***10.5%***	Return on Com Equity	***11.0%***
	1.7%	4.3%	2.2%	5.2%	4.8%	2.1%	4.1%	5.1%	5.3%	6.0%	***6.0%***	***6.5%***	Retained to Com Eq	***6.5%***
	72%	49%	65%	42%	44%	63%	48%	43%	43%	41%	***41%***	***41%***	All Div'ds to Net Prof	***41%***

CURRENT POSITION ($MILL.)	2011	2012	6/30/13
Cash Assets	21.9	25.5	17.7
Other	439.7	432.9	288.1
Current Assets	461.6	458.4	305.8
Accts Payable	186.8	155.7	105.2
Debt Due	322.6	50.1	11.0
Other	338.2	329.3	258.5
Current Liab.	847.6	535.1	374.7
Fix. Chg. Cov.	359%	399%	453%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '10-'12 to '16-'18
Revenues	1.5%	-1.5%	*3.5%*
"Cash Flow"	3.5%	3.0%	*5.5%*
Earnings	6.0%	6.5%	*8.0%*
Dividends	2.0%	4.0%	*7.0%*
Book Value	4.5%	5.0%	*5.0%*

BUSINESS: Southwest Gas Corporation is a regulated gas distributor serving approximately 1.9 million customers in sections of Arizona, Nevada, and California. Comprised of two business segments: natural gas operations and construction services. 2012 margin mix: residential and small commercial, 85%; large commercial and industrial, 4%; transportation, 11%. Total throughput: 2.1 billion therms. Sold PriMerit Bank, 7/96. Has 6,015 employees. Off. & Dir. own 1.5% of common stock; BlackRock Inc., 8.2%; GAMCO Investors, Inc., 7.5%; T. Rowe Price Associates, Inc., 6.7% (3/13 Proxy). Chairman: Michael J. Melarkey. CEO: Jeffrey W. Shaw. Inc.: CA. Address: 5241 Spring Mountain Road, Las Vegas, Nevada 89193. Telephone: 702-876-7237. Internet: www.swgas.com.

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2010	668.8	385.8	307.7	468.1	1830.4
2011	628.4	388.5	352.6	517.7	1887.2
2012	657.6	409.8	371.8	488.6	1927.8
2013	613.5	411.6	***380***	***534.9***	***1940***
2014	***650***	***430***	***410***	***560***	***2050***

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2010	1.42	d.02	d.11	.98	2.27
2011	1.48	.09	d.34	1.19	2.43
2012	1.70	d.08	d.09	1.34	2.86
2013	1.73	.22	***d.10***	***1.35***	***3.20***
2014	***1.80***	***.25***	***d.05***	***1.40***	***3.40***

Calendar	QUARTERLY DIVIDENDS PAID B■† Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2009	.225	.238	.238	.238	.94
2010	.238	.250	.250	.250	.99
2011	.250	.265	.265	.265	1.05
2012	.265	.295	.295	.295	1.15
2013	.295	.33	.33		

Southwest Gas posted healthy results in its most recent financial period. The top line advanced slightly, helped by relatively modest customer growth and rate relief in California and Nevada. Even more importantly, operating expenses declined somewhat, and the bottom-line picture was much rosier. Share earnings of $0.22 came in well above the $0.08-per-share loss generated in the second quarter of 2012. Construction services subsidiary NPL contributed $8.1 million to earnings in the quarter, a significant turnaround from the prior-year period. Meanwhile, the natural gas segment reported stable operating results, and benefited from lower interest expense thanks to refinancing and early debt redemptions.

Solid performance will probably continue going forward. The company should further benefit from fairly modest customer growth in the coming quarters. NPL will likely experience healthy demand, given the need to replace aging infrastructure. Moreover, efforts to control costs ought to support earnings. Even so, bottom-line comparisons may prove somewhat tougher in the third and fourth quarters. Overall, we anticipate a modest top-line advance and a nice share-net increase for full-year 2013. Growth will probably continue from 2014 onward.

The company has filed a general rate case application with the California Public Utilities Commission. It is requesting an $11.6 million increase. Hearings are expected to occur in the current quarter, with the new rates proposed to be effective in January of 2014.

Investors ought to be mindful of several caveats. The company will likely continue to incur greater operating costs as it expands its reach. Moreover, insufficient, or lagging, rate relief may hurt performance at the core utility business.

This equity is neutrally ranked for year-ahead relative price performance. Southwest Gas earns good marks for Price Stability and Earnings Predictability. However, the dividend yield is below average for a utility. The equity is not a standout for total return potential, either. All things considered, subscribers may find more-attractive choices within the utility industry.

Michael Napoli, CFA *September 6, 2013*

(A) Based on avg. shares outstand. thru. '97, then diluted. Excl. nonrec. gains (losses): '97, 16¢; '02, (10¢); '05, (11¢); '06, 7¢. Earnings may not sum due to rounding. Next egs. report due early November. **(B)** Dividends historically paid early March, June, September, and December. ■† Div'd reinvestment and stock purchase plan avail. **(C)** In millions.

Company's Financial Strength	B+
Stock's Price Stability	100
Price Growth Persistence	95
Earnings Predictability	75

WGL HOLDINGS NYSE-WGL

RECENT PRICE **42.68** | P/E RATIO **16.4** (Trailing: 15.5 / Median: 15.0) | RELATIVE P/E RATIO **0.96** | DIV'D YLD **3.9%** | **VALUE LINE**

TIMELINESS 3 Raised 8/9/13
SAFETY 1 Raised 4/2/93
TECHNICAL 3 Lowered 8/9/13
BETA .65 (1.00 = Market)

2016-18 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(+15%)	*8%*
Low	40	(-5%)	*3%*

Insider Decisions

	O	N	D	J	F	M	A	M	J
to Buy	0	1	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	1	0	0	2	0	0	0	0

Institutional Decisions

	4Q2012	1Q2013	2Q2013
to Buy	84	79	86
to Sell	87	89	87
Hld's(000)	31947	31484	31428

	High:	29.5	28.8	31.4	34.8	33.6	35.9	37.1	35.5	40.0	45.0	45.0	47.0
	Low:	19.3	23.2	26.7	28.8	27.0	29.8	22.4	28.6	31.0	34.7	36.0	38.3

LEGENDS
1.00 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded areas indicate recessions

Target Price Range 2016 | 2017 | 2018

% TOT. RETURN 7/13

	THIS STOCK	VL ARITH.* INDEX
1 yr.	17.1	36.4
3 yr.	42.0	63.6
5 yr.	62.5	92.7

Percent shares traded

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	© VALUE LINE PUB. LLC	16-18
24.16	23.74	20.92	22.19	29.80	32.63	42.45	42.93	44.94	53.96	53.51	52.65	53.98	53.60	53.75	47.09	*48.30*	*49.50*	Revenues per sh [A]	*54.10*
3.02	2.79	2.74	3.20	3.24	2.63	4.00	3.87	3.97	3.84	3.89	4.34	4.44	4.11	4.01	4.60	*4.45*	*4.55*	"Cash Flow" per sh	*4.85*
1.85	1.54	1.47	1.79	1.88	1.14	2.30	1.98	2.13	1.94	2.09	2.44	2.53	2.27	2.25	2.68	*2.55*	*2.65*	Earnings per sh [B]	*2.95*
1.17	1.20	1.22	1.24	1.26	1.27	1.28	1.30	1.32	1.35	1.37	1.41	1.47	1.50	1.55	1.59	*1.66*	*1.71*	Div'ds Decl'd per sh [C]■	*1.83*
3.20	3.62	3.42	2.67	2.68	3.34	2.65	2.33	2.32	3.27	3.33	2.70	2.77	2.57	3.94	5.85	*4.85*	*4.80*	Cap'l Spending per sh	*4.80*
13.48	13.86	14.72	15.31	16.24	15.78	16.25	16.95	17.80	18.86	19.83	20.99	21.89	22.82	23.49	24.75	*25.60*	*26.60*	Book Value per sh [D]	*29.80*
43.70	43.84	46.47	46.47	48.54	48.56	48.63	48.67	48.65	48.89	49.45	49.92	50.14	50.54	51.20	51.50	*51.75*	*52.00*	Common Shs Outst'g [E]	*52.00*
12.7	17.2	17.3	14.6	14.7	23.1	11.1	14.2	14.7	15.5	15.6	13.7	12.6	15.1	17.0	15.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*15.0*
.73	.89	.99	.95	.75	1.26	.63	.75	.78	.84	.83	.82	.84	.96	1.07	.99			Relative P/E Ratio	*1.00*
5.0%	4.5%	4.8%	4.8%	4.6%	4.8%	5.0%	4.6%	4.2%	4.5%	4.2%	4.2%	4.6%	4.4%	4.1%	4.3%			Avg Ann'l Div'd Yield	*4.1%*
2064.2	2089.6	2186.3	2637.9	2646.0	2628.2	2706.9	2708.9	2751.5	2425.3	*2500*	*2575*	Revenues ($mill) [A]	*2815*
112.3	98.0	104.8	96.0	102.9	122.9	128.7	115.0	115.5	138.3	*130*	*140*	Net Profit ($mill)	*155*
38.0%	38.2%	37.4%	39.0%	39.1%	37.1%	39.1%	38.7%	42.4%	39.0%	*39.0%*	*39.0%*	Income Tax Rate	*39.0%*
5.4%	4.7%	4.8%	3.6%	3.9%	4.7%	4.8%	4.2%	4.2%	5.7%	*5.3%*	*5.4%*	Net Profit Margin	*5.5%*
43.8%	40.9%	39.5%	37.8%	37.9%	35.9%	33.3%	33.4%	32.3%	31.0%	*30.5%*	*30.0%*	Long-Term Debt Ratio	*28.0%*
54.3%	57.2%	58.6%	60.4%	60.3%	62.4%	65.0%	65.0%	66.2%	67.5%	*68.0%*	*70.0%*	Common Equity Ratio	*70.5%*
1454.9	1443.6	1478.1	1526.1	1625.4	1679.5	1687.7	1774.4	1818.1	1886.9	*1945*	*2010*	Total Capital ($mill)	*2175*
1874.9	1915.6	1969.7	2067.9	2150.4	2208.3	2269.1	2346.2	2489.9	2667.4	*2855*	*3060*	Net Plant ($mill)	*3765*
9.1%	8.2%	8.5%	7.6%	7.6%	8.5%	8.8%	7.6%	7.5%	8.3%	*8.0%*	*8.0%*	Return on Total Cap'l	*8.0%*
13.7%	11.5%	11.7%	10.1%	10.2%	11.4%	11.4%	9.7%	9.4%	10.9%	*10.0%*	*10.0%*	Return on Shr. Equity	*10.0%*
14.0%	11.7%	12.0%	10.3%	10.4%	11.6%	11.6%	9.9%	9.5%	11.0%	*10.0%*	*10.0%*	Return on Com Equity	*10.0%*
6.2%	4.1%	4.6%	3.2%	3.5%	5.0%	5.0%	3.3%	3.4%	4.3%	*3.5%*	*3.5%*	Retained to Com Eq	*4.0%*
56%	65%	62%	69%	66%	57%	57%	67%	64%	59%	*65%*	*64%*	All Div'ds to Net Prof	*61%*

CAPITAL STRUCTURE as of 6/30/13
Total Debt $753.7 mill. **Due in 5 Yrs** $112.0 mill.
LT Debt $552.7 mill. **LT Interest** $36.4 mill.
(LT interest earned: 6.2x; total interest coverage: 5.7x)
Pension Assets-9/12 $1,108.9 mill.
Oblig. $1,417.2 mill.
Preferred Stock $28.2 mill. **Pfd. Div'd** $1.3 mill.

Common Stock 51,740,676 shs.
as of 7/31/13

MARKET CAP: $2.2 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2011	2012	6/30/13
Cash Assets	4.3	10.3	7.8
Other	720.4	822.5	798.5
Current Assets	724.7	832.8	806.3
Accts Payable	279.4	270.4	297.8
Debt Due	116.5	247.7	201.0
Other	180.8	238.9	235.9
Current Liab.	576.7	757.0	734.7
Fix. Chg. Cov.	535%	535%	535%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '10-'12 to '16-'18
Revenues	6.0%	0.5%	*1.0%*
"Cash Flow"	3.5%	1.5%	*2.5%*
Earnings	4.0%	3.0%	*3.5%*
Dividends	2.0%	3.0%	*3.0%*
Book Value	4.0%	4.5%	*4.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) [A] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2010	727.4	1056	459.7	465.1	2708.9
2011	795.9	1017	490.3	448.1	2751.5
2012	727.7	839.5	438.3	419.8	2425.3
2013	686.7	891.4	478.1	***443.8***	***2500***
2014	***705***	***910***	***495***	***465***	***2575***

Fiscal Year Ends	EARNINGS PER SHARE [A] [B] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2010	1.01	1.64	d.07	d.29	2.27
2011	1.02	1.53	d.03	d.27	2.25
2012	1.13	1.58	.08	d.11	2.68
2013	1.14	1.75	d.03	***d.31***	***2.55***
2014	***1.18***	***1.77***	***d.02***	***d.28***	***2.65***

Calendar	QUARTERLY DIVIDENDS PAID [C] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2009	.36	.37	.37	.37	1.47
2010	.37	.378	.378	.378	1.50
2011	.378	.39	.39	.39	1.55
2012	.39	.40	.40	.40	1.59
2013	.40	.42	.42		

BUSINESS: WGL Holdings, Inc. is the parent of Washington Gas Light, a natural gas distributor in Washington, D.C. and adjacent areas of VA and MD to resident'l and comm'l users (1,094,109 meters). Hampshire Gas, a federally regulated sub., operates an underground gas-storage facility in WV. Non-regulated subs.: Wash. Gas Energy Svcs. sells and delivers natural gas and provides energy related products in the D.C. metro area; Wash. Gas Energy Sys. designs/installs comm'l heating, ventilating, and air cond. systems. State Street Global owns 9.3% of common stock; Off./dir. less than 1% (1/13 proxy). Chrmn. & CEO: Terry D. McCallister. Inc.: D.C. and VA. Addr.: 101 Const. Ave., N.W., Washington, D.C. 20080. Tel.: 202-624-6410. Internet: www.wglholdings.com.

WGL Holdings posted mixed financial results for the June period. Indeed, the top line advanced roughly 9% when compared to the prior-year period. This was supported by increases in utility and nonutility volumes of 10.3% and 8.3%, respectively. The regulated utility division benefited from customer growth and recently approved rate cases. Meanwhile, the retail-energy marketing, commercial energy systems, and wholesale energy solution segments all logged lower contributions to the bottom line. On balance, these factors offset the positive gains at the regulated utility unit. Combined, WGL's earnings fell into negative territory, to a deficit of $0.03 a share. Nonetheless, this was relatively in line with our previous expectation of negative $0.04 for the third quarter.

Consequently, we have left our fiscal 2013 (ends September 30th) annual earnings estimate unchanged at $2.55 a share. This represents a share-net decline of almost 5%. This ought to be supported by good gains at all of WGL's operating segments, which have been logging higher year-over-year contributions to the top and bottom lines, save for the most recent quarter, which is always a cyclically slow period. The main drag on this year's performance is the wholesale energy solutions division, which reflects compressed storage spreads and higher operation and maintenance expenses due to new storage arrangements and consulting fees related to the investment in the Constitution Pipeline.

The company's overall financial position is in good shape at the moment. Despite its cash reserves declining almost 25% during the first nine months of this year, WGL still has almost $8 million in cash on hand. At the same time, the long-term debt burden declined 6%, and now represents a modest 29% of the capital structure.

These high-quality shares may appeal to income-seeking investors. They offer a slightly higher dividend yield than the industry as a whole. However, the stock has almost doubled in the past five years and, at this point, WGL is trading inside our Target Price Range, thus limiting its upside potential for the pull to late-decade.

Bryan J. Fong *September 6, 2013*

(A) Fiscal years end Sept. 30th.
(B) Based on diluted shares. Excludes nonrecurring losses: '01, (13¢); '02, (34¢); '07, (4¢); '08, (14¢) discontinued operations: '06, (15¢). Qtly egs. may not sum to total, due to change in shares outstanding. Next earnings report due late Oct. **(C)** Dividends historically paid early February, May, August, and November. ■ Dividend reinvestment plan available. **(D)** Includes deferred charges and intangibles. '12: $610.8 million, $11.93/sh. **(E)** In millions, adjusted for stock split.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	60
Earnings Predictability	95

Missouri Gas Energy
Summary of Risk Premium Models for the
Proxy Group of Eight Gas Distribution Companies

	Proxy Group of Eight Gas Distribution Companies
Predictive Risk Premium Model ™ (PRPM™) (1)	12.08 %
Risk Premium Using an Adjusted Market Approach (2)	10.15 %
Average	11.60 %

Notes:
(1) From page 2 of this Schedule.
(2) From page 3 of this Schedule.

Missouri Gas Energy
Derivation of Common Equity Cost Rate
Using the Predictive Risk Premium Model ™ (PRPM ™)
Proxy Group of Eight Gas Distribution Companies (1)

	AGL Resources Inc.	Atmos Energy Corporation	New Jersey Resources Corp.	Northwest Natural Gas Co.	Piedmont Natural Gas Co., Inc.	South Jersey Industries, Inc.	Southwest Gas Corporation	WGL Holdings, Inc.
GARCH Coefficient	2.833253502	1.756719917	1.890450178	1.481107208	2.260801915	1.956822416	1.286966316	1.090580269
Average Variance (2)	0.25%	0.36%	0.41%	0.33%	0.34%	0.31%	0.46%	0.41%
PRPM™ Derived Risk Premium (2)	8.97%	7.92%	9.65%	6.02%	9.71%	7.62%	7.29%	5.44%
Risk-Free Rate (3)	4.31%	4.31%	4.31%	4.31%	4.31%	4.31%	4.31%	4.31%
Indicated Cost of Common Equity	13.28%	12.23%	13.96%	10.33%	14.02%	11.93%	11.60%	9.75%
							Average	12.14%
							Median	12.08%

Notes:
(1) PRPM^{TM} run from first available trading month throuhg August 2013.
(2) Based upon data from CRSP(R) Data © 2012, Center For Research in Security Prices (CRSP(R)), The University of Chicago Booth School of Business.
(3) From note 3 on page 2 of Schedule PMA-7.

Missouri Gas Energy
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Eight Gas Distribution Companies
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	5.08 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A Rated Public Utility Bonds	0.27 (2)
3.	Adjusted Prospective Yield on A Rated Public Utility Bonds	5.35 %
6.	Equity Risk Premium (3)	4.80
7.	Risk Premium Derived Common Equity Cost Rate	10.15 %

Notes:
(1) Consensus forecast Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 9 and 10 of this Schedule).
(2) The average yield spread of A rated public utility bonds over Aaa rated corporate bonds of 0.27% from page 4 of this Schedule.
(3) From page 7 of this Schedule.

Missouri Gas Energy
Comparison of Bond Ratings, Business Risk and Financial Risk Profiles for the
Proxy Group of Eight Gas Distribution Companies

	Moody's		Standard & Poor's							
	Bond Rating		Bond Rating							
	August 2013		August 2013							
Proxy Group of Eight Gas Distribution Companies	Bond Rating	Numerical Weighting (1)	Bond Rating	Numerical Weighting (1)	Credit Rating	Numerical Weighting (1)	Business Risk Profile (2)	Numerical Weighting (1)	Financial Risk Profile (2)	Numerical Weighting (1)
AGL Resources Inc. (3)	A2	6.0	A-/BBB+	7.5	BBB+	8.0	Excellent	1.0	Significant	4.0
Atmos Energy Corporation	Baa1	8.0	BBB+	8.0	BBB+	8.0	Excellent	1.0	Significant	4.0
Delta Natural Gas Company	NR	- -	NR	- -	NR	- -	NR	- -	NR	- -
New Jersey Resources Corp. (4)	Aa3	4.0	A+	5.0	A	6.0	Excellent	1.0	Intermediate	3.0
Northwest Natural Gas Co.	A1	5.0	AA-	4.0	A+	8.0	Excellent	1.0	Intermediate	3.0
Piedmont Natural Gas Co., Inc.	A3	7.0	A	6.0	A	6.0	Excellent	1.0	Intermediate	3.0
South Jersey Industries, Inc. (5)	A1	5.0	A	6.0	BBB+	8.0	Excellent	1.0	Significant	4.0
Southwest Gas Corporation	Baa1	8.0	A-	7.0	A-	7.0	Excellent	1.0	Significant	4.0
WGL Holdings, Inc. (6)	A2	6.0	A+	5.0	A+	5.0	Excellent	1.0	Intermediate	3.0
Average	A2	6.1	A	6.1	A-	7.0	Excellent	1.0	Intermediate / Significant	3.5
The Laclede Group (7)	A2	6.0	A	6.0	A-	7.0	Excellent	1.0	Significant	4.0

Notes:
(1) From page 5 of this Schedule.
(2) From Standard & Poor's Issuer Ranking: U.S. Regulated Gas and Water Utilities, Strongest to Weakest, July 30, 2013.
(3) Ratings, business risk and financial risk profiles are those of Nicor Gas and Atlanta Gas Light Company.
(4) Ratings, business risk and financial risk profiles are those of New Jersey Natural Gas Company.
(5) Ratings, business risk and financial risk profiles are those of South Jersey Gas Company.
(6) Ratings, business risk and financial risk profiles are those of Washington Gas Light Company.
(7) Ratings, business risk and financial risk profiles are those of Laclede Gas Company.

Source Information: Moody's Investors Service
Standard & Poor's Global Utilities Rating Service

Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings
and Standard & Poor's Business and Financial Risk Profiles

Moody's Bond Rating	Numerical Bond Weighting	Standard & Poor's Bond Rating
Aaa	1	AAA
Aa1	2	AA+
Aa2	3	AA
Aa3	4	AA-
A1	5	A+
A2	6	A
A3	7	A-
Baa1	8	BBB+
Baa2	9	BBB
Baa3	10	BBB-
Ba1	11	BB+
Ba2	12	BB
Ba3	13	BB-

Standard & Poor's

Business Risk Profile	Numerical Weighting	Financial Risk Profile	Numerical Weighting
Excellent	1	Minimal	1
Strong	2	Modest	2
Satisfactory	3	Intermediate	3
Fair	4	Significant	4
Weak	5	Aggressive	5
Vulnerable	6	Highly Leveraged	6

Moody's
Comparison of Interest Rate Trends
for the Three Months Ending August 2013 (1)

Months	Corporate Bonds Aaa Rated	Public Utility Bonds Aa Rated	Public Utility Bonds A Rated	Public Utility Bonds Baa Rated	Spread - Corporate v. Public Utility Bonds: Aa (Pub. Util.) over Aaa (Corp.)	Spread - Corporate v. Public Utility Bonds: A (Pub. Util.) over Aaa (Corp.)	Spread - Corporate v. Public Utility Bonds: Baa (Pub. Util.) over Aaa (Corp.)	Spread - Public Utility Bonds: A over Aa	Spread - Public Utility Bonds: Baa over A
August-13	4.54 %	4.53 %	4.73 %	5.28 %					
July-13	4.34	4.44	4.68	5.21					
June-13	4.27	4.27	4.53	5.08					
Average of Last 3 Months	4.38 %	4.41 %	4.65 %	5.19 %	0.03 %	0.27 %	0.81 %	0.24 %	0.54 %

Notes: (1) All yields are distributed yields.

Source of Information: Mergent Bond Record, September 2013, Vol. 80, No. 9.

Missouri Gas Energy
Judgment of Equity Risk Premium for
the Proxy Group of Eight Gas Distribution Companies

Line No.		Proxy Group of Eight Gas Distribution Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1)	4.89 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	4.70
3.	Average equity risk premium	4.80 %

Notes: (1) From page 8 of this Schedule.
(2) From page 11 of this Schedule.

Missouri Gas Energy
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
the Proxy Group of Eight Gas Distribution Companies

Line No.		Proxy Group of Eight Gas Distribution Companies
	Based on SBBI Valuation Yearbook Data:	
1.	Ibbotson Equity Risk Premium (1)	5.60 %
2.	Ibbotson Equity Risk Premium based on PRPM™ (2)	9.20
	Based on Value Line Summary and Index:	
3.	Equity Risk Premium Based on Value Line Summary and Index (3)	6.16
4.	Conclusion of Equity Risk Premium (4)	6.99 %
5.	Adjusted Value Line Beta (5)	0.70
6	Beta Adjusted Equity Risk Premium	4.89 %

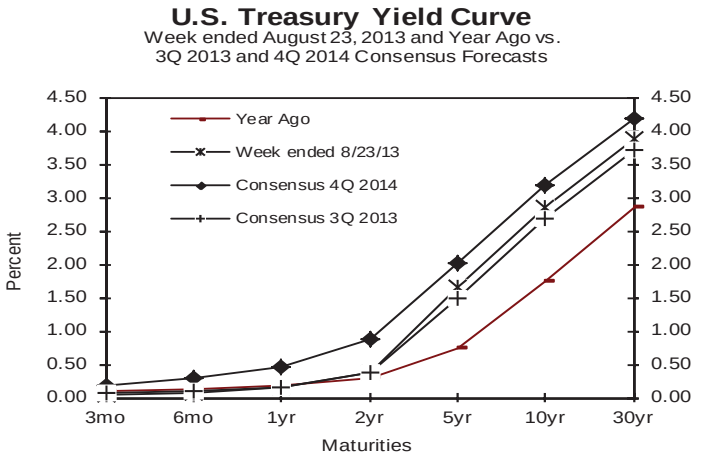
Notes:
(1) Based on the arithmetic mean historical monthly returns on large company common stocks from Ibbotson® SBBI® 2013 Valuation Yearbook - Market Results for Stocks, Bonds, Bills, and Inflation minus the arithmetic mean monthly yield of Moody's Aaa and Aa corporate bonds from 1926 - 2012. (11.83% - 6.23% = 5.60%).
(2) The Predictive Risk Premium Model (PRPM™) is discussed in Ms. Ahern's accompanying direct testimony. The Ibbotson equity risk premium based on the PRPM™ is derived by applying the PRPM™ to the monthly risk premiums between Ibbotson large company common stock monthly returns minus the average Aaa and Aa corporate monthly bond yields, from January 1928 through June 2013.
(3) The equity risk premium based on the Value Line Summary and Index is derived from taking the projected 3-5 year total annual market return of 11.24% (described fully in note 1 of page 2 of Schedule PMA-7) and subtracting the average consensus forecast of Aaa corporate bonds of 4.75% (Shown on page 3 of this Schedule). (11.24% - 5.08% = 6.16%)
(4) Average of Lines 1, 2, & 3.
(5) Median beta derived from page 1 of Schedule PMA-7..

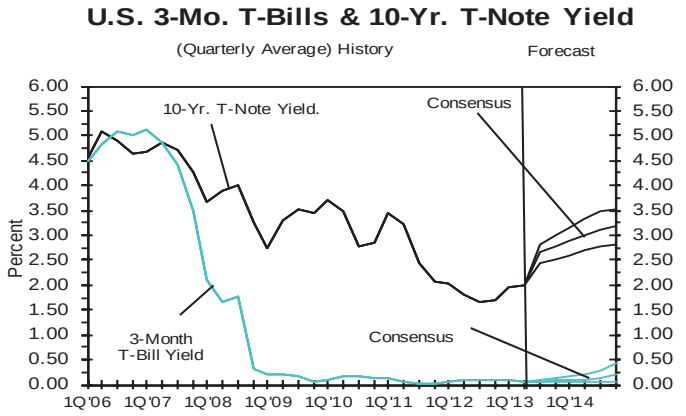
Sources of Information:
Ibbotson® SBBI® 2013 Valuation Yearbook - Market Results for Stocks, Bonds, Bills, and Inflation, Morningstar, Inc., 2013 Chicago, IL.
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, September 1, 2013

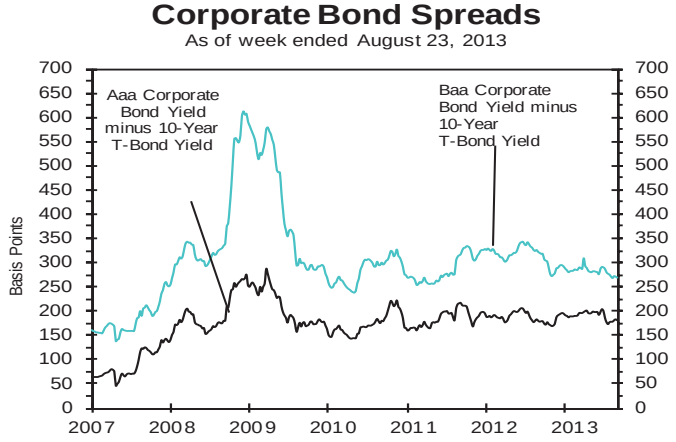
Consensus Forecasts Of U.S. Interest Rates And Key Assumptions[1]

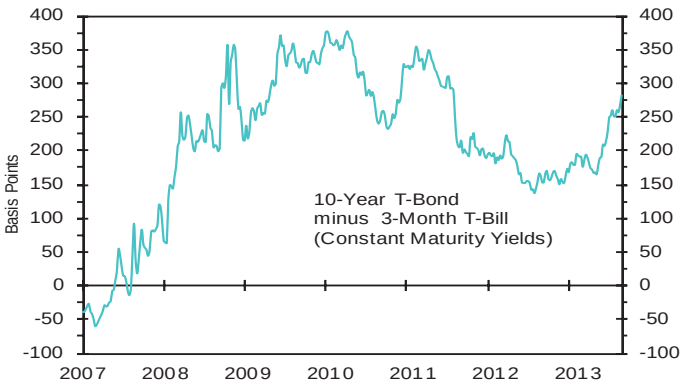
Interest Rates	Aug. 23	Aug. 16	Aug. 9	Aug. 2	July	June	May	Latest Q 2Q 2013	3Q 2013	4Q 2013	1Q 2014	2Q 2014	3Q 2014	4Q 2014
	History: Average For Week Ending				Average For Month				Consensus Forecasts-Quarterly Avg.					
Federal Funds Rate	0.09	0.08	0.09	0.09	0.09	0.09	0.11	0.12	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**
LIBOR, 3-mo.	0.26	0.26	0.27	0.27	0.27	0.27	0.28	0.28	**0.3**	**0.3**	**0.3**	**0.3**	**0.4**	**0.4**
Commercial Paper, 1-mo.	0.05	0.06	0.05	0.05	0.06	0.07	0.07	0.07	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**
Treasury bill, 3-mo.	0.04	0.05	0.05	0.04	0.04	0.05	0.04	0.05	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**
Treasury bill, 6-mo.	0.07	0.08	0.08	0.07	0.07	0.09	0.08	0.09	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.3**
Treasury bill, 1 yr.	0.14	0.12	0.12	0.11	0.12	0.14	0.12	0.13	**0.2**	**0.2**	**0.2**	**0.3**	**0.4**	**0.5**
Treasury note, 2 yr.	0.38	0.34	0.32	0.32	0.34	0.33	0.25	0.27	**0.4**	**0.4**	**0.5**	**0.6**	**0.8**	**0.9**
Treasury note, 5 yr.	1.64	1.50	1.38	1.40	1.40	1.20	0.84	0.92	**1.5**	**1.6**	**1.7**	**1.8**	**1.9**	**2.0**
Treasury note, 10 yr.	2.86	2.73	2.62	2.64	2.58	2.30	1.93	2.00	**2.7**	**2.8**	**2.9**	**3.0**	**3.1**	**3.2**
Treasury note, 30 yr.	3.87	3.77	3.68	3.69	3.61	3.40	3.11	3.15	**3.7**	**3.8**	**3.9**	**4.0**	**4.1**	**4.2**
Corporate Aaa bond	4.67	4.56	4.43	4.42	4.34	4.27	3.89	3.96	**4.5**	**4.6**	**4.7**	**4.8**	**4.9**	**5.0**
Corporate Baa bond	5.55	5.44	5.34	5.32	5.32	5.19	4.73	4.84	**5.4**	**5.5**	**5.6**	**5.7**	**5.7**	**5.8**
State & Local bonds	4.91	4.80	4.73	4.70	4.56	4.27	3.72	3.97	**4.6**	**4.6**	**4.7**	**4.8**	**4.8**	**4.9**
Home mortgage rate	4.58	4.40	4.40	4.39	4.37	4.07	3.54	3.69	**4.4**	**4.5**	**4.6**	**4.7**	**4.8**	**4.9**
	History								Consensus Forecasts-Quarterly					
Key Assumptions	3Q 2011	4Q 2011	1Q 2012	2Q 2012	3Q 2012	4Q 2012	1Q 2013	2Q 2013	3Q 2013	4Q 2013	1Q 2014	2Q 2014	3Q 2014	4Q 2014
Major Currency Index	69.9	72.4	72.9	73.9	74.0	73.2	74.7	76.4	**76.7**	**77.1**	**77.5**	**77.8**	**78.0**	**78.0**
Real GDP	1.4	4.9	3.7	1.2	2.8	0.1	1.1	2.5	**2.3**	**2.6**	**2.7**	**2.8**	**2.9**	**2.9**
GDP Price Index	2.5	0.5	2.0	1.8	2.3	1.1	1.3	0.8	**1.8**	**1.7**	**1.9**	**1.9**	**2.0**	**2.0**
Consumer Price Index	2.9	1.4	2.3	1.0	2.1	2.2	1.4	0.0	**2.5**	**1.9**	**2.0**	**2.0**	**2.2**	**2.2**

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Interest rate definitions are the same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for the Fed's Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).









Long-Range Forecasts:

The table below contains results of our semi-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are estimates for the years 2015 through 2019 and averages for the five-year periods 2015-2019 and 2020-2024. Apply these projections cautiously. Few economic, demographic and political forces can be evaluated accurately over such long time spans.

		----------Average For The Year----------					Five-Year Averages	
Interest Rates		**2015**	**2016**	**2017**	**2018**	**2019**	**2015-2019**	**2020-2024**
1. Federal Funds Rate	**CONSENSUS**	**0.8**	**2.0**	**3.1**	**3.6**	**3.9**	**2.7**	**3.8**
	Top 10 Average	1.6	3.4	4.3	4.4	4.6	3.7	4.6
	Bottom 10 Average	0.2	0.8	1.7	2.5	3.1	1.7	2.9
2. Prime Rate	**CONSENSUS**	**3.9**	**5.1**	**6.1**	**6.6**	**6.9**	**5.7**	**6.8**
	Top 10 Average	4.7	6.5	7.3	7.6	7.6	6.7	7.5
	Bottom 10 Average	3.3	3.9	4.8	5.5	6.1	4.7	6.0
3. LIBOR, 3-Mo.	**CONSENSUS**	**1.1**	**2.4**	**3.3**	**3.9**	**4.1**	**3.0**	**4.1**
	Top 10 Average	2.0	3.8	4.6	4.8	4.9	4.0	4.9
	Bottom 10 Average	0.5	1.1	2.0	2.8	3.3	1.9	3.0
4. Commercial Paper, 1-Mo.	**CONSENSUS**	**1.0**	**2.3**	**3.2**	**3.7**	**3.9**	**2.8**	**3.7**
	Top 10 Average	1.7	3.4	4.3	4.5	4.6	3.7	4.5
	Bottom 10 Average	0.5	1.2	2.1	2.8	3.1	1.9	2.8
5. Treasury Bill Yield, 3-Mo.	**CONSENSUS**	**0.9**	**2.0**	**3.1**	**3.5**	**3.8**	**2.7**	**3.7**
	Top 10 Average	1.7	3.4	4.3	4.5	4.6	3.7	4.5
	Bottom 10 Average	0.2	0.8	1.7	2.4	2.9	1.6	2.7
6. Treasury Bill Yield, 6-Mo.	**CONSENSUS**	**1.0**	**2.2**	**3.2**	**3.7**	**3.9**	**2.8**	**3.9**
	Top 10 Average	1.8	3.5	4.4	4.7	4.7	3.8	4.6
	Bottom 10 Average	0.3	1.0	1.8	2.6	3.0	1.7	2.8
7. Treasury Bill Yield, 1-Yr.	**CONSENSUS**	**1.2**	**2.4**	**3.3**	**3.8**	**4.0**	**2.9**	**4.0**
	Top 10 Average	2.1	3.6	4.5	4.8	4.9	4.0	4.8
	Bottom 10 Average	0.4	1.1	1.9	2.7	3.1	1.9	3.0
8. Treasury Note Yield, 2-Yr.	**CONSENSUS**	**1.6**	**2.7**	**3.6**	**4.1**	**4.2**	**3.2**	**4.2**
	Top 10 Average	2.4	3.8	4.7	5.0	5.1	4.2	5.0
	Bottom 10 Average	0.8	1.6	2.4	3.0	3.3	2.2	3.1
10. Treasury Note Yield, 5-Yr.	**CONSENSUS**	**2.3**	**3.3**	**4.1**	**4.4**	**4.6**	**3.8**	**4.5**
	Top 10 Average	3.2	4.4	5.1	5.3	5.5	4.7	5.3
	Bottom 10 Average	1.5	2.3	3.1	3.4	3.6	2.8	3.5
11. Treasury Note Yield, 10-Yr.	**CONSENSUS**	**3.2**	**4.1**	**4.6**	**4.9**	**5.0**	**4.4**	**4.9**
	Top 10 Average	4.0	5.0	5.5	5.8	5.9	5.3	5.7
	Bottom 10 Average	2.5	3.2	3.6	3.8	4.0	3.4	4.0
12. Treasury Bond Yield, 30-Yr.	**CONSENSUS**	**4.2**	**4.8**	**5.4**	**5.6**	**5.7**	**5.2**	**5.6**
	Top 10 Average	5.0	5.9	6.4	6.6	6.8	6.1	6.5
	Bottom 10 Average	3.5	3.9	4.4	4.6	4.7	4.2	4.7
13. Corporate Aaa Bond Yield	**CONSENSUS**	**4.9**	**5.5**	**6.0**	**6.2**	**6.3**	**5.8**	**6.3**
	Top 10 Average	5.6	6.5	7.0	7.1	7.3	6.7	7.1
	Bottom 10 Average	4.1	4.5	5.1	5.3	5.4	4.9	5.4
13. Corporate Baa Bond Yield	**CONSENSUS**	**5.8**	**6.6**	**7.1**	**7.4**	**7.5**	**6.9**	**7.4**
	Top 10 Average	6.6	7.6	8.0	8.3	8.5	7.8	8.3
	Bottom 10 Average	5.1	5.6	6.2	6.4	6.5	5.9	6.5
14. State & Local Bonds Yield	**CONSENSUS**	**4.4**	**5.1**	**5.5**	**5.6**	**5.7**	**5.2**	**5.6**
	Top 10 Average	5.2	6.1	6.5	6.5	6.6	6.2	6.4
	Bottom 10 Average	3.8	4.1	4.6	4.7	4.9	4.4	4.8
15. Home Mortgage Rate	**CONSENSUS**	**4.8**	**5.6**	**6.2**	**6.4**	**6.5**	**5.9**	**6.5**
	Top 10 Average	5.7	6.6	7.1	7.4	7.4	6.8	7.3
	Bottom 10 Average	4.1	4.6	5.1	5.4	5.5	5.0	5.5
A. FRB - Major Currency Index	**CONSENSUS**	**78.6**	**79.1**	**79.3**	**79.6**	**79.6**	**79.2**	**80.0**
	Top 10 Average	82.7	83.7	84.7	85.2	85.3	84.3	85.9
	Bottom 10 Average	74.4	74.2	73.9	73.9	74.1	74.1	74.2
		----------Year-Over-Year, % Change----------					Five-Year Averages	
		2015	**2016**	**2017**	**2018**	**2019**	**2015-2019**	**2020-2024**
B. Real GDP	**CONSENSUS**	**3.0**	**2.9**	**2.8**	**2.7**	**2.6**	**2.8**	**2.5**
	Top 10 Average	3.5	3.3	3.2	3.1	3.1	3.2	2.9
	Bottom 10 Average	2.6	2.6	2.4	2.3	2.3	2.4	2.2
C. GDP Chained Price Index	**CONSENSUS**	**2.1**	**2.1**	**2.2**	**2.2**	**2.2**	**2.1**	**2.2**
	Top 10 Average	2.4	2.5	2.6	2.6	2.6	2.5	2.5
	Bottom 10 Average	1.6	1.7	1.8	1.8	1.8	1.7	1.9
D. Consumer Price Index	**CONSENSUS**	**2.3**	**2.4**	**2.4**	**2.4**	**2.4**	**2.4**	**2.4**
	Top 10 Average	2.7	2.8	2.9	2.9	2.9	2.8	2.8
	Bottom 10 Average	1.8	1.9	1.8	1.9	2.0	1.9	2.0

Missouri Gas Energy
Derivation of Mean Equity Risk Premium Based on a Study
Using Holding Period Returns of Public Utilities

Line No.		Over A Rated Moody's Public Utility Bonds - AUS Consultants Study (1)
1.	Arithmetic Mean Holding Period Returns on the Standard & Poor's Utility Index 1926-2012 (2):	10.69 %
2.	Arithmetic Mean Yield on Moody's A Rated Public Utility Yields 1926-2012	(6.53)
3.	Historical Equity Risk Premium	4.16 %
4.	Forecasted Equity Risk Premium Based on PRPM™ (3)	5.24
5.	Average of Historical and PRPM™ Equity Risk Premium	4.70 %

Notes:
(1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2012, (AUS Consultants, 2013).
(2) Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.
(3) The Predictive Risk Premium Model (PRPM™) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A rated public utility bonds from 1928 - 2013.

Missouri Gas Energy
Indicated Common Equity Cost Rate Through Use
of the Traditional Capital Asset Pricing Model (CAPM) and Empirical Capital Asset Pricing Model (ECAPM)

	1	2	3	4	5	6
Proxy Group of Eight Gas Distribution Companies	Value Line Adjusted Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate (3)	ECAPM Cost Rate (4)	Indicated Common Equity Cost Rate (5)
AGL Resources Inc.	0.75	7.93 %	4.31 %	10.26 %	10.75 %	
Atmos Energy Corporation	0.70	7.93	4.31	9.86	10.46	
New Jersey Resources Corp.	0.70	7.93	4.31	9.86	10.46	
Northwest Natural Gas Co.	0.60	7.93	4.31	9.07	9.86	
Piedmont Natural Gas Co., Inc.	0.70	7.93	4.31	9.86	10.46	
South Jersey Industries, Inc.	0.65	7.93	4.31	9.46	10.16	
Southwest Gas Corporation	0.75	7.93	4.31	10.26	10.75	
WGL Holdings, Inc.	0.65	7.93	4.31	9.46	10.16	
Average	0.69			9.76 %	10.38 %	10.07 %
Median	0.70			9.86 %	10.46 %	10.16 %

See page 2 for notes.

Missouri Gas Energy
Development of the Market-Required Rate of Return on Common Equity Using
the Capital Asset Pricing Model for
the Proxy Group of Eight Gas Distribution Companies
Adjusted to Reflect a Forecasted Risk-Free Rate and Market Return

Notes:

(1) For reasons explained in Ms. Ahern's accompanying direct testimony, from the 13 weeks ending September 13, 2013, Value Line Summary & Index, a forecasted 3-5 year total annual market return of 11.24% can be derived by averaging the 13 weeks ending September 13, 2013 forecasted total 3-5 year total appreciation, converting it into an annual market appreciation and adding the Value Line average forecasted annual dividend yield.

The 3-5 year average total market appreciation of 42% produces a four-year average annual return of 9.16% ($(1.42^{0.25}) - 1$). When the average annual forecasted dividend yield of 2.08% is added, a total average market return of 11.24% (2.08% + 9.16%) is derived.

The 13 weeks ending September 13, 2013 forecasted total market return of 11.24% minus the risk-free rate of 4.31% (developed in Note 2) is 6.93% (11.24% - 4.31%).

The Predictive Risk Premium Model (PRPM™) market equity risk premium of 10.30% is derived by applying the PRPM™ to the monthly equity risk premium of large company common stocks over the income return on long-term U.S. Government Securities from January 1926 through June 2013.

The Morningstar, Inc. (Ibbotson Associates) calculated arithmetic mean monthly market equity risk premium of 6.55% for the period 1926-2012 results from a total market return of 11.83%% less the arithmetic mean income return on long-term U.S. Government Securities of 5.28% (11.83% - 5.28% = 6.55%).

These three expectational risk premiums are then averaged, resulting in an 7.93% market equity risk premium, which is then multiplied by the beta in column 1 of page 1 of this Schedule. ((6.93% + 10.30% + 6.55%)/3).

(2) For reasons explained in Ms. Ahern's direct testimony, the risk-free rate that Ms. Ahern relies upon for her CAPM analysis is the average forecast of 30-year Treasury Note yields per the consensus of nearly 50 economists reported in the Blue Chip Financial Forecasts dated June 1 and September 1, 2013 (see pages 9 & 10 of Schedule PMA-6).The estimates are detailed below:

	30-Year Treasury Note Yield
Third Quarter 2013	3.70%
Fourth Quarter 2013	3.80%
First Quarter 2014	3.90%
Second Quarter 2014	4.00%
Third Quarter 2014	4.10%
Fourth Quarter 2014	4.20%
2015 – 2019	5.20%
2020 – 2024	5.60%
Average	4.31%

(3) The traditional Capital Asset Pricing Model (CAPM) is applied using the following formula:

$R_S = R_F + \beta (R_M - R_F)$

Whise R_S = Return rate of common stock
R_F = Risk Free Rate
β = Value Line Adjusted Beta
R_M = Return on the market as a whole

(4) The empirical CAPM is applied using the following formula:

$R_S = R_F + .25 (R_M - R_F) + .75 \beta (R_M - R_F)$

Whise R_S = Return rate of common stock
R_F = Risk-Free Rate
β = Value Line Adjusted Beta
R_M = Return on the market as a whole

Source of Information:
Value Line Summary & Index
Blue Chip Financial Forecasts, June 1 & September 1, 2013
Value Line Investment Survey, (Standard Edition)
2013 Ibbotson® SBBI® Valuation Yearbook, Morningstar, Inc., 2013, Chicago, IL

Missouri Gas Energy
Summary of Cost of Equity Models Applied to the
Proxy Group of Non-Price-Regulated Companies
Comparable in Total Risk to the
Proxy Group of Eight Gas Distribution Companies

Principal Methods		Nine Non-Price-Regulated Companies	
Discounted Cash Flow Model (1)		11.21	%
Risk Premium Model (2)		9.92	%
Capital Asset Pricing Model (3)		9.81	%
	Average	10.31	%

Notes:
(1) From page 5 of this Schedule.
(2) From page 6 of this Schedule.
(3) From page 9 of this Schedule.

Missouri Gas Energy
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

Proxy Group of Eight Gas Distribution Companies	Value Line Adjusted Beta	Unadjusted Beta	Residual Standard Error of the Regression	Standard Deviation of Beta
AGL Resources Inc.	0.75	0.56	2.1619	0.0427
Atmos Energy Corporation	0.70	0.48	2.2584	0.0446
New Jersey Resources Corp.	0.65	0.45	2.1927	0.0433
Northwest Natural Gas Co.	0.60	0.32	2.2337	0.0441
Piedmont Natural Gas Co., Inc.	0.65	0.46	2.3400	0.0462
South Jersey Industries, Inc.	0.65	0.43	2.1882	0.0432
Southwest Gas Corporation	0.75	0.59	2.1715	0.0428
WGL Holdings, Inc.	0.65	0.40	2.3373	0.0461
Average	0.68	0.46	2.2355	0.0441
Beta Range (+/- 2 std. Devs. of Beta)	0.37	0.55		
2 std. Devs. of Beta	0.09			
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.0391	2.4319		
Std. dev. of the Res. Std. Err.	0.0982			
2 std. devs. of the Res. Std. Err.	0.1964			

Missouri Gas Energy
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Eight Gas Distribution Companies

Proxy Group of Nine Non-Price-Regulated Companies	VL Adjusted Beta	Unadjusted Beta	Residual Standard Error of the Regression	Standard Deviation of Beta
Becton, Dickinson	0.65	0.46	2.1629	0.0427
Clorox Co.	0.60	0.37	2.1485	0.0424
Erie Indemnity	0.75	0.55	2.3029	0.0454
Coca-Cola	0.60	0.39	2.1882	0.0432
Laboratory Corp.	0.70	0.48	2.3580	0.0465
PepsiCo, Inc.	0.60	0.37	2.2420	0.0442
Sysco Corp.	0.70	0.51	2.3131	0.0456
Tootsie Roll Ind.	0.70	0.53	2.1835	0.0431
Verisk Analytics	0.60	0.37	2.4191	0.0749
Average	0.66	0.45	2.2576	0.0476
Proxy Group of Eight Gas Distribution Companies	0.68	0.46	2.2355	0.0441

Basis of Selection of the Group of Non-Price Regulated Companies
Comparable in Total Risk to the Proxy Group of Eight Gas Distribution Companies

The criteria for selection of the proxy group of nine non-price regulated companies was that the non-price regulated companies be domestic and reported in Value Line Investment Survey (Standard Edition).

The proxy group of nine non-price regulated companies were then selected based upon the unadjusted beta range of 0.37 – 0.55 and standard error of the regression range of 2.0391 – 2.4319 of the gas distribution proxy group.

These ranges are based upon plus or minus two standard deviations of the unadjusted beta and standard error of the regression. Plus or minus two standard deviations captures 95.50% of the distribution of unadjusted betas and standard errors of the regression.

The standard deviation of the water industry's standard error of the regression is 0.1964. The standard deviation of the standard error of the regression is calculated as follows:

$$\text{Standard Deviation of the Std. Err. of the Regr.} = \frac{\text{Standard Error of the Regression}}{\sqrt{2N}}$$

where: N = number of observations. Since Value Line betas are derived from weekly price change observations over a period of five years, N = 259

$$\text{Thus, } 0.1964 = \frac{2.2355}{\sqrt{518}} = \frac{2.2355}{22.7596}$$

Source of Information: Value Line, Inc., June 15, 2013
Value Line Investment Survey (Standard Edition)

Missouri Gas Energy
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to
the Proxy Group of Eight Gas Distribution Companies

Proxy Group of Nine Non-Price-Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Reuters Mean Consensus Projected Five Year Growth Rate in EPS	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS	Adjusted Dividend Yield	Indicated Common Equity Cost Rate
Becton, Dickinson	1.99 %	8.50 %	9.30 %	8.60 %	9.29 %	8.92 %	2.08 %	11.00 %
Clorox Co.	3.37	10.50	7.70	8.30	7.70	8.55	3.51	12.06
Erie Indemnity Co.	3.05	7.50	10.00	10.00	10.00	9.38	3.20	12.58
Coca-Cola	2.81	8.00	7.90	8.00	7.90	7.95	2.92	10.87
Laboratory Corp.	-	9.50	11.00	11.20	11.10	10.70	-	NA
PepsiCo, Inc.	2.77	8.50	8.30	8.30	8.30	8.35	2.89	11.24
Sysco Corp.	3.30	8.00	7.80	7.50	7.80	7.78	3.43	11.21
Tootsie Roll Ind.	0.97	10.00	NA	NA	9.00	9.50	1.02	10.52
Verisk Analytics	-	13.00	12.00	13.40	12.83	12.81	-	NA
Average								11.35 %
Median								11.21 %

NA= Not Available
NMF= Not Meaningful Figure

(1) Ms. Ahern's application of the DCF model to the domestic, non-price regluated comparable risk companies is identical to the application of the DCF to her proxy group of water companies. She uses the 60 day average price and the spot indicated dividend as of September 6, 2013 for her dividend yield and then adjusts that yield for 1/2 the average projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.reuters.com, www.zacks.com, and www.yahoo.com (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.

Source of Information: Value Line Investment Survey:
www.reuters.com Downloaded on 09/09/2013
www.zacks.com Downloaded on 09/09/2013
www.yahoo.com Downloaded on 09/09/2013

Missouri Gas Energy
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Nine Non-Price-Regulated Companies
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	5.08 %
2.	Adjustment to Reflect Average Rating of Proxy Group (2)	0.30
3.	Prospetive Yield on A Rated Corporation Bonds	5.38
3.	Equity Risk Premium (3)	4.54
4.	Risk Premium Derived Common Equity Cost Rate	9.92 %

Notes: (1) Consensus forecast of Aaa rated corporate bonds per the nearly 50 economists reported in Blue Chip Financial Forecasts (see pages 9 and 10 of Schedule PMA-7). The estimates are detailed below.

Third Quarter 2013	4.50 %
Fourth Quarter 2013	4.60
First Quarter 2014	4.70
Second Quarter 2014	4.80
Third Quarter 2014	4.90
Fourth Quarter 2014	5.00
2015-2019	5.80
2020-2024	6.30
Average	5.08 %

(2) Adjustment to reflect the A Moody's bond rating of the non-utility proxy group as shown on page 7 of this Schedule. The 30 basis point adjustment is derived by taking the entire spread between Aaa and A corporate bond yields for the last three months as shown below.

	A Rated Corporate Bonds	Aaa Rated Corporate Bonds
August-13	4.78 %	4.54 %
July-13	4.69	4.34
June-13	4.56	4.27
	4.68 %	4.38 %

Spread Between Aaa and A Rated Moody's Corporate Bond Yields	0.30 %

(3) From page 8 of this Schedule.

Missouri Gas Energy
Comparison of Bond Ratings for the
Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Eight Gas Distribution Companies

	Moody's Bond Rating September 2013		Standard & Poor's Bond Rating September 2013	
Proxy Group of Nine Non-Price-Regulated Companies	Bond Rating	Numerical Weighting (1)	Bond Rating	Numerical Weighting (1)
Becton, Dickinson	A3	7.0	A	6.0
Clorox Co.	Baa1	8.0	BBB+	8.0
Erie Indemnity	NR	- -	NR	- -
Coca-Cola	Aa3	4.0	AA-	4.0
Laboratory Corp.	Baa2	9.0	BBB	9.0
PepsiCo, Inc.	A1	5.0	A-	7.0
Sysco Corp.	A1	5.0	A	6.0
Tootsie Roll Ind.	NR	- -	NR	- -
Verisk Analytics	NR	- -	NR	- -
Average	A2	6.3	A-	6.7

Notes:
(1) From page 5 of Schedule PMA-6.

Source of Information:
Standard & Poor's Bond Guide August 2013
www.moodys.com; downloaded 9/9/2013

Missouri Gas Energy
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
the Proxy Group of Non-Price-Regulated Companies
Proxy Group of Eight Gas Distribution Companies

Line No.		Proxy Group of Nine Non-Price-Regulated Companies
	Based on SBBI Valuation Yearbook Data:	
1.	Ibbotson Equity Risk Premium (1)	5.60 %
2.	Ibbotson Equity Risk Premium based on PRPM™ (2)	9.20
	Based on Value Line Summary and Index:	
3.	Equity Risk Premium Based on Value Line Summary and Index (3)	6.16
4.	Conclusion of Equity Risk Premium (4)	6.99 %
5.	Adjusted Value Line Beta (5)	0.65
6.	Forecasted Equity Risk Premium	4.54 %

Notes:
(1) Based on the arithmetic mean historical monthly returns on large company common stocks from Ibbotson® SBBI® 2013 Valuation Yearbook - Market Results for Stocks, Bonds, Bills, and Inflation minus the arithmetic mean monthly yield of Moody's Aaa and Aa corporate bonds from 1926 - 2012. (11.83% - 6.23% = 5.60%).
(2) The Predictive Risk Premium Model (PRPM™) is discussed in Ms. Ahern's accompanying direct testimony. The Ibbotson equity risk premium based on the PRPM™ is derived by applying the PRPM™ to the monthly risk premiums between Ibbotson large company common stock monthly returns minus the average Aaa and Aa corporate monthly bond yields, from January 1928 through June 2013.
(3) From page 8 of Schedule PMA-6.
(4) Average of Lines 1, 2, & 3.
(5) Median beta derived from page 9 of this Schedule.

Sources of Information:
Ibbotson® SBBI® 2013 Valuation Yearbook - Market Results for Stocks, Bonds, Bills, and Inflation, Morningstar, Inc., 2013 Chicago, IL.

Value Line Summary and Index
Blue Chip Financial Forecasts, September 1, 2013

Missouri Gas Energy
Traditional CAPM and ECAPM Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Eight Gas Distribution Companies

Proxy Group of Nine Non-Price-Regulated Companies	Value Line Adjusted Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate (3)	ECAPM Cost Rate (4)	Indicated Common Equity Cost Rate (5)
Becton, Dickinson	0.65	7.93 %	4.31 %	9.46 %	10.16 %	
Clorox Co.	0.60	7.93	4.31	9.07	9.86	
Erie Indemnity	0.75	7.93	4.31	10.26	10.75	
Coca-Cola	0.60	7.93	4.31	9.07	9.86	
Laboratory Corp.	0.70	7.93	4.31	9.86	10.46	
PepsiCo, Inc.	0.60	7.93	4.31	9.07	9.86	
Sysco Corp.	0.70	7.93	4.31	9.86	10.46	
Tootsie Roll Ind.	0.70	7.93	4.31	9.86	10.46	
Verisk Analytics	0.60	7.93	4.31	9.07	9.86	
Average	0.66			9.51 %	10.19 %	9.85 %
Median	0.65			9.46 %	10.16 %	9.81 %

Notes:
(1) From Schedule PMA-7, page 2, note 1.
(2) From Schedule PMA-7, page 2, note 2.
(3) Derived from the model shown on Schedule PMA-7, page 2, note 3.
(4) Derived from the model shown on Schedule PMA-7, page 2, note 4.
(5) Average of CAPM and ECAPM cost rates.

Missouri Gas Energy
Derivation of Investment Risk Adjustment Based upon
Ibbotson Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.		1 Market Capitalization on September 6, 2013 (1) (millions)	1 (times larger)	2 Applicable Decile of the NYSE/AMEX/ NASDAQ (2)	3 Applicable Size Premium (3)	4 Spread from Applicable Size Premium for (4)
1.	Missouri Gas Energy					
a.	Based Upon the Proxy Group of Eight Gas Distribution Companies	$ 1,113.563		6 - 7	1.73%	
2.	Proxy Group of Eight Gas Distribution Companies	$ 2,491.086	2.2	5	1.70%	0.03%

	(A) Decile	(B) Number of Companies (millions)	(C) Recent Total Market Capitalization (millions)	(D) Recent Average Market Capitalization (millions)	(E) Size Premium (Return in Excess of CAPM) (2)
Largest	1	173	$ 10,255,341.469	$ 59,279.430	-0.37%
	2	193	2,219,118.548	$ 11,498.024	0.76%
	3	187	1,072,861.025	$ 5,737.225	0.92%
	4	202	695,897.336	$ 3,445.036	1.14%
	5	205	473,139.360	$ 2,307.997	1.70%
	6	234	377,485.205	$ 1,613.185	1.72%
	7	317	329,504.738	$ 1,039.447	1.73%
	8	329	214,084.258	$ 650.712	2.46%
	9	466	166,708.095	$ 357.743	2.70%
Smallest	10	1068	107,517.520	$ 100.672	6.03%

*From Ibbotson 2013 Yearbook

Notes:
(1) From Page 2 of this Schedule PMA-.
(2) Gleaned from Column (D) on the bottom of this page. The appropriate decile (Column (A)) corresponds to the market capitalization of the proxy group, which is found in Column 1.
(3) Corresponding risk premium to the decile is provided on Column (E) on the bottom of this page.
(4) Line No. 1a Column 3 – Line No. 2 Column 3 and Line No. 1b, Column 3 – Line No. 3 of Column 3 etc.. For example, the 0.025% in Column 4, Line No. 2 is derived as follows 0.025% = 1.725% - 1.7%.

Missouri Gas Energy
Market Capitalization of Missouri Gas Energy and
the Proxy Group of Eight Gas Distribution Companies

Company	Exchange	1 Common Stock Shares Outstanding at Fiscal Year End 2012 (millions)	2 Book Value per Share at Fiscal Year End 2012 (1)	3 Total Common Equity at Fiscal Year End 2012 (millions)	4 Closing Stock Market Price on September 06, 2013	5 Market-to-Book Ratio on September 06, 2013 (2)	6 Market Capitalization on September 06, 2013 (3) (millions)
Missouri Gas Energy		NA	NA	$ 608.172 (4)	NA		
Based Upon the Proxy Group of Eight Gas Distribution Companies						183.1 % (5)	$ 1,113.563 (6)
Proxy Group of Eight Gas Distribution Companies							
AGL Resources Inc.		117.855	$ 28.959	$ 3,413.000	$ 43.850	151.4 %	$ 5,167.945
Atmos Energy Corporation		90.517	$ 26.064	$ 2,359.243	$ 39.490	151.5	$ 3,574.514
New Jersey Resources Corp.		41.810	$ 19.466	$ 813.865	$ 42.210	216.8	$ 1,764.803
Northwest Natural Gas Co.		26.917	$ 27.233	$ 733.033	$ 40.250	147.8	$ 1,083.409
Piedmont Natural Gas Co., Inc.		72.512	$ 14.163	$ 1,027.004	$ 31.940	225.5	$ 2,316.033
South Jersey Industries, Inc.		31.653	$ 23.259	$ 736.214	$ 56.790	244.2	$ 1,797.589
Southwest Gas Corporation		46.148	$ 28.391	$ 1,310.179	$ 46.380	163.4	$ 2,140.334
WGL Holdings, Inc.		51.688	$ 24.562	$ 1,269.556	$ 40.320	164.2	$ 2,084.061
Average		59.888	$ 24.012	$ 1,457.762	$ 42.654	183.1 %	$ 2,491.086

NA= Not Available

Notes: (1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 5 * Column 3.
(4) From Financial Statements of Missouri Gas Energy for Fiscal Year End 2012.
(5) The market-to-book ratio of Missouri Gas Energy on September 06, 2013 is assumed to be equal to the market-to-book ratio of the Proxy Group of Eight Gas Distribution Companies at September 06, 2013.
(6) Missouri Gas Energy's common stock, if traded, would trade at a market-to-book ratio equal to the average market-to-book ratio at September 06, 2013 of the Proxy Group of Eight Gas Distribution Companies, 183.1%, and Missouri Gas Energy's market capitalization on September 06, 2013 would therefore have been $1113.563 million.

Source of Information: 2012 Annual Forms 10K
yahoo.finance.com