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**BEFORE THE ARIZONA CORPORATION COMMISSION**

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| IN THE MATTER OF THE APPLICATION OF SOUTHWEST GAS CORPORATION FOR THE ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF ITS PROPERTIES THROUGHOUT ARIZONA | Docket No. G-01551A-10-0458 |

Arizona Corporation Commission
DOCKETED
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**RUCO'S NOTICE OF FILING DIRECT TESTIMONY**

The Residential Utility Consumer Office ("RUCO") hereby provides notice of filing the Direct Testimony of William A. Rigsby, CRRA, and Dr. Ben Johnson in the above-referenced matter.

RESPECTFULLY SUBMITED this 10th day of June, 2011.

Daniel W. Pozefsky
Chief Counsel

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SOUTHWEST GAS CORPORATION

DOCKET NO. G-01551A-10-0458

DIRECT TESTIMONY

OF

BEN JOHNSON, Ph.D.

ON BEHALF OF

THE

RESIDENTIAL UTILITY CONSUMER OFFICE

JUNE 10, 2011

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TESTIMONY

OF BEN JOHNSON, PH.D.

On Behalf of

The Residential Utility Consumer Office

Before the

Arizona Corporation Commission

Docket No. G-01551A-10-0458

## Introduction

**Q. Would you please state your name and address?**

A. Ben Johnson, 3854-2 Killearn Court, Tallahassee, Florida.

**Q. What is your present occupation?**

A. I am a consulting economist and president of Ben Johnson Associates, Inc.®, an economic research firm specializing in public utility regulation.

**Q. Have you prepared an appendix that describes your qualifications in regulatory and utility economics?**

A. Yes. Appendix A, attached to my testimony, will serve this purpose.

**Q. Have you prepared any schedules to be filed with your testimony?**

A. Yes, I have prepared Schedules BJ-1 through BJ-7. These schedules were prepared under my supervision and are attached to my testimony.

**Q. What is your purpose in making your appearance at this hearing?**

A. Our firm has been retained by the Residential Utility Consumer Office ("RUCO") to assist with RUCO's evaluation of Southwest Gas Corporation's (SWG's) application for a rate increase. The purpose of my testimony is to present RUCO's revenue requirement recommendation for SWG in this proceeding, taking into account my analysis, as well as that of RUCO's rate of return witness Bill Rigsby.

Following this introduction, my testimony has seven sections. In the first section, I briefly summarize the background of this proceeding. In the second section, I discuss SWG's financial condition and credit ratings. In the third section I briefly summarize and discuss SWG's revenue requirement filing in general terms. In the fourth section, I discuss the rate base adjustments proposed by SWG and I present RUCO's recommendations with respect to those adjustments. In the fifth section, I discuss the income adjustments proposed by the Company and I present RUCO's recommendations with respect to each proposed adjustment. In the sixth section, I discuss the appropriate rate of return to be applied to a fair value rate base taking into account the testimony of RUCO witness Bill Rigsby concerning SWG's cost of capital. In the seventh and final section, I summarize my conclusions and recommendations.

## I. Background

**Q. Can you briefly discuss SWG's most recent rate case?**

A. Yes. On August 31, 2007, SWG filed an application requesting an increase in rates. SWG requested a revenue increase of $57,546,205, and proposed an adjusted original cost rate base ("OCRB") of $1,069,743,402 and a fair value rate base of $1,392,895,487. [Decision 70665, p. 5] Staff and RUCO recommended revenue increases of $28,239,870 and $32,046,846, respectively. [Id.] Staff proposed an OCRB of $1,065,561,602, and a fair value rate base (FVRB) of $1,388,713,687. [Id.] RUCO proposed an OCRB of $1,089,082,745, and a FVRB of $1,463,404,389. [Id.] The evidentiary hearing was held on 7 days beginning June 16, 2008. The Commission determined that SWG had an OCRB of $1,066,107,826 and a FVRB of $1,389,259,911. [Id., p. 8] The Commission further determined that the Company was entitled to a revenue increase of $33,533,844, or 8.4% over adjusted test year revenues.[1] [Id.] The Commission ordered the new rates to become effective December 1, 2008. [Id., p. 60]

**Q. Can you now briefly discuss the procedural background of this current case?**

A. Yes. SWG's application for a rate increase was filed with the Commission on November 12, 2010. On December 13, 2010, Staff filed a Letter of Sufficiency in the docket indicating that SWG's' application had meet the sufficiency requirements of the Arizona Administrative Code. A Procedural Order was issued on January 11, 2011, setting an evidentiary hearing for September 12, 2011, establishing dates for testimony, and setting a deadline for motions to intervene. The procedural order also granted RUCO's motion to intervene.

1 The Commission determined SWG's adjusted test year revenues to be $399,234,678. [Id., p. 21]

**Q. Can you now summarize SWG's Application?**

A. Yes. SWG requests a $73.2 million rate increase. If granted, this would represent an increase of approximately 17.8% relative to the adjusted test year revenues (including the cost of gas). [Schedule A-1, Sheet 2] The proposed increase is an even larger percentage of the Company's operating margin (revenues after subtracting the cost of gas). The requested increase is based in part on sales and expenses during the test year, but it also reflects various adjustments to the actual test year results, including certain post-test year adjustments.

SWG is also requesting approval of two deferred accounting orders, and approval of its Arizona Energy Efficiency and Renewable Energy Resource Technology Portfolio Implementation Plan (EE and RET Plan).

> The EE and RET Plan is comprised of 10 energy efficiency and renewable energy resource technology (RET) programs that afford Southwest Gas' customers, including its low income customers, cost-effective opportunities and resources, education and training tools, all of which are designed to promote energy efficiency and conservation, and will result in lower energy bills for customers. [Application, p. 4]

Finally, SWG requests approval of its Energy Efficiency Enabling Provision (EEP). The proposed EEP is a revenue per customer decoupling mechanism which is intended to "better align utility and customer interests so Southwest Gas will be able to sharpen its focus on customer end-use efficiencies and the development of strategies to achieve the Standards established by the Commission". [Id., pp. 8-9] SWG's proposed EE and RET Plan and EEP will be discussed in my rate design testimony, which will be prefiled a few weeks after this testimony was prepared.

## II. SWG Financial Situation and Credit Metrics

**Q. What information does SWG provide regarding its financial condition?**

A. In SWG's prior rate case, the Commission authorized an 8.86% rate of return on original cost rate base (OCRB). [Decision No. 70665, pp. 58-59] The Company claims, however, that during the test year on an adjusted basis, it earned a ROR of 6.06%. [Mashas Direct, p. 3]

> Southwest Gas' current rates and charges, which were approved by the Commission in Decision No. 70665 (December 24, 2008) are no longer sufficient to produce a reasonable return on the fair value of the Company's properties devoted to public service in the state of Arizona ... [Application, p. 4]

The Company has identified three "major factors" contributing to the alleged revenue deficiency: (1) a decline in residential consumption per customer, and the need to set rates based upon current usage levels; (2) a decline in general service customer consumption per customer, and the need to set rates based upon current usage levels; and (3) changes in the Company's cost of capital. [Id., pp. 4-5]

**Q. To the extent SWG has not been earning its cost of capital, is this problematic?**

A. While there is no expectation that earnings will exactly match a utility's cost of capital or its allowed rate of return, it is not in the public interest for the Company to achieve earnings that are far below its cost of capital or a fair rate of return – particularly if there is reason to anticipate this pattern will be sustained well into the future.

**Q. Can you explain how Moody's and S&P rate the Company's credit?**

A. Yes. As shown below, Moody's and S&P have established a series of tiers designated by alphanumeric codes to rate corporate securities.

| S&P | Moody's |
|---|---|
| ——Investment Grade—— | |
| AAA | Aaa |
| AA+ | Aa1 |
| AA+ | Aa2 |
| AA- | Aa3 |
| A+ | A1 |
| A+ | A2 |
| A- | A3 |
| BBB+ | Baa1 |
| BBB | Baa2 |
| BBB- | Baa3 |
| ——Speculative Grade—— | |
| BB+ | Ba1 |
| BB | Ba2 |
| BB- | Ba3 |
| B+ | B1 |
| B | B2 |
| B- | B3 |
| CCC+ | Caa1 |
| CCC | Caa2 |
| CCC- | Caa3 |
| CC | |
| ————In Default———— | |
| SD | Ca |
| D | C |

**Q. Where does SWG currently fall relative to this list?**

A. At the time SWG filed its testimony, the Company's debt obligations were rated Baa2 from Moody's and BBB from S&P, which is toward the bottom of the range of ratings that are commonly referred to as "Investment Grade." [Wood Direct, p. 5]

**Q. How do these ratings compare to the ratings in effect during SWG's 2008 rate case?**

A. On April 22, 2009 (a few months after SWG's last rate case), S&P upgraded the Company's unsecured bond rating from BBB- to BBB. [Id., p. 6] More than a year later, on May 27, 2010, Moody's followed suit, upgrading SWG's unsecured bond rating from Baa3 to Baa2. [Id.]

**Q. Have there been any changes in the Company's debt ratings since SWG filed its testimony?**

A. Yes. On April 27, 2011, S&P raised SWG's debt rating by one more notch, to BBB+.

**Q. What is the rationale behind S&P and Moody's ratings for SWG, and the recent upgrades in those ratings?**

A. According to the Company, the key factors for Moody's rating are "the improvement in the Company's regulatory environment due to authorized decoupling in Nevada and the prospect for approval of a decoupling mechanism in Arizona". [Id.] Likewise, S&P's positive outlook is "based on the assumption of adequate rate relief and improved regulatory support", according to SWG. [Id.]

**Q. Do you agree that "improved regulatory support" through an approved decoupling mechanism was the primary factor behind the recent Moody's and S&P upgrades?**

A. I agree that both rating agencies consider the Company's overall regulatory environment to be "improving", and that this factored into the Company's current ratings. However, I've not seen any indication the rating agencies are placing substantial weight on this particular policy issue, and other factors are obviously also contributing to the recent upgrades. For example, Moody's provided the following "ratings drivers" for SWG:

- Generally low business risk given dominance of regulated gas distribution operations
- Cautiously optimistic about signs of improvements in historically challenging regulatory environment
- Timely recovery of costs via PGA mechanisms
- Market diversity and high reliance on residential and commercial customers stabilize cash flows
- Moderate capital expenditure plan eases future financing needs
- Credit metrics appropriate for the rating

> [Moody's Investor Service, Credit Opinion: Southwest Gas Corporation, May 27, 2010, p. 1]

Moody's further explains:

> The upgrade follows improvements in Southwest's cash flow credit metrics which we believe will be sustained for the foreseeable future...As of March 31, 2010, the ratio of Southwest's last twelve month cash flow from operations excluding changes in working capital to debt, calculated in accordance with Moody's standard analytical adjustments, had improved to over 20% from approximately 16% for the year ended December 2006. Over the medium term, Moody's anticipates this metric will remain at a similar level. [Moody's Investor Service, Ratings Action: Moody's upgrades Southwest Gas Corp. -- Sr. Unsecured to Baa2, May 27, 2010, p. 1]

S&P summarizes their recent decision to upgrade SWG's rating as follows:

> We are raising our corporate credit senior unsecured ratings on U.S. natural gas distributor and construction services provider Southwest Gas Corp. to 'BBB+' from 'BBB' and revising the outlook to stable from positive. The ratings action reflects improved financial results, and our view that the business risk profile remains excellent given the utility's steady cash flow contribution. The stable outlook reflects our expectation that the company will maintain stable financial metrics. [Standard & Poor's, Research Update: Southwest Gas Corp.'s Ratings Are Raised To 'BBB+' On Good Financial Performance; Outlook Stable, April 27, 2011, p. 1]

**Q. To what extent has the issue of decoupling been considered by the rating agencies?**

A. Although the references are rather cryptic, both Moody's and the S&P mention decoupling in their recent reports. For example, Moody's states:

> The rating upgrade also recognizes signs of improvements in Southwest's regulatory environment where we remain cautiously optimistic about, primarily in Nevada (34% of operating margins) and potentially Arizona (55% of operating margins). In Nevada, the Public Utilities Commission of Nevada approved the company's request for the implementation of decoupling mechanism in its April 2009 general rate case, pursuant to the decoupling legislation approved in 2008. Furthermore, the Arizona Corporation Commission (ACC) has conducted a series of workshops in

> 2009 and 2010 to evaluate the possibility of implementing a decoupling mechanism in Arizona, and is currently reviewing related proposals submitted by utilities in its jurisdiction, including Southwest. [Moody's Investor Service, Ratings Action: Moody's upgrades Southwest Gas Corp. -- Sr. Unsecured to Baa2, May 27, 2010, p. 1]

Similarly, S&P states:

> We also factor a gradual reduction in the regulatory risks associated with the company's Arizona service territory into our rating. We expect resolution of the company's rate case before the Arizona Corporation Commission (ACC) in early 2012, where the company has requested a $73.2 million revenue increase (return on equity [ROE] of 11%) and regulatory mechanisms, including decoupling. [Standard & Poor's, Research Update: Southwest Gas Corp.'s Ratings Are Raised To 'BBB+' On Good Financial Performance; Outlook Stable, April 27, 2011, p. 1]

**Q. Is there reason for the Commission to be worried about SWG's bond rating and credit metrics?**

A. In recent years we have recently seen extreme swings in credit markets, triggered by relatively minor changes in the underlying facts. Once perceptions of the credit-worthiness of major institutions like Lehman Brothers or Wachovia turned a bit negative, the shift in perceptions began to feed on itself, leading to rapidly escalating atmosphere of fear and uncertainty, which in turn had very real consequences for these firms and others.

During a financial crisis or tight credit environment, even firms with a solid investment grade bond rating may find it more difficult than normal to issue additional debt or equity. A company with a debt rating toward the low end of the utility industry may find it difficult to fully fund future capital construction programs – bearing in mind that merely offering to pay higher than normal interest rates wouldn't necessarily solve the problem, since the very need to offer such high rates could be perceived as a sign of weakness, pushing away more risk-averse investors and making it harder to raise capital in the future.

SWG's credit ratings are two (Moody's) or three (S&P) notches above the threshold between investment grade and "speculative" grade ratings, and Moody's and S&P have both offered a "stable" outlook for SWG, indicating that neither agency thinks a downgrade is likely in the foreseeable future. Under the circumstances, the Commission should be sensitive to the Company's bond ratings, but I don't believe it needs to be particularly worried about them.

**Q. To what extent should SWG's credit ratings influence the Commission's analysis of the issues in this case?**

A. The Commission has no direct control over bond ratings, and it would not be appropriate to skew its decisions in this proceeding toward a particular outcome in the hopes of further improving the Company's bond ratings. Fortunately, SWG's credit ratings do not appear to be in any danger of falling below investment grade levels.

In fact, there is reason to be hopeful that if economic conditions in the state improve, this trend may continue. Any further improvement in SWG's credit ratings could have a positive impact on the interest rates which would be paid by the Company when it needs to raise additional debt capital. In general, as bond ratings improve, the required interest on new issuances tends to decrease, which will can lead to lower costs for customers over the life cycle of the debt issuance.

The Company explains its belief that

> obtaining an "A" bond rating would provide the Company with a greater amount of financial flexibility. The Company would be able to attract capital at reasonable prices during both normal and turbulent market conditions, which have been recently experienced. [Woods Direct, p. 9]

I would agree that any further improvement in the Company's ratings could result in decreased costs associated with future capital improvements. However, as both S&P and Moody's have pointed out, the Company's future capital expenditure plans are moderate, and can be largely financed through internal cash flows. The benefit of any reduction in interest rates primarily shows up when new debt is issued.

In any event, the Commission should not let the potential for a further improvement in the Company's credit ratings drive the results of this proceeding, nor should it cause the Commission to accept inappropriate ratemaking proposals in a misplaced effort to improve SWG's bond ratings. I believe a vigilant and appropriately balanced regulatory regime is ultimately in everyone's best interest. For regulation to work as intended, management of monopolies cannot be given a blanket promise of immediate, full recovery of any and all costs they have incurred, or anticipate incurring. The regulatory process should serve as a substitute for effective competition; thus, for example, it is appropriate to closely scrutinize the Company's application to identify a normalized level of reasonable, prudently incurred costs – costs which are appropriate for consideration in determining rates to be paid by customers – rather than simply passing through whatever cost levels are proposed by the Company in its filing.

## III. SWG's Filing: An Overview

**Q. Is SWG proposed revenue requirement based upon the actual test year results?**

A. No. A substantial portion of the proposed rate increase can be traced to various proposed adjustments. For example, SWG has proposed to include in its rate base certain construction investments the Company describes as "Completed Construction Not Classified". This series of adjustments increases its proposed rate base by a total of $6,090,567. [Schedule B-1] Similarly, SWG has proposed numerous adjustments to its actual test year operating income. These adjustments collectively result in a $16,524,664 decrease in operating margin and a $10,157,812 increase in operating expenses prior to tax effects, relative to the actual, unadjusted test year results. After taxes, these adjustments translate into a $16,039,330 decrease in calculated net operating income, relative to the actual income experienced during the test year. [Schedule A-1]

**Q. Can you explain the concept of pro forma adjustments, in general terms?**

A. Yes. Although terminology can vary, test year adjustments can be classified into various groups, based on the underlying purpose or theoretical basis for making the adjustment. For example, pro forma adjustments can be categorized into three major types: normalizations, annualizations and eliminations. Using this terminology and classification schema, normalization adjustments are typically made when the recorded test year operating revenues and expenses are believed to not be representative of a normal level for ratemaking purposes. Annualization adjustments are made to reflect a full 12-month revenue or expense level for items that were not in effect throughout the entire test year; typically this is done by applying end-of-test-year quantities to known and measurable prices and rates as of the end of the year. Eliminations are made to remove out-of-period or non- recurring transactions, or items that are not costs or revenues related to the provision of utility service.

Many of the Company's proposed "annualization" adjustments are designed to bring costs and revenue to an end-of-test year basis, while others update costs beyond the test year, to reflect the impact of additional investment, inflation or cost changes which weren't placed into service or didn't occur until after the test year. While making "annualization" adjustments for "known and measurable" cost increases is a popular method for dealing with the closely related problems of inflation and regulatory lag, this method tends to be arbitrary and controversial, particularly when attempts are made to select a cut-off date or annualization data that goes beyond the end of the test year. Regardless of how well known or measurable a particular cost change may be, it is difficult to achieve internal consistency and an appropriate "matching" of revenues and costs when the adjustments go beyond the test year.

**Q. Can you elaborate on the "matching" principle, and RUCO's concerns about "known and measurable" adjustments?**

A. Yes. RUCO recognizes that the Commission, as a matter of policy, has decided to rely upon a historical test year approach, rather than using a projected test year. However, RUCO believes it would be better policy to stay within the parameters of the historical test year, and to generally reject ad hoc adjustments stretching beyond the historical time period. In other words, if the Commission isn't satisfied with the result of using the historical test year, it should not assume that a long series of adjustments to the historical data will somehow "improve" upon, or overcome the weaknesses of, the historical test year. To the contrary, RUCO believes that an historical test year that is heavily adjusted tends to be arbitrary and subjective, and the end result may be a less reliable basis for setting rates than would be an appropriately developed and thoroughly validated projected future test year.

I recognize that this Commission, and other regulators, have long accepted the practice of modifying the historical test year in an attempt to solve concerns about the impact of inflation and other trends. However, adopting adjustments for "known and measurable" changes within and beyond the test year is an inherently difficult and controversial process. Should the Commission only consider "known and measurable" changes which occurred during the test year? Or, should the Commission go a few weeks, or perhaps as much as 6 months beyond the test year? These are vexing questions that are never answered the satisfaction of all concerned. While it is understandable why the Commission has sometimes gone beyond the end of the test year, in my opinion, this is not a good practice, nor is it the preferred solution to dealing with inflation, under-earnings, or allegations of attrition. Among other problems, as more and more adjustments pile up, stretching farther and farther beyond the test year, it becomes increasingly arbitrary to pick and choose adjustments, or to select a specific cutoff date. As well, the mismatch between revenues and expenses tends to become increasingly severe, and it becomes harder to ensure that all of the adjustments are fully known and accurately measurable, and to ensure that the final result is a realistic and representative snapshot of the Company's actual operations – rather than a distorted hypothetical picture which is largely a function of the adjustment development and advocacy process.

To its credit, in its filing the Company mostly focuses on the actual test year, and many of its adjustments are relatively uncontroversial, at least in principle (e.g. it is better to base rates upon typical, rather than atypical, weather). However, the Company makes some important exceptions, in which it proposes adjustments that are calculated using various dates that go past the test year. No overarching principle has been put forward to justify the particular mix of adjustments and dates, and in my view the end result is not an improvement over an analysis which focuses on the Company's actual operating experience during the test year. There is no assurance that the end result of a series of post-test year adjustments will be reasonable, or representative of actual conditions that can reasonably be anticipated in the future.

Admittedly, some of the same criticisms can be applied to adjustments for "known and measurable" changes that occurred within the test year. But, once the line is crossed and adjustments are made beyond the end of the test year, the tendency is to pile up more and more adjustments, extending farther and farther beyond the test year. In turn, the entire exercise tends to degenerate into an arbitrary, ad hoc, and ultimately unsound process of picking and choosing items to be included in the adjustment process, as well as picking and choosing the specific dates to be used in developing each of the accepted adjustments. As well, the more one goes beyond the actual test year experience, the less confidence can be placed in the underlying premise that the test year represents a realistic, representative snapshot of the Company's actual revenues, costs, and income – undermining the fundamental rationale for using an historical test year approach in the first place.

**Q. What is your recommendation concerning pro forma adjustments for "known and measurable" changes?**

A. Rather than debating the merits of a long series of actual and potential "known and measurable" adjustments in isolation, one-by-one, or attempting to put forward an alternative ad hoc mixture of such adjustments, my general approach has been to start with a specific cut-off date, and to remove all of the proposed adjustments that are inconsistent with that cut-off date.

More specifically, I recommend using a June 30, 2010 cut off date, because this comes the closest to the Company's proposals while staying within the confines of the test year ending June 30, 2010. In other words, I recommend accepting proposals to adjust for wage increases and other changes which went into effect during the test year, but to reject all such adjustments to the extent they relate to changes which occurred after the end of the test year. For example, I recommend that the Commission only allow into rate base plant that has been placed in service on or before June 30, 2010.

It is worth noting that by choosing a specific adjustment cut-off date within the test year, and by disallowing adjustments for events that occurred after that date, the matching principle is better achieved, and a greater degree of internal consistency and discipline is imposed. Selecting a specific cutoff date is not as arbitrary an exercise as selecting individual adjustments to include or exclude on some arbitrary basis, like whether there is adequate precedent for that particular type of adjustment, whether enough is "known" about the change in question, or whether the calculations were sufficiently precise and reliable. Any specific cutoff date will sometimes work for, and sometimes work against, the Company's favor. Some potential adjustments will relate to events beyond the cutoff date that, if they were allowed, would have the effect of increasing the calculated revenue requirement, but other potential adjustments will have the opposite effect – potentially reducing the calculated revenue requirement.

## IV. Rate Base Adjustments

**Q. Can you now briefly explain how SWG develops its adjusted Original Cost Rate Base?**

A. Yes. SWG begins with the recorded levels of Gas Plant in Service as of the the end of the test year. This consists of $2.25 billion of Arizona-specific plant and $101.3 million in system allocated plant. [Schedule B-1] SWG then subtracts $955.2 million in accumulated depreciation and amortization, resulting in $1.4 billion Net Plant in Service. SWG then modifies this amount to account for "other rate base items". First, SWG adds $10.2 million to account for working capital [Id.] Next, SWG removes $62 million in customer advances, $48.5 million in customer deposits, and $230.7 million in deferred taxes – amounts that represent funds provided by customers, rather than investors. [Id.] The net result is a test year rate base of $1.068 billion. [Id.]

**Q. Does SWG make any adjustments to its test year rate base?**

A. Yes. As I mentioned earlier, SWG adjusts Gas Plant in Service (GPIS) by adding and removing various amounts related to Completed Construction Not Classified (CCNC). First, SWG adds tangible plant expenditures that were made during the test year, for plant that was not booked to GPIS until after the test year. [Mashas Direct, p. 21] The gas plant included in this step of this adjustment "was either in-service at the end of the test year or shortly thereafter". [Id.] These plant balances were included in Construction Work in Progress (CWIP) at the end of the test year. [Id.] SWG argues that none of this plant is revenue producing. [Id.] The result of this portion of the adjustment is a $2.8 million increase to rate base. [Schedule B-1]

Second, SWG modifies system allocable intangible plant by removing "all projects with an amortization period expiring March 31, 2011 or earlier from rate base," and adding "estimated amounts for projects to be closed to plant prior to March 31, 2011 to rate base". [Id.,

p. 22] The result of this portion of the adjustment is a $3.3 million increase to rate base. [Schedule B-1] The total effect of this CCNC adjustment is a $6.09 million increase to test year rate base. [Id.]

**Q. When was the tangible plant portion of this adjustment placed into service?**

A. Although the underlying expenditures were made during the test year, during the discovery process SWG disclosed that many of the associated plant items were not placed into service until after the test year. [See, SWG response to Staff DR 6-7(a) and included attachment] Of the 40 tangible plant projects included in this adjustment, 9 projects totaling $576,000 involved plant that was apparently placed into service during the test year, but the investment was not transferred to GPIS until a later date. [Id.] Another 29 projects, totaling $2.1 million, involved plant that was not placed into service until after the test year. The last of these projects was placed into service on January 14, 2011. [Id.] The remaining 2 projects, totaling $110,000 were removed by SWG during the discovery process because they involved "work orders that have not closed". [ Id.]

**Q. Do you agree with this portion of the CCNC adjustment?**

A. No. In effect, SWG is attempting to include CWIP in rate base – albeit construction that was completed shortly after the test year. The Commission has explained that CWIP is generally not allowed in rate base, except under extraordinary circumstances. [See, Decision 70360, p. 8] For example, in Decision 70360, UNSE was denied inclusion of CWIP because UNSE was not faced with an extraordinary situation. [Id.] The Commission further noted that UNSE achieved a return on its CWIP investment during the test year through the accrual of AFUDC; it noted that allowing CWIP in rate base tends to undermine the balancing of test year revenues and expenses; and it pointed out that regulatory lag can be both a benefit and determent to UNSE.

[Id.] In the alternative, UNSE requested post test year plant be included in rate base. [See, Id.] With regard to UNSE's alternative post test-year plant request, the Commission concluded that "post-test-year plant should not be included in rate base for the same reasons stated above with respect to the Company's request for CWIP". [Id., p. 9]

In my opinion, the appropriate policy is to use AFUDC to compensate the Company for its investment in construction projects before they are completed and transferred into plant in service, and there is no need to make an exception to this policy. This approach provides a more consistent and conceptually sound approach to rate making. It is a policy that provides a clear delineation between the period when construction is occurring and the period when an investment is in service and providing benefits to customers. And, it is a policy that better balances the interests of customers and stockholders, as well as one that better balances the interests of different generations of customers. I recommend the Commission reject the Company's proposed adjustment, because it deviates from this sound policy, and it does so under ordinary – not extraordinary – circumstances.

**Q. Can you please elaborate on the reason why you recommend rejection of this proposal?**

A. Yes. While the Company describes these investments as not producing revenues, this is irrelevant at best, and misleading at worst. The effect of including these construction projects in rate base would certainly not be revenue neutral – it would increase the rate base, and if it were approved, this proposal would increase revenues received by the Company and the bills paid by customers. More importantly, there is nothing extraordinary about these investments; these assets are not unlike many other assets that are routinely acquired by utilities in the ordinary course of business, benefiting both existing and future customers. I am not questioning whether these investments are worthwhile, but whether they require extraordinary post-test year treatment. I see no evidence that special treatment is warranted for the items that were not placed into service during the test year.

The Commission should bear in mind that even if the proposed adjustment is rejected, the Company will be adequately compensated for its investment. For instance, during the test year it received AFUDC on this investment. While AFUDC treatment ends once the property is placed into service, that doesn't mean customers won't be compensating the Company for its investment. To the contrary, these projects are taking place in the ordinary course of business, and the Company receives substantial cash flows from customers as compensation for these sorts of costs – both in terms of recovering its cost of capital, and in terms of payments from customers as compensation for depreciation – cash flows that provide funds that can be used to replace existing plant and invest in projects that may or may not directly and immediately contribute to growth in the Company's revenues. To the extent any specific investments are not sufficiently offset through depreciation, reduced operating expenses, or increased revenues, any associated income shortfall will be short lived, since the investments will be included in Gas Plant in Service, and thus will be included in the rate base that is calculated in future rate cases.

In general, RUCO believes it is inappropriate to modify the historical test year for some, but not all, of the impacts of post-test year events. Among other reasons, it is impossible to know precisely how specific assets will impact the Company's operating costs. In some cases, new investments may enhance safety, making it feasible to reduce maintenance and other operating costs. In some cases, costs may decline as a direct or indirect result of new construction, as older equipment is reinforced or replaced with new plant additions that increase reliability, reduce the need to incur extraordinary labour costs to provide safe and reliable service, or make it feasible to maintain adequate pressure at lower cost.

It isn't feasible to analyze all of the repercussion and implications of each investment made during the test year – nor is there any need to do so when an appropriate test year is established and used on a consistent basis, since it is reasonable to assume that the test year represents a reasonable representation of future conditions, where all factors – both good and bad – are taken into consideration. There is no justification for violating the matching principle which is a fundamental underpinning of the historical test year approach to ratemaking, by selectively reaching beyond the test year include the cost of new construction projects, while ignoring other things that occur after the test year, including the continued decline in net plant in service through the accumulation of additional depreciation, as well as the benefit of operating cost decreases and efficiency increases which will occur after the test year.

In sum, as a matter of sound public policy, as long as the Commission continues to use an historical test year, it should reject proposals to include in rate base investments which were not actually completed and placed into service during the test year. I believe it is preferable to adopt a uniform, consistent cut-off based on the end of the test year. Accordingly, I recommend only accepting the portion of this proposed adjustment which relates to the items which were placed into service during the test year. As shown on Schedule BJ-2, this portion of the proposed adjustment increases rate base by $575,976.

**Q. Do you agree with the intangible portion of SWG's CCNC adjustment?**

A. No. SWG is adjusting its rate base for intangible plant additions that were not anticipated to be in service until as much as 10 months after the end of the test year, and for intangible plant projects with an amortization period expiring as much as 10 months after the end of the test year. I have excluded this portion of the adjustment for the same reasons that I excluded the post test year tangible plant portion of this adjustment.

**V. Income Adjustments**

Q. Let's discuss SWG's proposed income adjustments. Can you begin by commenting on SWG's first income adjustment?

A. Company witness Mashas states that witness A. Brooks Congdon covers SWG Adjustment No. 1 (as well as Adjustment No. 2). However, Mr. Congdon primarily discusses the Company's cost of service study, and he does not specifically address Adjustment No. 1. In any event, SWG's first income adjustment, "Revenues and Volumes" appears to primarily be intended to adjust the test year non-gas revenues (margin) to reflect 12 months of consumption under "normal" weather conditions. Witness Cattanach explains Adjustment No. 1 is actually the composite result of five different sets of adjustments:

> After compiling the recorded number of bills and therms for the test year, Southwest Gas made the following adjustments in order to derive the adjusted test year billing determinants: (1) billing adjustments; (2) customer specific volume annualizations; (3) customer reclassifications; (4) weather normalizations; (5) customer annualizations. ... The purpose of the five adjustments is to ensure that Southwest Gas's test year number of bills and volumes accurately reflect a full 12 months of consumption under normal weather conditions for the development of revenues and proposed rates. [Cattanach Direct, pp. 2-3]

**Q. How does SWG describe these five sets of adjustments?**

A. The billing adjustments involved adjusting monthly consumption for customer bills, to correct "significant billing anomalies". [Id., p. 3]

> This adjustment is necessary to ensure that the monthly adjusted volumes accurately reflect actual test year consumption. Otherwise, distorted monthly values would reduce the reliability of the regression analysis associated with the weather normalization adjustments ... [Id.]

The volume annualization adjustments were performed to "reflect a full year of consumption for each active customer (excluding residential and small commercial customers) billed during June

2010". [Id.] Additional consumption was estimated for months during the test year "where a new customer was not on-line or was clearly in a start-up phase". Consumption was removed for customers who discontinued service during the test year. [Id., pp. 3-4]

The customer reclassification adjustments move certain customers between rate schedules, to reflect a full 12 months of usage under the correct rate schedule that was applicable at the end of the test year. According to SWG, reclassification adjustments do not impact the overall number of bills or volumes for the test year. [Id., p. 4]

The weather normalization adjustments involve adjusting heat sensitive consumption per customer "to provide an accurate representation of monthly test year volumes under normal weather conditions". [Id., p. 4] According to SWG, actual billing cycle heating degree days during the test year were 7.1 percent colder than "normal" in Tucson, and 6.6 percent colder than "normal" in Phoenix. [Id.] To develop the "normal" number of heating degree days, SWG used a ten-year average for the 120 months ended June 2010, adjusted for outliers. The net result of the weather normalization adjustments was a decrease in test year volumes of 16,064,337 therms. [Id., p. 6]

The customer annualization adjustments were made by comparing the number of customers in the last month of the test year to the same month of the prior year. The customer growth was then

> prorated across the test year in declining intervals with 11/12ths of the adjustment in the first month of the test year (July 2009), 10/12ths in the second month (August 2009) and so forth. Adjustments to annualize volumes were made by multiplying the monthly customer additions by the respective monthly weather-adjusted average use per customer. Customer and volume adjustments are then added to the weather-normalized monthly bills and volumes to produce annualized test year monthly bills and volumes. [Id., p. 7]

**Q. What was the overall net effect of these five sets of adjustments?**

A. SWG's test year operating margin was $427,436,762 as recorded on in its account records. [Schedule C-1, Sheet 1] After making these five adjustments, SWG computed an adjusted test year margin of $410,912,098. [Schedule H-2, Sheet 8] The $16,524,664 difference is reflected in the proposed revenue requirement calculations through its proposed Adjustment No. 1.

**Q. Schedule C-2 shows a $423,844,760 reduction in revenues for Adjustment No. 1. Why is that?**

A. Since SWG calculated adjusted margin, Adjustment No. 1 also includes a reduction in revenues to exclude actual test purchased gas cost of $407,320,096. These gas costs are subsequently added back through Adjustment No. 2.

**Q. What is your conclusion regarding these adjustments?**

A. These types of adjustments are fairly common in ratemaking proceedings, and they are generally consistent with the underlying purpose of using a historical test year, which is simply a device for analyzing the normal level of revenues and costs which can be expected in the future. However, I do have some concerns about the proposed calculations. In particular, it seems odd to replace the actual test year results with hypothetical calculations based upon "normal" weather based on just ten years of data. Since weather patterns can vary widely from one year to the next, it is not unreasonable to attempt to "normalize" the test year based on typical weather conditions. But, it would be more appropriate to develop such calculations based upon a longer time period than just the past 10 years – since even a ten year period can be warmer, or cooler, than normal.

**Q. What was actual weather like during the test year?**

A. According to data supplied by SWG, there were 1,542 heating degree days in Tuscon during the test year, and 951 heating degree days in Phoenix during the twelve months ended June 2010. [SWG Response to RUCO DR 6-1 and included attachment] Heating degree day (HDD) is a standard measurement of the demand for energy needed to heat a home or business. Heating degree days are defined relative to a base temperature - typically the outside temperature above which a building needs no heating. For example, if the baseline temperature is 65 degrees, and the average ambient (outside) temperature during a given day is 55, that day will result in a calculated HDD of 10. HDD can be added over time; for instance, the HDD for each day during a month can be summed, to arrive at the total HDD for a particular month, and the process can be repeated for all 12 months to develop the total HDD for a given year. In turn, the HDD-based estimate of the heating requirements during any given 12 month period can be compared to the analogous number for a "normal" year, to determine the extent to which heating demand during the time period in question was larger or smaller than normal.

**Q. Have you compared the Heating Degree days during the test year to those proposed by the Company, based upon an adjusted 10-year average?**

A. Yes. As shown in the table below, the Company started with the 10-year average, which it then adjusted to remove certain alleged "outliers", resulting in a claimed "normal" level of 1,440 HDD for Tuscon, and 904 HDD for Phoenix. [Id.] The actual test year HDD for Tucson was 102 HDD greater than SWG's proposed "normal" HDD based on its proposed adjusted 10-year average; a difference of 7.1%. Similarly, during the test year the HDD for Phoenix was 59 HDD greater than SWG's proposed 10-year adjusted average, a difference of 6.6%.

**Q. Do you agree with the Company's approach to this issue?**

A. No. I agree the test year was a bit colder than normal, and I agree it would be reasonable to adjust the test year based upon a reasonable measure of "normal" weather. However, I don't agree with the specific calculations put forth by the Company. First, I think 10 years is too short a period to develop a reliable estimate of normal weather. Second, the proposed adjustment to remove supposed "outliers" has the effect of distorting the calculations, pushing the so-called "normal" measure of HDD farther from a true norm.

The problem is shown in the table below:

| | Tucson CHDD | Test Year Difference | Phoenix CHDD | Test Year Difference |
|---|---|---|---|---|
| Test Year | 1,542 | | 951 | |
| SWG Adjusted 10-Year Average | 1,440 | 7.1% | 892 | 6.6% |
| 10-Year Average | 1,458 | 5.8% | 904 | 5.1% |
| 15-Year Average | 1,450 | 6.3% | 922 | 3.1% |
| 20-Year Average | 1,444 | 6.7% | 924 | 2.8% |
| 25-Year Average | 1,438 | 7.2% | 922 | 3.1% |
| 30-Year Average | 1,465 | 5.2% | 923 | 3.0% |

Source: SWG Response to RUCO DR 6-1

As shown in the table, the unadjusted 10 year average for Tucson was 1,458 HDD – just slightly higher than the 15 year average of 1,450, the 20 year average of 1,444 and the 25 year average of 1,438. The unadjusted 10 year average is a bit lower than the 30 year average of 1,465. I would argue that a 10 year period is too short to consistently provide a reliable estimate of "normal" weather. The Company apparently agrees, since it felt compelled to adjust the actual 10 year data to remove certain alleged "outliers." Whatever the merits of their reasoning, the end result is not appropriate – their proposed adjustment to the data results in numbers that are clearly not normal – particularly for Phoenix. More specifically, the Company is proposing to replace the 10 year average with an adjusted figure of 892 HDD for Phoenix, which is lower than the actual 10, 15, 20, 25 and 30 year averages.

The unadjusted test year data reflects the impact of gas sales attributable to the actual HDD of 1,542 and 951 in Tucson and Phoenix respectively. When compared to other time periods, it is apparent that the test year was somewhat colder than normal – but the extent of the discrepancy varies, depending on the specific time period used for the evaluation. For instance, the test year HDD were 5.8% and 5.1% colder than the unadjusted 10 year average, for Tucson and Phoenix, respectively. However, the test year HDD were 6.7% and 2.8% colder than the unadjusted 20 year average, for Tucson and Phoenix, respectively.

In essence, the data confirms that the test year was a bit colder than "normal" and thus people in Phoenix and Tucson undoubtedly used somewhat more gas than "normal" during the test year. However, the Company is going too far with its proposed adjustment, creating an unrealistic picture of a test year in which the weather was unusually warm and balmy during the winter, creating hypothetical condition in which people use relatively little gas. The effect of this proposal is to spread the Company's test year operating costs over an artificially small volume of gas, translating into higher than appropriate proposed rates. If approved, this will allow the Company to recover its revenue requirement over an artificially low volume of gas – one which is lower than the actual volume used during the test year, as well as one that is lower than the volume which will likely occur in future years – assuming weather patterns in the future are similar to the actual long term averages reflected in the above table.

**Q. If the Commission wants to adjust the test year to reflect normal weather, what time period do you recommend be used to develop the adjustment?**

A. I recommend using the 30-year average. This provides better, more stable measure of "normal" weather. However, I would not object to using a somewhat shorter time period, such as the 20-year average. Either way, I recommend relying on the actual, unadjusted historical data for the time period in question, thereby avoiding the need to debate whether or not particular bits of data represent an anomaly, which justifies removal from the data as an "outlier". As well, with a longer time period, even if someone insists on removing outliers, the impact of this step will be relatively modest, since you are working with a larger body of data, in which any one outlier will have relatively limited impact.

**Q. Have you estimated the impact of revising Adjustment No. 1 to reflect the use of a more appropriate measure of "normal" weather, based upon a longer time period than ten years?**

A. Yes. I have estimated the impact of using a 30-year weather average, rather than the Company's adjusted 10-year average. As shown on Schedule BJ-5 column (A), my estimate for this adjustment works out to $420,471,656. Keep in mind that this adjustment is calculated residually. It is the difference between test year gross revenues and adjusted margin. The adjusted margin of $414,285,202 is shown Schedule BJ-4, column (C). The adjusted margin was estimated using the 30-year weather average, and compares to SWG's adjustment margin of $410,912,098.

**Q. Can you now discuss SWG's second income adjustment - Purchased Gas Cost?**

A. Yes. As I just mentioned, this adjustment simply adds back recorded test year purchased gas costs, and is consistent with the methodology used to develop Adjustment No. 1. Accordingly, I have included this adjustment on Schedule BJ-5.

**Q. Can you now discuss SWG's third income adjustment - Labor/Loading Annualization?**

A. Yes. This adjustment consists of a $7,852,483 increase to operating expenses. [Schedule C] This adjustment includes a salary annualization component for all employees with salaries in effect at the end of the last pay period beginning prior to June 30, 2010, and a similar labor loadings annualization component. The adjustment also includes "an estimated 1.5 percent general wage increase to be effective in June 2011, along with additional wage increases as a result of within-grade movement during the twelve months subsequent to the end of the test year." [Aldridge Direct, pp. 6-7]

**Q. What is your conclusion regarding this adjustment?**

A. I disagree with the portion of this adjustment that is based upon pay increases that went into effect after the end of the test year. Accordingly, I have incorporated a similar adjustment in my revenue requirement analysis which excludes the portions of the Company's proposed adjustment attributable to the post test-year wage increases. This modified adjustment results in a $5,707,094 increase to operating expenses, as shown on BJ-7, page 1 in column (C), rather than the $7.9 million increase proposed by the Company.

**Q. Can you now discuss SWG's fourth income adjustment - Call Center and Support Allocation and Annualization?**

A. SWG explains there are two parts to this adjustment. One part allocates a portion of the call center and customer support costs (which are incurred on a systemwide basis) to Arizona customers. The other part is an annualization adjustment, to reflect the impact of contract employees who were present at the end of the test year, "to synchronize with the number of Company call center employees at the end of the test year". [Id., p. 9] This adjustment increases operating expenses by $690,350. [Schedule C-2] SWG proposed a similar adjustment in its previous rate case; it doesn't seems to have been disputed by the parties, and apparently was accepted by the Commission. I have included it in my recommended revenue requirements, as shown on BJ-7, page 1 in column (D).

**Q. Can you now discuss SWG's fifth income adjustment - Cost of Service Analysis?**

A. This adjustment results in a $252,777 increase in operating expenses. [Schedule C-2] This appears to be something of a catch-all adjustment which includes: 1) the removal of certain costs for which SWG is not requesting recovery; 2) an adjustment to ensure "a full year's worth of expense is reflected, no more and no less"; 3) annualization of certain items with significant cost changes; and 4) removal of material, non-recurring costs. [Aldridge Direct, p. 10]

**Q. What do you conclude regarding this adjustment?**

A. The process by which SWG calculated this adjustment is not entirely clear to me, and I have not studied it in depth. However, the adjustment does not seem to go beyond the end of the test year and it appears reasonable based on the provided description. I have included it in my recommended revenue requirements, as shown on BJ-7, page 1 in column (E).

**Q. Can you now discuss SWG's sixth income adjustment - Employee Vehicle Compensation?**

A. This adjustment reduces operating expenses by $227,232. [Schedule C-2] The adjustment removes from test year expenses the cost of Company vehicles related to personal use by employees. [Aldridge Direct, p. 11]

**Q. What do you conclude regarding the vehicle compensation adjustment?**

A. This adjustment appears reasonable, and I have included it in developing my recommended revenue requirements, as shown on BJ-7, page 1 in column (F).

**Q. Can you now discuss SWG's seventh income adjustment - Uncollectible Expense Annualization?**

A. SWG explains:

> Adjustment No. 7 annualizes the recorded amounts in Account 904, Uncollectibles Expenses, to reflect the test year net closing bill write-offs as a percentage of gross revenues. The write-off percent applied to present revenues determines the annualized amount, which is then compared to the recorded uncollectible expense to determine the adjustment amount. [Aldridge Direct, p. 11]

The proposed adjustment consists of a $436,181 increase to operating expenses. [Schedule C-2]

**Q. What is your conclusion regarding this adjustment?**

A. The write off percent the Company is using is 0.2543%, which appears to be reasonable, and is consistent with the Company's historical experience.

**Q. Can you now discuss SWG's eighth income adjustment - Leak Survey and Repair?**

A. This adjustment reduces operating expenses by $178,871. The adjustment reduces test year accelerated leak survey and leak repair expense related to Aldyl A and Aldyl HD pipe. SWG states that this adjustment is consistent with prior Commission decisions. [Aldridge Direct, p. 11]

**Q. What is your conclusion regarding this adjustment?**

A. I have not studied this adjustment in depth, but it appears reasonable. I have included it in developing my recommended revenue requirements, as shown on BJ-7, page 1 in column (H).

**Q. Can you now discuss SWG's ninth income adjustment - Injuries and Damages?**

A. SWG explains: "Adjustment No. 9 adjusts the recorded self-insured accruals charged to Account 925 (Injuries and Damages) during the test year to a normalized level". [Id.] The

Company uses a ten-year average of self-insured amounts to normalize its injuries and damages expense. [Id. p. 13] The effect of the adjustment is a $689,621 increase in operating expenses. [Schedule C-2]

**Q. What is your conclusion regarding this adjustment?**

A. By using a 10 year average of self-insured accruals, SWG's approach is generally consistent with the methodology approved by the Commission in the Company's last rate case. The Commission explained: "We agree with Staff that the 10-year normalization of recorded injuries and damages expenses for Southwest Gas is an appropriate means of calculating the Company's likely pro forma expenses for the period rates will be in effect from this case". [Decision 70665, p. 14]

However, in that case the Staff recommended, and the Commission approved, the removal of one extraordinary item. The claim involved an incident in 2005 when a leaking gas fire severely burned several people, and resulted in a $10 million settlement paid by SWG. [Id., p. 13] Staff argued that the payment represented an abnormal expense that was not likely to be experienced in the future. [Id., p. 14] The Commission agreed: "We believe Staff has presented a reasonable analysis of the issue by excluding the costs for what appears to be an extraordinary event that occurred in 2005, but is not likely to occur on a going-forward basis". [Id.]

I conclude that injuries and damages expense should again be calculated in the manner approved by the Commission in Decision 70665, using a long term average that excludes the extraordinary payment made in 2005. During the discovery process, SWG recalculated its injuries and damages expense (Account 925) in a manner consistent with Staff's approach in the prior rate case. [See, ACC-STF-6-12 Injuries and Damamges.xlsx, provided in response to Staff DR 6-12] As shown on those calculations, SWG's injuries and damages expense during the test year was $7,229,013. These total Account 925 expenses include the reserve for self insurance, as well workman's comp expenses, legal and other costs. The Company proposed $7,918,534 for Account 925, resulting in SWG's $689,621 pro forma adjustment. Using Staff's methodology from the prior case, SWG calculated $7,411,513 for Account 925, which would require a $182,500 adjustment to the test year injuries and damages expense, rather than the $689,621 adjustment requested by the Company. As shown on Schedule BJ-5, I have included this smaller adjustment in my revenues requirements analysis.

**Q. Can you now discuss SWG's tenth income adjustment - American Gas Association (AGA) Dues?**

A. SWG adjusts its AGA dues expense by removing $16,324, which is the portion of the dues allocated to Arizona that SWG estimates is attributable to AGA's lobbying efforts. [Aldridge Direct, p. 14] The adjustment is based on an estimate that 6.09% of AGA's budget is used to fund lobbying efforts. [See, Schedule C-2, Adjustment No. 10, Sheet 1]

**Q. What is your conclusion regarding this adjustment?**

A. I disagree with SWG's exclusion of just 6.09% of AGA dues. This exclusion is not sufficient, in my opinion. I say this for two primary reasons. First, a large, but indeterminate, portion of AGA's activities are designed to influence government policy, both directly (supporting industry lobbying and public relations efforts with respect to Congress and various State and Federal agencies) and indirectly (through various types of policy studies and research which support those efforts). The Company has focused on a narrow subset of this overall range of activities – those which are most directly related to influencing legislation, but the entire range of activities is primarily the responsibility of, and for the benefit of, stockholders.

Second, this organization's activities would continue whether or not SWG or any other Arizona utility belongs to the organization, or contributes to the budget for these activities.

Thus, it is hard to say these costs are necessary for the Company to incur, or that membership offers any significant benefits to the Company's ratepayers. Taking both of these problems into account, I recommend that ratepayers be required to bear no more than a reasonable portion of these dues.

**Q. What percentage of AGA dues did the Commission allow in SWG's previous rate case?**

A. The Commission accepted Staff's recommendation to disallow 40% of AGA dues as a reasonable approximation of the amount for which ratepayers receive no benefit. [Decision 70665, p. 12] Staff's recommendation was based on two NARUC sponsored "Audit Reports of the Expenditures of the AGA", as well as information provided in AGA's 2007 and 2008 budgets. [See, Smith Direct, Docket No. G-01551A-07-0504, p. 42] As explained by the Commission:

> Staff claims that its recommended 40-percent disallowance is consistent with a March 2005 NARUC Audit Report that quantified AGA function categories that Staff believes should not be paid by ratepayers. The categories cited by Staff are: Public Affairs (24.13 percent); Corporate Affairs and International (10.54 percent); half of General Counsel and Corporate Secretary (2.6 percent); and Marketing (2.37 percent). (Id. at RCS-2, Sched. C-6.) Staff contends that the 39.64-percent total represented by these activities supports its recommended disallowance. Moreover, according to Mr. Smith, based on the 2007 and 2008 AGA budgets, the recommended dues disallowance would be 13.29 percent and 46.19 percent, respectively. [Decision 70665, p. 12]

**Q. Did SWG provide any recent AGA budget information that would allow a similar computation as those provided by Staff in the prior rate case?**

A. Yes. During the discovery process, SWG provided AGA's actual and forecasted expenditures for 2009 and 2010, respectively.

| AGA Categories of Expenses | 2009 | Percent | 2010 (forecast) | Percent |
|---|---|---|---|---|
| Public Affairs | $6,087,552 | 22.98% | $6,143,000 | 23.87% |
| Policy, Planning & Regulatory Affairs | 4,277,647 | 16.15% | 4,427,000 | 17.20% |
| Market Development | - | 0.00% | - | 0.00% |
| Corporate Affairs | 2,880,397 | 10.87% | 2,354,000 | 9.15% |
| Operations & Engineering Management | 5,474,235 | 20.67% | 5,085,000 | 19.76% |
| Industry Finance & Administrative | 1,027,748 | 3.88% | 1,129,000 | 4.39% |
| General Counsel | 1,172,072 | 4.42% | 1,067,000 | 4.15% |
| General and Administrative | 5,569,647 | 21.03% | 5,535,000 | 21.50% |
| Total | $26,489,298 | 100.00% | $25,740,000 | 100.00% |

Summing the percentages for Public Affairs, Corporate Affairs, and half of General Counsel results in a 36.07% and 35.08% disallowance based on 2009 and 2010 data, respectively. Based on this data, I conclude that 35% is a reasonable estimate of the amount of dues that should not be born by ratepayers. Accordingly, I have removed 35% of AGA dues, which results in an Arizona-specific adjustment of $93,815, as Shown on Schedule BJ-5.

**Q. Can you now discuss SWG's eleventh income adjustment - Paiute Pipeline/SGTC Annualization?**

A. Yes. The adjustment consists of a $44,593 increase to expenses. [Schedule C-2] SWG explains:

> Adjustment No. 11 annualizes the system allocable A&G amounts allocated to Paiute through the MMF allocation methodology, the insurable property factor, and the rent revenue that Southwest Gas receives from Paiute for the test year ended June 30, 2010. [Aldridge Direct, pp. 17-18]

SWG states that the methodology used for this adjustment is the same as the methodology it used in previous rate cases. [Id., p. 18] The analogous adjustment made by SWG in it's last rate case was not discussed by the Commission in Decision 70665. Therefore, it appears that a similar adjustment has been implicitly approved by the Commission.

**Q. What is your conclusion regarding this adjustment?**

A. Although I have not studied this adjustment in depth, it appears reasonable, and I have included it in my analysis, as shown on Schedule BJ-5.

**Q. Can you now discuss SWG's twelfth income adjustment - Rate Case Expense?**

A. Yes. This adjustment increases operating expenses by the estimated costs of this rate case, including printing, postage, court reporting, noticing, publication, travel and outside consultants, amortized over a three year period. [Id.] The $33,386 adjustment is the difference between the computed amortization amount and the amount of rate case expense from the prior proceeding which was amortized on the Company's books during the test year. [Id.] This adjustment is consistent with the methodology used by SWG in the last rate case, which appears to have been implicitly approved by the Commission.

**Q. What is your conclusion regarding this adjustment?**

A. This adjustment appears reasonable, and I have included it in my analysis, as shown on Schedule BJ-5.

**Q. Can you now discuss SWG's thirteenth income adjustment - Depreciation and Amortization Expense Annualization?**

A. Yes. This adjustment consists of a $3,135,177 increase to operating expenses. [Schedule C-2]

> Adjustment No. 13 annualizes depreciation and amortization expense based on adjusted plant in service at June 30, 2010, using currently approved depreciation rates. ...This adjustment is necessary to synchronize the depreciation and amortization expense with the plant in service at the end of the test year, as adjusted. ... [P]lant that is placed in service or retired after the beginning of the test year has a partial year's depreciation expense recorded on the books of the Company. ...This adjustment... is consistent with the methodology approved by the

Commission in the Company's previous rate cases. [Aldridge Direct, pp. 18-19]

**Q. What is your conclusion regarding this adjustment?**

A. The general approach used by SWG seems reasonable, and I have included a similar adjustment in my analysis. However, in calculating my recommended adjustment, I used my recommended adjusted plant balances. As I explained previously, the latter amounts exclude certain post test-year additions and retirements proposed by SWG. As shown on Schedule BJ-5, my adjustment increases operating expenses by $2,481,107, which is substantially lower than SWG's proposed $3,135,177 adjustment.

**Q. Can you now discuss SWG's fourteenth income adjustment - Property Tax Annualization?**

A. Yes. SWG annualizes property taxes on the Company's adjusted investment in plant and materials as of the end of the test year. [Aldridge Direct, p. 20] The company estimated "full cash value" by adding materials and supplies to, and subtracting transportation equipment and land rights from, its adjusted test year net plant in service. "The estimated cash value is then multiplied by the 2011 assessment rate of 20 percent to determine the assessed value". [Id.] SWG multiplies the resulting assessed value by the currently effective property tax rate of 10.1263 percent to determine the annualized property tax expense. [Id.] This adjustment increases operating expenses by $1,457,495. [Schedule C-2]

**Q. What is your conclusion regarding this adjustment?**

A. I disagree with using the 2011 assessment ratio, because this goes too far beyond the test year. Property tax reform legislation passed in 2005 reduced the assessment ratio on class one property (business) from 25% to 20% over a ten-year period. [An Explanation of Arizona Property Taxes, 2010 Edition, p. 4] Legislation passed during the 2007 legislative session accelerated the reduction in the class one assessment ratio from a ten year phase down to six years. [Id.] The assessment ratio was reduced to 22% for 2009, 21% for 2010, and 20% for 2011 and later years. [Id.] I have developed an alternative adjustment, as shown on BJ-7, using the 21% 2010 ratio, rather than the 20% 2011 ratio proposed by SWG. Further, my recommended adjustment is based upon my recommended net plant in service amount as of the end of the test year (June 30, 2010), rather than the post-test year adjusted net plant amount proposed by SWG.

As shown on Schedule BJ-5, my recommended adjustment results in a $2,730,392 increase to operating expenses, as compared with the Company's proposed adjustment, which increases operating expenses by $1,457,495. This is a good illustration of one of the points I mentioned earlier in my testimony. In this case, if the Company's proposed post-test year adjustment were allowed, it would substantially reduce the calculated revenue requirement. No one would dispute that the change in the assessment ratio is "known" or that the impact is "measurable." But, I believe the proposed adjustment should be rejected because it relates to changes which occurred after the test year, consistent with my recommendations concerning other adjustments which should also be limited to events which occurred before the end of the test year.

**Q. Can you now discuss SWG's fifteenth income adjustment - Interest on Customer Deposits?**

A. Yes. This adjustment consists of a $292,612 increase to operating expenses. [Schedule C-2] SWG explains:

> Adjustment No. 15 synchronizes interest expense on customer deposits with the amount of customer deposits used as a rate base reduction. The customer deposit balance used as a rate base reduction is multiplied by the customer deposit rate of six percent to determine the adjusted interest on customer deposit balance expense. The difference between the

> adjusted amount and the recorded amount is the adjustment. Consistent with prior Commission decisions, interest expense is treated as an above-the-line expense. [Aldridge Direct, p. 20]

**Q. What is your conclusion regarding this adjustment?**

A. This type of adjustment is appropriate, in order to include the cost of interest on customer deposits (since this isn't included in the cost of capital and rate of return calculations), and to synchronize the level of interest on customer deposits with the end of the test-year rate base, and other adjustments that are tied to this cut off date. Accordingly, I recommend the Commission approve this adjustment. I have incorporated this adjustment into Schedule BJ-5.

**Q. Can you now discuss SWG's sixteenth adjustment - Surcharge Adjustment?**

A. This adjustment is intended to remove from base rates expenses that are recovered through various surcharges. [Aldridge Direct, p. 21] The adjustment results in a $3,798,881 reduction to operating expenses. [Schedule C-2]

**Q. What is your conclusion regarding this adjustment?**

A. This adjustment is necessary to prevent double recovery of expenses associated with R&D, TRIMP and Demand Side Management programs, since these expenses are being recovered through separate surcharges. I have included it in developing my recommended revenue requirements, as shown on Schedule BJ-5.

**Q. Are there any other expense related adjustments you would like to discuss?**

A. Yes. I would like to discuss several adjustments related to certain SWG incentive compensation and retirement plans. SWG has several retirement plans. The Company's Employee Investment Plan (EIP) is a 401(k) plan under which SWG provides matching contributions equal to one-half the deferred amount up to 7 percent of their annual salary. [SWG Response to Staff DR 1-50, p. 3] Officers are not eligible for matching contributions under the EIP. [Id.] SWG's

Defined Benefit Retirement Plan (DBRP), is a retirement plan with benefits based on an employee's years of service, up to a maximum of 30 years, and the 12-month average of the employee's highest five consecutive years salaries, excluding bonuses, within the final ten years of service. [Id. p. 2] The DBRP is available to all employees. [Id.] SWG's Executive Deferral Plan (EDP), is only available to executives at the vice president level and above. [Id.] Under the EDP, executives may defer up to 100 percent of their annual compensation and 100 percent of the cash portion of their variable at-risk compensation. The Company provides matching contributions similar to contributions made under the Company's 401(k) plan. [Id.] Finally, SWG provides a Supplemental Executive Retirement Plan (SERP) to executives. SWG explains:

> Benefits from the plan, when added to the benefits received under the basic retirement plan, will equal 60 percent of annual compensation for senior executives, and 50 percent of annual compensation for all other officers. Annual compensation is defined as the 12-month average of the highest 36 months of salary. [Id.]

SWG's incentive compensation plans include the Management Incentive Plan (MIP), the Restricted Stock/Unit Plan (RSUP), the Aspire program (Aspire), and the Going the Extra Mile (GEM) program. [Id., pp. 3-5] The MIP provides compensation based on certain goals and performance objectives. [Id., p. 3] The MIP is based on performance on four measures: customer satisfaction, customer-to-employee ratio, return on equity, and operating costs. [Id.] "Forty percent of the total award earned under the MIP is paid in cash immediately following the financial close of the most recent calendar year. The remaining 60 percent is issued as performance shares and vest three years in the future". [Id.] The MIP is measured as a percentage of base salary and varies by title, ranging from 10% for key management employees, to 115% for the CEO. [Id.] The MIP is only available to executives and upper-level management.

SWG's RSUP replaced the Company's Stock Incentive Plan in 2007. [Id., p. 4] The RSUP is only available to officers and other key management employees. The dollar amount of the award under the RSUP is "converted to restricted share units using the market price on the date such awards are approved by the Company's Board of Directors". [Id.]

Aspire is only available to salaried employees who do not qualify for the MIP. [Id.] To qualify, an employee must be recommended in writing by an officer of the Company. Awards range from $2,500 to $7,500 and are granted to individuals "who go significantly above and beyond their job responsibilities with substantial contributions toward the overall betterment of Southwest Gas, as well as demonstrate dedication to the goals and philosophy of the Company". [Id., p. 5]

GEM is similar to Aspire, but is tailored towards "non-exempt" (non-salaried) employees. Employees nominated are evaluated on: productivity; customer service; innovation; leadership; and, character. [Id.] The number of employees who may be recognized each year is limited to one hundred non-exempt employees Company-wide. "The number of awards allocated to each jurisdiction is determined by the number of non-exempt employees in that jurisdiction as a percent of the total non-exempt employee population company wide". [Id.]

**Q. How has the Commission traditionally handled retirement plans in SWG rate cases?**

A. The Commission has disallowed 100% of SERPs expenses in prior SWG rate cases. In SWG's previous rate case, SWG argued that the Company's SERP was "vital to the Company's attraction and retention of highly-skilled employees, which ultimately benefits customers". [See, Decision 70665, p. 17] Staff and RUCO argued that the Commission had disallowed SERPs expenses in prior cases involving SWG, UNS Gas, UNS Electric, and APS, and that SERPs were not necessary costs since high-ranking officers were already fairly compensated through their salaries and an array of benefits. [See, Id.] The Commission quoted the following from previous rate cases:

> [W]e believe that the record in this case supports a finding that the provision of additional compensation to Southwest Gas' highest paid employees to remedy a perceived deficiency in retirement benefits relative to the Company's other employees is not a reasonable expense that should be recovered in rates. Without the SEW, the Company's officers still enjoy the same retirement benefits available to any other Southwest Gas employee and the sttempt to make these executives "whole" in the sense o€ allowing a greater percentage of retirement benefits does not meet the test of reasonableness. If the Company wishes to provide additional retirement benefits above the level permitted by IRS regulations applicable to all other employees it may do so at the expense of its shareholders. However, it is not reasonable to place this additional burden on ratepayers. [Id., pp. 17-18, quoting from SWG Decision 68497, p. 19]

> [T]he issue is not whether UNS may provide compensation to select executives in excess of the retirement limits allowed by the IRS, but whether ratepayers should be saddled with costs of executive benefits that exceed the treatment allowed for all other employees. If the Company chooses to do so. shareholders rather than ratepayers should be responsible for the retirement benefits afforded only to those executives. We see no reason to depart from the rationale on this issue in the most recent Southwest Case rate case, and we therefore adopt the recommendations of Staff and RUCO and disallow the requested SEW costs. [Id., p. 18, quoting from UNS Decision 70011, p. 28]

The Commission concluded that no material factual differences existed in SWG's prior rate case that would require a departure from past decisions on this issue, and denied the inclusion of SERP expenses in rates. [Id., pp. 17-18]

**Q. What do you conclude regarding SWG's SERP expenses?**

A. I conclude that SWG's SERP's expenses should once again be disallowed. As with SWG prior rate case, there are no material differences that would justify a departure from past precedent. During the discovery process, SWG was asked to identify the amount of SERP expense including in its filing. [See, RUCO DR 4-3 and Staff DR 17-1] SWG estimates that $1,725,839 in SERP expenses are included in its filing. [SWG response to Staff DR 17-1 and included attachment] However, SWG explains:

> The precise amount of SERP requested for recovery is impacted by numerous calculations within the cost of service model, including cash working capital and the labor loading allocations. The attached spreadsheet, which does not reproduce every calculation within Southwest Gas' cost of service model, but shows the largest components, shows an impact of approximately $1.73 million. Any changes to the allocation methods, charged labor amounts, or cash working capital components will impact the exact amount of SERP requested for recovery in Arizona. [Id.]

As shown on Schedule BJ-5, I have included an adjustment which removes the Company's estimated test year SERPs expenses. This adjustment results in a $1,725,839 decrease to operating expenses.

**Q. How has the Commission traditionally handled incentive compensation plans in SWG rate cases?**

A. In the past, the Commission has disallowed 50% of SWG's MIP expenses, and 100% of SWG's other executive stock-based incentive plans. In SWG's prior rate case, the Company argued that annual variable pay was "less than the market average compared to other western utilities, including Pinnacle West and UniSource". [See, Id., p. 15] Staff and RUCO argued that the MIP goals benefit both ratepayers and stockholders, and that certain criteria primarily benefit stockholders. [See, Id.] The Commission noted that in several earlier rate cases, it had disallowed 50% of MIPs expenses "on the basis that such programs provide lpproximately equal benefits to shareholders and ratepayers because the performance goals relate to Financial performance and cost containment goals as well as customer service elements. [Id. p. 16] The Commission quoted from its decision in an earlier SWG rate case, in which it concluded:

> In Decision No. 64 172, the Commission adopted Staffs recommendation

> regarding MIP expenses based on Staffs claim that two of the five performance goals were tied to return on equity and thus primarily benefited shareholders. We believe that Staffs recommendation for an equal sharing of the costs associated with MIP compensation provides an appropriate balance between the benefits attained by both shareholders and ratepayers. Although achievement of the performance goals in the MIP, and the benefits attendant thereto, cannot be precisely quantified there is little doubt that both shareholders and ratepayers derive some benefit from incentive goals. Therefore, the costs of the program should be borne by both groups and we find Staffs equal sharing recommendation to be a reasonable resolution. [Id., quoting Decision 68487, p. 18]

With regard to other stock incentive plans, the Commission held:

> On the same basis, we will also disallow 100 percent of the Southwest Gas stock incentive plan ("SIP"). The costs elated to similar incentive plans were recently rejected for APS and UNS Electric. (See Ex. S-12 at 32-34.) As was noted n the APS case, stock performance incentive goals have the potential to negatively affect customer service, and ratepayers should not be required to pay executive compensation that is based on the performance of the Company's stock price. [Id., p. 16, f.n. 4]

**Q. What do you conclude regarding SWG's incentive compensation plans?**

A. I conclude that there has been no change in facts or circumstances that would require a deviation from the Commission's established practice of disallowing 50% of SWG's MIP expenses, and 100% of other executive stocked-based incentive compensation. SWG's MIP goals still include criteria that primarily benefit stockholders. Further, a significant portion of MIP compensation is in the form of stock. As the Commission has noted, when the value of incentive compensation is tied to the value of the Company's stock price, there is the potential for a conflict with customer service goals, and ratepayers should be required to pay for such executive compensation.

**Q. What amount of MIP expense is SWG seeking to recover in this proceeding?**

A. During the discovery process, SWG was asked to identify the amount of all incentive compensation included in its revenue deficiency analysis. [See, RUCO DR 4-2] SWG replied: "The amounts of incentive compensation are embedded into total labor costs, and cannot be separately identified by a cell reference to any tab in the file 2010 Arizona Deficiency.xlsx". [SWG reply to RUCO DR 4-2] However, in response to another data request, SWG provided the amount of incentive compensation recorded during the test year. [See, SWG response to Staff DR 17-2] SWG is requesting recovery of $3,536,498 in MIP expenses in this proceeding. [SWG response to Staff DR 17-2, and included attachment] As shown on Schedule BJ-5, I have included an adjustment to remove 50% ($1,768,249) from operating expenses.

**Q. What amount of other (non-MIP) executive stocked-based incentive compensation is SWG seeking to recover in this proceeding?**

A. As I explained earlier, the Commission disallowed 100% of SWG SIP expenses in the prior rate case. SIP has been replaced with SWG's RSUP program. SWG has included $1,033,831 in RSUP expenses in this proceeding. [Id.] Accordingly, as shown on Schedule BJ-5, I have included an adjustment which reduces operating expenses by $1,033,831.

## VI. Fair Value Rate of Return

**Q. Can you begin your discussion of the fair value rate of return (FVROR) by explaining how SWG developed its request?**

A. SWG started by calculating the difference between its proposed OCRB and FVRB. [Hevert Direct, p. 52] SWG then "weighted the OCRB using the Company's proposed capital structure weighting, which includes the debt and equity component of the OCRB, and the appreciation in the value of the assets which, when added to the OCRB, results in the FVRB". [Id.] The Company applied its cost of debt to the debt component of the OCRB, its proposed ROE to the equity component of the OCRB, and 50% of an estimate of the risk free rate of return to the difference between FVRB and OCRB. [Id., pp. 52-53] The Company estimated the nominal risk free rate of return by averaging the short-term projected yield on 30-year Treasury bonds and the long-term projected yield on the 30-year Treasury bonds. [Id. p. 53] This nominal risk free rate was then adjusted by the rate of inflation. [Id.] SWG estimated the inflation rate by averaging the Blue Chip Financial Forecast estimate of the long term change in CPI for 2017 through 2020, and the EIA Annual Energy Outlook estimate of the change in CPI for the period from 2010 through 2035. [Id.] The Company's calculations result in a cost rate of 1.24% to be applied to the difference between OCRB and FVRB.

**Q. The Commission's traditional method of calculating a rate of return for application to a fair value rate base has been heavily litigated in recent years. Can you briefly explain how that recent litigation began?**

A. On September 30, 2005 the Commission issued Decision No. 68176 granting a rate increase to Chaparral City Water Company. ("Chaparral") In accordance with longstanding precedent, the Commission multiplied the weighted average cost of capital (WACC) by the original cost rate base (OCRB) to estimate the needed operating income. [Decision 68176, pp. 26-28] The Commission then divided that required level of operating income by the fair value rate base (FVRB) to arrive at a fair rate of return. [Id., p. 28] The fair rate of return was then applied to the FVRB to determine operating income for rate making purposes. Chaparral subsequently filed an appeal with the Arizona Court of Appeals that, among other things, has resulted in the Commission rethinking its approach to developing the rate of return it applies to the FVRB.

**Q. Did the Court of Appeals address the methodology for determining a fair rate of return?**

A. Yes. First, the court recognized that the Arizona Constitution gives the Commission "exclusive and plenary" authority to prescribe rates for public utilities within the state. [Chaparral City Water Company v. ACC, 1 CA-CC 05-0002, Memorandum Decision, p. 5] However, the court also noted that the state Constitution specifically requires the Commission to ascertain the "fair value" of the utility's property. [Id., p. 6]. Article 15, Section 14 of the Arizona Constitution states:

> The corporation commission shall, to aid it in the proper discharge of its duties, ascertain the fair value of the property within the state of every public service corporation doing business therein; and every public service corporation doing business within the state shall furnish to the commission all evidence in its possession, and all assistance in its power, requested by the commission in aid of the determination of the value of the property within the state of such public service corporation.

The court stated that this provision has been interpreted as requiring the Commission to determine the fair value of the utility's property, and to use that finding as the rate base in setting rates. [Id., citing Simms v. Round Valley Light & Power Co., 294 P. 2nd at 382] The court noted that the Arizona Constitution does not define fair value, but stated that it is "generally recognized as being based on both original cost and reproduction cost". [Id., p. 4, f.n. 4]

On appeal, Chaparral argued that operating income should be determined by multiplying the FVRB by the rate of return, and that "the rate of return is generally equal to a utility's weighted cost of capital". [See, Id., p. 7] The Commission responded by asserting that it was not bound to use the weighted average cost of capital as the rate of return to be applied to FVRB. The court agreed, stating:

> If the Commission determines that the cost of capital analysis is not the appropriate methodology to determine the rate of return to be applied to the FVRB, the Commission has the discretion to determine the appropriate methodology. [Id., p. 13]

The court also noted that “rates of return vary, depending upon the type of rate base used”. [Id., p. 7, f.n. 5] However, the Court of Appeals found that the Commission's method for determining operating income ignored fair value rate base, in violation of the Arizona Constitution.

> Here, the Commission determined Chaparral City's operating income based on the OCRB and then mathematically calculated a corresponding rate of return had the income been based on the FVRB. Under this method, Chaparral City's operating income, and therefore its revenue requirements and rates, were based not on the fair value of its property, but on its OCRB, which does not comport with the Arizona Constitution. [Id., p. 12]

Accordingly, the court remanded the matter to the Commission for further determination.

**Q. What did the Commission decide on remand?**

A. On July 28, 2008, the Commission issued Decision No. 70441, in which it stated:

> Our previous method was a shorthand method of ensuring that inflation would only influence one piece of the ratemaking formula - the rate of return. However, the Court of Appeals has made it clear that, under our constitution, the "inflation component" belongs in the FVRB. Accordingly, in order to avoid over-counting the effect of inflation, it is necessary for us to ensure that the rate of return does not also carry an inflation component. [Decision No. 70441, p. 33]

The Commission noted that there are many methods that could be used to determine an appropriate FVROR, including the methods advocated by Staff and RUCO in the Chaparral case. [Id., p. 34] Staff's method "adjusts the cost of capital to reflect the cost of the portion of the capital structure that is funded by neither debt nor equity, but exists due to inflation". [Id.] RUCO's method "analyzes the inflation contained in the estimates of cost of equity and adjusts the cost of capital to eliminate the inflation component". [Id.] Ultimately, the Commission used a method similar to the one I recommended on behalf of RUCO, but with a significant modification, which limited its scope. [Id.]

**Q. Can you describe the method that was recommended by RUCO in the Chaparral remand case?**

A. Yes. As I explained in that proceeding, in jurisdictions where the rate base is entirely based on original cost data, it is common practice to apply a rate of return which is based upon the weighted average cost of capital, derived in large part using accounting data (e.g. debt and equity amounts; embedded interest rates). In contrast, where the rate of return will be applied to the current value of the utility's property, a lower return is appropriate – one that provides the utility with an opportunity to recover its actual capital costs, without overcompensating for inflation.

A rate of return that is fair to both customers and stockholders can be derived from the weighted average cost of capital by simply subtracting an amount related to the rate of inflation, thereby preventing a double counting of compensation for inflation. For example, assume the weighted average cost of capital is 7.50%, and the relevant inflation rate is 2.5%, then a fair return on the fair value rate base would be 5.00%, or thereabouts.

**Q. Why is it appropriate to remove inflation from the rate of return?**

A. A typical cost of capital, which includes inflation, cannot be applied to the fair value rate base because this would result in a double counting of inflation. A fair value valuation of the rate base tends to be higher than an original cost valuation, because it also reflects the impact of inflation and other factors which tend to contribute to an upward growth in value over time. Economists have long recognized that inflation and other factors which increase the value of an investment will significantly impact an investment's expected return. In turn, these factors affect the present value of the investment. To fully understand this relationship, it is necessary to realize that growth in the value of an investment is a component of the total return achieved by the investor. Indeed, for many so-called growth stocks which pay little or no dividends, virtually the entire return received by the investor results from growth in the market value of the stock (capital gains). The same principle applies to the value of rental property in areas where real estate prices (and/or rents) are escalating – investors will take into account the anticipated growth in the value of their investment – similar to the way growth stocks are evaluated.

Similarly, if the income being generated by a particular investment is expected to grow over time (e.g. rents are increasing), that will tend to push up the current market value of an investment. Investors will accept a lower current return from an investment, if they have reason to believe the return will increase over time.

The current market value of an investment is determined by the net effect of multiple factors, including the current annual income or return (in dollars), expected changes in that income or return, and expected changes in the value of the investment. Thus, real estate investors in areas where demand is growing will often purchase property with an extremely low or negative current cash return, because they anticipate profiting from future growth. Similarly, investors might construct a new office building, despite the fact that the rent payments during the first few years will actually be less than their direct expenses (interest, utilities, taxes, etc.), indicating a negative current level of return – if they expect rents, and/or the value of the property, to increase sufficiently in the future. Investors take into account all aspects of anticipated returns, including past and future trends in market rents, as well as anticipated growth in the value of the building. If the growth expectations are strong enough, investors will accept extremely low or negative returns during the early years, because they anticipate earning an adequate return over the entire life cycle of their investment.

Since the dollar magnitude of the fair value rate base is larger than an original cost rate base, reflecting past growth in the value of the utility's property, and since the future income stream can reasonably be expected to increase in the future, due to inflation and other factors which tend to push up property values as time passes, a 5.00% return on fair value is likely to provide investors with as large a total return (over time) as a 7.50% return applied to an original cost rate base. The exact amounts received by investors may differ somewhat, and they certainly will differ during any specific year, but the key point is that investors will have as strong an opportunity to recover their capital costs and to earn a competitive return through the application of a 5.00% return on an escalating estimate of fair value as with a 7.50% return on the original cost. The regulatory goal of simulating the effects of competitive markets, and compensating investors for the impact of inflation, can be achieved either way.

**Q. Can you explain in greater detail why a fair rate of return applied to a fair value rate base is less than the percentage return which would normally be applied to an original cost rate base?**

A. Yes. If the return is going to be fair to customers as well as to stockholders, it must be lower than the weighted average cost of capital. The same percentage figure cannot be appropriate for application to both the original cost and to the replacement cost of the utility's property, unless these two cost measures happen to be nearly the same.

Another way of seeing why this conclusion is valid is to start with the competitive market result, which is widely accepted as the appropriate standard for utility regulation in nearly all jurisdictions, regardless of whether they use original cost or fair value in developing their rate base calculations. Utilities in Arizona and other states are all competing for investment capital that is being provided in a national market. If the same percentage rates of return were applied to fair value rate bases in Arizona as are applied to original cost rate bases in all other jurisdictions, it is self evident that Arizona investors would be overcompensated.

If the same cost of capital were applied to a fair value rate base as is applied to original cost rate bases in other jurisdictions, Arizona utilities would be provided with an opportunity to earn windfall profits, in comparison with the treatment of utilities in other states, where firms are only given the opportunity to earn a normal, competitive return.

While the Arizona Constitution requires use of a fair value rate base, and that may influence the specific rate of compensation provided to any specific utility during any specific year, it is not necessary or appropriate to provide Arizona utilities with earnings that consistently exceed those earned, on average, by utilities in other states (or which consistently exceed the earnings of the average unregulated firm which operates in competitive markets, adjusted for differences in risk). Yet just such a consistent differential would occur if the same rate of return were applied to fair value in Arizona and to original cost in other jurisdictions.

Aside from differences in risk, the long term average compensation provided to utility investors in Arizona should be roughly equivalent to that paid to investors in other enterprises – assuming comparable levels of risk. Investors in Arizona and in other states should all be given a reasonable opportunity to earn a normal return – a return which is consistent with competitive market levels.

I made that last statement in terms of the long term average, because there could be differences in timing, due to differences in the rate base valuation methodology. The return on investment provided in a fair value rate jurisdiction might be somewhat lower in the initial years, and higher in the later years of any given investment, relative to the timing of the returns received in an original cost jurisdiction, just as investors in growth stocks receive more of their return in later years, as dividends increase, or upon sale of the stock. While the year-to-year pattern of cash flows might differ somewhat depending on the specific rate base methodology, the overall long term average level of compensation paid to investors should be very similar, regardless of whether the rate base is based upon original cost, or fair value.

Consistent with this line of reasoning, it is clear that the appropriate magnitude of the difference between the appropriate rate of return in an original cost jurisdiction and the fair rate of return in a fair value jurisdiction is closely related to the rate of growth in the utility's fair value rate base relative to the original cost of its property. The more rapidly fair value is growing relative to original cost, the less need there is to immediately provide a high level of current income in the form of high percentage return for application to the fair value rate base. This is exactly what we observe in the stock market, where investors are satisfied with relatively lower levels of current income and dividends in growth industries, where the value of the stock and the anticipated future level of dividends are expected to grow over time.

**Q. Can you now describe the modified method the Commission used in the Chaparral case?**

A. The Commission held:

> Although we believe that the cost of debt may reflect the effects of inflation, we are not convinced that the evidence presented in this proceeding is developed sufficiently to make that determination with certainty. Accordingly, while we agree with RUCO that the WACC should be adjusted to remove the inflation component, we believe that the appropriate adjustment in this case is to adjust only the cost of equity component of the WACC. [Id., pp. 36-37 ]

The Commission used a "conservative" inflation estimate of 2.00%, but it only removed the inflation component from the cost of equity component of the WACC. [Id., p. 37]

**Q. Has the Commission's approach to FVROR evolved since the Chaparral remand case?**

A. Yes. The Commission issued an order in SWG's prior rate case on December 24, 2008; several months after the Chaparral remand order. [Decision 70665] The Commission used an approach which was similar to a method proposed by Staff during the Chaparral remand proceeding, and similar to the methodology used by SWG in this proceeding, although the numbers differed.

Specifically, the Staff proposed applying 50% of the risk free rate to the difference between OCRB and FVRB. [See. Id., pp. 30-31] the Staff estimated a risk free rate of 2.50%, and recommended applying one half of this rate (1.25%) to the FVRB increment. [See, Id., p. 31] The Commission accepted the methodology, but adopted a lower return:

> Based on the record before us, we believe that Staffs alternative FVRB recommendation is appropriate, with a slight modification. Although we agree with Staff that it should not be necessary to provide the Company with any additional return on the increment between OCRB and FVRB, because that increment is not financed with investor-supplied funds, we find that applying a 1.00 percent return on the fair value increment is appropriate under the facts of this case and properly accounts for the effect of inflation. [Id., p. 32]

On October 21, 2009, the Commission issued an order in another Chaparral rate case, Docket No. W-02113A-07-0551. In that proceeding Staff recommended a different approach, reducing the WACC by a factor related to inflation. [See, Decision 71308, p. 39] According to the Commission, Staff used the 2.4 percent difference between the spot yields on a 20-year Treasury and a 20-year TIPS as a proxy for expected inflation. [Id., p. 43] "Because one half of the FVRB includes OCRB, which does not include inflation, Staff adjusted the 2.4 percent inflation factor by one-half, resulting in an inflation adjustment to the WACC of 1.2 percent". [Id., pp. 43-44] The Commission noted that there are many methods that could be used to determine an appropriate FVROR. [Id., p. 40] The Commission concluded that Staff's method to apply a downward adjustment for inflation to both the equity and debt components of the WACC "is a reasoned and sound approach to determining a FVROR that equitably balances the needs of the Company and its ratepayers, and results in the setting of just and reasonable rates". [Id., p. 49]

On September 30, 2010, the Commission issued an order in UNS Electric's most recent rate case, Docket No. E-04204A-09-0206. In that proceeding I testified on behalf of RUCO and illustrated several methods the Commission could use to develop an appropriate FVROR. I recommended the Commission place the most weight on an approach that subtracted an inflation component from both the cost of equity and cost of debt, but that did not reduce that inflation component by 50%. The Commission agreed, concluding that

> an unadjusted inflation factor should be subtracted from the entire WACC, to afford appropriate recognition to the fact that inflation exists in both the debt and equity components of the Company's capital structure, and that reconstruction cost estimates likely exceed the rate of inflation ... [Decision 71914, pp. 49-50]

To my knowledge, this is the most recent decision in which the Commission has dealt with these issues.

**Q. Can you elaborate on why it would be inappropriate to cut the inflation component in half?**

A. Yes. As I explained in the UNSE case, while it is true that reproduction cost is only given half weight in developing the FVRB, reproduction cost does not escalate at the inflation rate; to the contrary, reproduction costs tend to grow faster than the rate of inflation, because they don't fully consider the favorable impact of technological changes, increasing economies of scale, and other sources of increased efficiency and cost savings – factors which tend to hold back the pace at which prices escalate over time.

Technological improvements and other sources of cost savings are one of the reasons why the Commission doesn't rely entirely on reproduction cost in developing fair value, and instead weights reproduction cost with original cost. As well, it's important to realize that technological improvements and other sources of cost savings are considered in developing most measures of inflation. In other words, most measures of inflation are relatively low percentage figures, because they take into account the beneficial effects of technological changes and other sources of cost savings which ameliorate or offset other factors which tend to push up reproduction costs.

**Q. If the Commission again decides to remove inflation from the WACC in developing a fair return on fair value, what estimate of inflation would you suggest using?**

A. This is a matter of judgment; the Commission can exercise sound discretion in determining the most appropriate inflation factor to subtract from the weighted average cost of capital. In making this decision, I recommend that the Commission review and consider several of the data series that are publicly available. In particular, I recommend the Commission consider the data published by the Bureau of Labor Statistics for the annual rate of change in the Gross Domestic Product Deflator, as well as annual changes in consumer prices and various measures of producer prices. The following table summarizes historical changes in each of these inflation measures.

| Year | GDP Implicit Price Deflator | CPI All Items | PPI All Comm. | PPI Finished Goods | PPI Mat. and Comp. for Const. |
|---|---|---|---|---|---|
| 1979 | 8.3% | 11.3% | 12.6% | 11.1% | 10.1% |
| 1980 | 9.1% | 13.5% | 14.1% | 13.5% | 8.4% |
| 1981 | 9.4% | 10.4% | 9.2% | 9.3% | 7.2% |
| 1982 | 6.1% | 6.2% | 2.0% | 4.0% | 2.1% |
| 1983 | 4.0% | 3.2% | 1.2% | 1.6% | 2.8% |
| 1984 | 3.8% | 4.4% | 2.4% | 2.1% | 2.7% |
| 1985 | 3.0% | 3.5% | -0.5% | 0.9% | 1.6% |
| 1986 | 2.2% | 1.9% | -2.9% | -1.4% | 0.7% |
| 1987 | 2.9% | 3.6% | 2.6% | 2.1% | 1.6% |
| 1988 | 3.4% | 4.1% | 4.0% | 2.5% | 5.7% |
| 1989 | 3.8% | 4.8% | 5.0% | 5.1% | 4.5% |
| 1990 | 3.9% | 5.4% | 3.6% | 4.9% | 1.3% |
| 1991 | 3.5% | 4.2% | 0.2% | 2.1% | 1.3% |
| 1992 | 2.4% | 3.0% | 0.6% | 1.2% | 1.6% |
| 1993 | 2.2% | 3.0% | 1.5% | 1.2% | 4.3% |
| 1994 | 2.1% | 2.6% | 1.3% | 0.6% | 3.5% |
| 1995 | 2.1% | 2.8% | 3.6% | 1.9% | 4.0% |
| 1996 | 1.9% | 2.9% | 2.3% | 2.6% | 1.1% |
| 1997 | 1.8% | 2.3% | -0.1% | 0.4% | 2.0% |
| 1998 | 1.1% | 1.5% | -2.5% | -0.9% | 0.2% |
| 1999 | 1.5% | 2.2% | 0.8% | 1.8% | 1.4% |
| 2000 | 2.2% | 3.4% | 5.8% | 3.7% | 1.2% |
| 2001 | 2.3% | 2.8% | 1.1% | 2.0% | -0.1% |
| 2002 | 1.6% | 1.6% | -2.3% | -1.3% | 0.5% |
| 2003 | 2.2% | 2.3% | 5.3% | 3.2% | 1.5% |
| 2004 | 2.8% | 2.7% | 6.2% | 3.6% | 8.3% |
| 2005 | 3.3% | 3.4% | 7.3% | 4.9% | 6.1% |
| 2006 | 3.3% | 3.2% | 4.7% | 3.0% | 6.7% |
| 2007 | 2.9% | 2.9% | 4.8% | 3.9% | 2.2% |
| 2008 | 2.2% | 3.8% | 9.8% | 6.3% | 6.7% |
| 2009 | 0.9% | -0.3% | -8.8% | -2.6% | -1.2% |
| 2010 | 1.0% | 1.6% | 6.8% | 4.2% | 1.4% |

Shown are average annual changes in the Gross Domestic Product Implicit Price Deflator (GDP Deflator); the familiar Consumer Price Index or CPI for "all consumer items"; the Producer Price Index, or PPI, for "all commodities"; the analogous PPI for "finished goods"; and the PPI for Materials and Components for Construction.

The annual change in any one measure of inflation can vary widely from one year to the next; as well there are variations between the various data series. However, by calculating averages over extended time periods, it is readily apparent that the average rate of inflation tends to fluctuate in a much tighter range, and that the differences between these various inflation measures are not extreme. As shown in the table below, I have calculated averages for 12 different time periods. The averages include time periods of 30 years, 25 years, 20 years, 15 years, 10 years, and 5 years ending in 2008 and 2010. As shown, these averages cover a fairly wide range. Several of the most important series (the GDP deflator and the CPI) averaged about about 2.1% to 2.4% during several historical time periods, including the recent five year period of 2006-2010, as well as the 25 year period ending in 2010. I believe this 2.1% to 2.4% range is an appropriate one for the Commission to use in evaluating historical inflation patterns for consideration in establishing the fair rate of return to apply to Chaparral's fair value rate base.

| Date Range | GDP Implicit Price Deflator | CPI All Items | PPI All Comm. | PPI Finished Goods | PPI Mat. and Comp. for Const. |
|---|---|---|---|---|---|
| 1979-2008 | 3.4% | 4.1% | 3.5% | 3.2% | 3.4% |
| 1981-2010 | 2.9% | 3.3% | 2.5% | 2.4% | 2.8% |
| 1984-2008 | 2.6% | 3.1% | 2.6% | 2.3% | 2.8% |
| 1986-2010 | 2.1% | 2.4% | 2.8% | 2.3% | 2.5% |
| 1989-2008 | 2.4% | 3.0% | 3.0% | 2.5% | 2.9% |
| 1991-2010 | 2.2% | 2.6% | 2.4% | 2.1% | 2.6% |
| 1994-2008 | 2.2% | 2.7% | 3.2% | 2.4% | 3.0% |
| 1996-2010 | 2.1% | 2.4% | 2.8% | 2.3% | 2.5% |
| 1999-2008 | 2.4% | 2.8% | 4.4% | 3.1% | 3.5% |
| 2001-2010 | 2.2% | 2.4% | 3.5% | 2.7% | 3.2% |
| 2004-2008 | 2.9% | 3.2% | 6.6% | 4.3% | 6.0% |
| 2006-2010 | 2.1% | 2.2% | 3.5% | 3.0% | 3.1% |

**Q. The data you just discussed is strictly historical. Should the Commission also consider expectations regarding future levels of inflation?**

A. Yes, although the most logical starting point is historical inflation data, it's important to also consider anticipated future rates of inflation. Interestingly, both backward and forward views of inflation are closely related. In fact, the historical data series are some of the best, most detailed and most objective information available for estimating future inflation rates – and this information is highly relevant to consideration of future inflation, since investors will often assume the future will be similar to the past, even though various differences are likely to occur, due to changes in monetary policy, fluctuations in the business cycle, and other changes over time. Succinctly stated, in evaluating a fair return to provide to investors, the Commission should consider both past and future inflation rates – giving some consideration to investor expectation concerning future inflation, as well as some consideration of the inflation rates which have already contributed to increases in the value of the utility's property.

**Q. Are you aware of any published data series that are indicative of the future inflation rate expectations of investors?**

A. Yes. A useful measure of investor inflation expectations can be derived by comparing the yields on Treasury Inflation-Protected Securities (TIPS) and other securities issued by the Treasury Department with similar liquidity and duration. TIPS are bonds issued by the U.S. Treasury which are sometimes called "linkers", because they are "linked" to the actual rate of inflation.

TIPS are issued twice a year, in January and July. The principal amount that is paid back to the holder upon maturity is periodically increased, based on the CPI-All Consumer Items. Like most government bonds, the TIPS coupon rate (percentage return) is constant, but these particular securities are unique because they generate an increasing flow of interest payments. TIPs pay interest twice a year, based upon a fixed rate that is multiplied by the inflation-adjusted principal. The end result is that investors are protected against inflation both with respect to the value of their investment, and with respect to the income they receive. Thus, for example, if the interest rate on a TIP Security is 5%, its cost is $100, and cumulative total amount of inflation from the time of issuance until maturity is 20%, the value of the investment would increase to $120 at maturity. The 5% interest rate would be applied to the increasing principal amount, eventually reaching the level of 5% of $120 – approximately 20% more than the initial payment level.

At maturity, the securities are redeemed at the greater of their inflation-adjusted principal or the original par amount at the time they were issued. TIPS provide yet another example that illustrates one of the key points in my testimony – that the percentage rate of return earned by an investment that grows in value over time will normally be lower than the analogous return paid on an investment that does not grow over time. The fact that these securities offer significantly different percentage returns is further proof of this fundamental point. But, these securities are also of interest because they provide useful insights into investor expectations concerning inflation.

It is well established in the academic literature that the difference between the yield on a TIP and the yield on a comparable government security that is not linked to inflation can be used to estimate investors' future inflation expectations. In the following table, I present average daily yields on 10 year TIPs and average yields on analogous bonds, for the years 2003 through 2010. I have also calculated the average differences in the yields for the two types of securities. As shown, the average differences range from a low of 1.60% in 2009, to a high of 2.48% in 2005 and 2006.

| Year | Value TIPS | Value Bond | Difference |
|---|---|---|---|
| 2004 | 1.83 | 4.27 | 2.44 |
| 2005 | 1.82 | 4.29 | 2.48 |
| 2006 | 2.31 | 4.80 | 2.48 |
| 2007 | 2.29 | 4.64 | 2.35 |
| 2008 | 1.76 | 3.67 | 1.90 |
| 2009 | 1.66 | 3.26 | 1.60 |
| 2010 | 1.15 | 3.22 | 2.07 |
| 2011 | 1.05 | 3.36 | 2.31 |
| | | | |
| Averages | | | |
| 2004-2010 | 1.83 | 4.02 | 2.19 |
| 2006-2010 | 1.84 | 3.92 | 2.08 |
| 2008-2010 | 1.53 | 3.38 | 1.86 |

Averaging the entire array of annual average differences indicates the overall average level of future expected inflation during this time period was about 2.19%. Averaging the data over just the most recent three year period, from 2008 through 2010, suggests inflation expectations have dipped somewhat, averaging just 1.86%. However, it appears this drop in inflation expectations may have been only temporary. The most recent data – from the first part of 2011 – is within the historical range of 2.1% to 2.4%, which I mentioned earlier.

**Q. Assuming the Commission adopts the approach it used in the recent UNSE case, what would be a reasonable inflation rate to use as an offset to the weighted average cost of capital?**

A. Given current economic uncertainties, I recommend the Commission choose an inflation rate that is conservative – one that falls toward the low end of the historical data, and is reasonably consistent with the recent level of investor expectations concerning future inflation rates. Admittedly, there is a good chance that inflation will accelerate in the future, depending on how quickly and successfully the Federal Reserve Board is at unwinding its recent policy of holding down short term interest rates and aggressively expanding the nation's money supply, I don't think it would be appropriate to incorporate this upside potential into the fair value rate of return calculations in this proceeding. Instead, I recommend the Commission use a conservative inflation factor of 2.1%, which is at the lower end of the historical data discussed earlier, and comfortably within the recent range of investor expectation for future inflation, as indicated by the TIPS data I just discussed.

**Q. How does your recommended inflation rate compare with SWG's estimate of inflation?**

A. It is more conservative. For purposes of calculating the risk free rate of return, SWG estimated an inflation rate of 2.47%

**Q. Can you illustrate your recommended approach, and how it compares to the results of SWG's FVROR analysis?**

A. As shown in the table below, applying a 2.1% adjustment factor to the weighted average cost of capital results in a fair rate of return of 6.08%. This compares to a FVROR of 7.50% using the Company's methodology.

**RUCO**

| Type of Capital | Amount | Percent | Cost Rate | Inflation Component | Modified Cost Rate | Weighted Avg. Cost Rate |
|---|---|---|---|---|---|---|
| Common Equity | 611,263,103 | 50.15% | 9.00% | 2.10% | 6.90% | 3.46% |
| Long Term Debt | 607,500,000 | 49.85% | 7.35% | 2.10% | 5.25% | 2.62% |
| Total | 1,218,763,103 | 100.00% | | | | 6.08% |

**SWG**

| Type of Capital | Amount | Percent | Cost Rate | Inflation Component | Modified Cost Rate | Weighted Avg. Cost Rate |
|---|---|---|---|---|---|---|
| Common Equity | 561,545,431 | 38.55% | 11.00% | 0.00% | 11.00% | 4.24% |
| Long Term Debt | 512,155,202 | 35.16% | 8.34% | 0.00% | 8.34% | 2.93% |
| FVRB Increment | 382,816,834 | 26.28% | 1.24% | 0.00% | 1.24% | 0.33% |
| Total | 1,456,517,467 | 100.00% | | | | 7.50% |

## VII. Conclusions and Recommendations

**Q. Can you now please briefly summarize your recommendations?**

A. Yes. The effect of my recommendations, as well as Bill Rigsby's cost of capital analysis, is set forth on Schedule BJ-1 of my exhibit. If the Commission were to accept these RUCO recommendations, the original cost rate base would be $1,067,667,709 and the RCND rate base would be $1,833,301,376. The fair value rate base would be $1,450,484,543, assuming the Commission follows its traditional 50/50 weighting of original cost and RCND. These figures compare to the Company's rate base proposals of $1,073,700,633, $1,839,334,300, and $1,456,517,467, for original cost, RCND and fair value, respectively.

If the Commission were to accept all of my recommendations, after taking into account my recommended pro forma adjustments, the test year operating income would be $70,561,890, which compares to the Company's proposed operating income of $65,065,829. If the Commission were to adopt RUCO witness Rigsby's 9.00% estimate of the cost of equity, his overall weighted average cost of capital of 8.18%, and my corresponding recommended fair rate of return on fair value rate base of 6.08%, the required operating income would be approximately $88.2 million. This analysis suggests a test year operating income deficiency of $17,627,571. This compares to the Company's calculated income deficiency of $44,145,700.

**Q. What increase in revenues is implied by this income deficiency calculation?**

A. Applying the Company's gross revenue conversion factor to this test year income deficiency results in a base rate revenue increase of approximately $29.2 million. This compares to the Company's proposed revenue increase of $73.2 million.

**Q. Does this conclude your testimony, prefiled on June 10, 2011?**

A. Yes, it does.

Appendix A

**Qualifications**

***Present Occupation***

**Q. What is your present occupation?**

A. I am a consulting economist and President of Ben Johnson Associates, Inc.®, a firm of economic and analytic consultants specializing in the area of public utility regulation.

***Educational Background***

**Q. What is your educational background?**

A. I graduated with honors from the University of South Florida with a Bachelor of Arts degree in Economics in March 1974. I earned a Master of Science degree in Economics at Florida State University in September 1977. The title of my Master's Thesis is a "A Critique of Economic Theory as Applied to the Regulated Firm." Finally, I graduated from Florida State University in April 1982 with the Ph.D. degree in Economics. The title of my doctoral dissertation is "Executive Compensation, Size, Profit, and Cost in the Electric Utility Industry."

*Clients*

**Q. What types of clients employ your firm?**

A Much of our work is performed on behalf of public agencies at every level of government involved in utility regulation. These agencies include state regulatory commissions, public counsels, attorneys general, and local governments, among others. We are also employed by various private organizations and firms, both regulated and unregulated. The diversity of our clientele is illustrated below.

Regulatory Commissions

Alabama Public Service Commission—Public Staff for Utility Consumer Protection
Alaska Public Utilities Commission
Arizona Corporation Commission
Arkansas Public Service Commission
Connecticut Department of Public Utility Control
District of Columbia Public Service Commission
Idaho Public Utilities Commission
Idaho State Tax Commission
Iowa Department of Revenue and Finance
Kansas State Corporation Commission
Maine Public Utilities Commission
Minnesota Department of Public Service
Missouri Public Service Commission
National Association of State Utility Consumer Advocates
Nevada Public Service Commission
New Hampshire Public Utilities Commission
North Carolina Utilities Commission—Public Staff
Oklahoma Corporation Commission
Ontario Ministry of Culture and Communications
Staff of the Delaware Public Service Commission
Staff of the Georgia Public Service Commission
Texas Public Utilities Commission
Virginia State Corporation Commission
Washington Utilities and Transportation Commission

West Virginia Public Service Commission—Division of Consumer Advocate

Wisconsin Public Service Commission

Wyoming Public Service Commission

## Public Counsels

Arizona Residential Utility Consumers Office

Colorado Office of Consumer Counsel

Colorado Office of Consumer Services

Connecticut Consumer Counsel

District of Columbia Office of People's Counsel

Florida Public Counsel

Georgia Consumers' Utility Counsel

Hawaii Division of Consumer Advocacy

Illinois Small Business Utility Advocate Office

Indiana Office of the Utility Consumer Counselor

Iowa Consumer Advocate

Maryland Office of People's Counsel

Minnesota Office of Consumer Services

Missouri Public Counsel

New Hampshire Consumer Counsel

Ohio Consumer Counsel

Pennsylvania Office of Consumer Advocate

Utah Department of Business Regulation—Committee of Consumer Services

## Attorneys General

Arkansas Attorney General

Florida Attorney General—Antitrust Division

Idaho Attorney General

Kentucky Attorney General

Michigan Attorney General

Minnesota Attorney General

Nevada Attorney General's Office of Advocate for Customers of Public Utilities

South Carolina Attorney General

Utah Attorney General

Virginia Attorney General

Washington Attorney General

Local Governments

City of Austin, TX

City of Corpus Christi, TX

City of Dallas, TX

City of El Paso, TX

City of Galveston, TX

City of Norfolk, VA

City of Phoenix, AZ

City of Richmond, VA

City of San Antonio, TX

City of Tucson, AZ

County of Augusta, VA

County of Henrico, VA

County of York, VA

Town of Ashland, VA

Town of Blacksburg, VA

Town of Pecos City, TX

Other Government Agencies

Canada—Department of Communications
Hillsborough County Property Appraiser
Provincial Governments of Canada
Sarasota County Property Appraiser
State of Florida—Department of General Services
United States Department of Justice—Antitrust Division
Utah State Tax Commission

Regulated Firms

Alabama Power Company
Americall LDC, Inc.
BC Rail
CommuniGroup
Florida Association of Concerned Telephone Companies, Inc.
LDDS Communications, Inc.
Louisiana/Mississippi Resellers Association
Madison County Telephone Company
Montana Power Company
Mountain View Telephone Company
Nevada Power Company
Network I, Inc.
North Carolina Long Distance Association
Northern Lights Public Utility
Otter Tail Power Company
Pan-Alberta Gas, Ltd.
Resort Village Utility, Inc.
South Carolina Long Distance Association

Stanton Telephone
Teleconnect Company
Tennessee Resellers' Association
Westel Telecommunications
Yelcot Telephone Company, Inc.

## Other Private Organizations

Arizona Center for Law in the Public Interest
Black United Fund of New Jersey
Casco Bank and Trust
Coalition of Boise Water Customers
Colorado Energy Advocacy Office
East Maine Medical Center
Georgia Legal Services Program
Harris Corporation
Helca Mining Company
Idaho Small Timber Companies
Independent Energy Producers of Idaho
Interstate Securities Corporation
J.R. Simplot Company
Merrill Trust Company
MICRON Semiconductor, Inc.
Native American Rights Fund
PenBay Memorial Hospital
Rosebud Enterprises, Inc.
Skokomish Indian Tribe
State Farm Insurance Company
Twin Falls Canal Company
World Center for Birds of Prey

***Prior Experience***

**Q. Before becoming a consultant, what was your employment experience?**

A. From August 1975 to September 1977, I held the position of Senior Utility Analyst with Office of Public Counsel in Florida. From September 1974 until August 1975, I held the position of Economic Analyst with the same office. Prior to that time, I was employed by the law firm of Holland and Knight as a corporate legal assistant.

**Q. In how many formal utility regulatory proceedings have you been involved?**

A. As a result of my experience with the Florida Public Counsel and my work as a consulting economist, I have been actively involved in approximately 400 different formal regulatory proceedings concerning electric, telephone, natural gas, railroad, and water and sewer utilities.

**Q. Have you done any independent research and analysis in the field of regulatory economics?**

A. Yes, I have undertaken extensive research and analysis of various aspects of utility regulation. Many of the resulting reports were prepared for the internal use of the Florida Public Counsel. Others were prepared for use by the staff of the Florida Legislature and for submission to the Arizona Corporation Commission, the Florida Public Service Commission, the Canadian Department of Communications, and the Provincial Governments of Canada, among others. In addition, as I already mentioned, my Master's thesis concerned the theory of the regulated firm.

**Q. Have you testified previously as an expert witness in the area of public utility regulation?**

A. Yes. I have provided expert testimony on more than 250 occasions in proceedings before state courts, federal courts, and regulatory commissions throughout the United States and in Canada. I have presented or have pending expert testimony before 35 state commissions, the Interstate Commerce Commission, the Federal Communications Commission, the District of Columbia Public Service Commission, the Alberta, Canada Public Utilities Board, and the Ontario Ministry of Culture and Communication.

**Q. What types of companies have you analyzed?**

A. My work has involved more than 425 different telephone companies, covering the entire spectrum from AT&T Communications to Stanton Telephone, and more than 55 different electric utilities ranging in size from Texas Utilities Company to Savannah Electric and Power Company. I have also analyzed more than 30 other regulated firms, including water, sewer, natural gas, and railroad companies.

***Teaching and Publications***

**Q. Have you ever lectured on the subject of regulatory economics?**

A. Yes, I have lectured to undergraduate classes in economics at Florida State University on various subjects related to public utility regulation and economic theory. I have also addressed conferences and seminars sponsored by such institutions as the National Association of Regulatory Utility Commissioners (NARUC), the Marquette University College of Business Administration, the Utah Division of Public Utilities and the University of Utah, the Competitive Telecommunications Association (COMPTEL), the

International Association of Assessing Officers (IAAO), the Michigan State University Institute of Public Utilities, the National Association of State Utility Consumer Advocates (NASUCA), the Rural Electrification Administration (REA), North Carolina State University, and the National Society of Rate of Return Analysts.

**Q. Have you published any articles concerning public utility regulation?**

A. Yes, I have authored or co-authored the following articles and comments:

"Attrition: A Problem for Public Utilities—Comment." *Public Utilities Fortnightly*, March 2, 1978, pp. 32-33.

"The Attrition Problem: Underlying Causes and Regulatory Solutions." *Public Utilities Fortnightly*, March 2, 1978, pp. 17-20.

"The Dilemma in Mixing Competition with Regulation." *Public Utilities Fortnightly*, February 15, 1979, pp. 15-19.

"Cost Allocations: Limits, Problems, and Alternatives." *Public Utilities Fortnightly*, December 4, 1980, pp. 33-36.

"AT&T is Wrong." *The New York Times,* February 13, 1982, p. 19.

"Deregulation and Divestiture in a Changing Telecommunications Industry," with Sharon D. Thomas. *Public Utilities Fortnightly*, October 14, 1982, pp. 17-22.

"Is the Debt-Equity Spread Always Positive?" *Public Utilities Fortnightly,* November 25, 1982, pp. 7-8.

"Working Capital: An Evaluation of Alternative Approaches." *Electric Rate-Making,* December 1982/January 1983, pp. 36-39.

"The Staggers Rail Act of 1980: Deregulation Gone Awry," with Sharon D. Thomas. *West Virginia Law Review,* Coal Issue 1983, pp. 725-738.

"Bypassing the FCC: An Alternative Approach to Access Charges." *Public Utilities Fortnightly*, March 7, 1985, pp. 18-23.

"On the Results of the Telephone Network's Demise—Comment," with Sharon D. Thomas. *Public Utilities Fortnightly*, May 1, 1986, pp. 6-7.

"Universal Local Access Service Tariffs: An Alternative Approach to Access Charges." In *Public Utility Regulation in an Environment of Change,* edited by Patrick C. Mann and Harry M. Trebing, pp. 63-75. Proceedings of the Institute of Public Utilities Seventeenth Annual Conference. East Lansing, Michigan: Michigan State University Public Utilities Institute, 1987.

With E. Ray Canterbery. Review of *The Economics of Telecommunications: Theory and Policy* by John T. Wenders. *Southern Economic Journal* 54.2 (October 1987).

"The Marginal Costs of Subscriber Loops," A Paper Published in the Proceedings of the Symposia on Marginal Cost Techniques for Telephone Services. The National Regulatory Research Institute, July 15-19, 1990 and August 12-16, 1990.

With E. Ray Canterbery and Don Reading. "Cost Savings from Nuclear Regulatory Reform: An Econometric Model." *Southern Economic Journal,* January 1996.

***Professional Memberships***

**Q. Do you belong to any professional societies?**

A. Yes. I am a member of the American Economic Association.

**SOUTHWEST GAS CORPORATION**
**DOCKET NO. G-01551A-10-0458**
**TABLE OF CONTENTS TO BJ SCHEDULES**

SCHEDULE #

SOUTHWEST GAS CORPORATION
ADJUSTED TEST YEAR ENDED JUNE 30, 2010
ACC JURISDICTIONAL REVENUE REQUIREMENTS



| LINE NO. | DESCRIPTION | (A) RUCO ORIGINAL COST | (B) RUCO RCND |
|---|---|---|---|
| 1 | ADJUSTED RATE BASE | $1,067,667,709 | $1,833,301,376 |
| 2 | ADJUSTED OPERATING INCOME | 70,561,890 | 70,561,890 |
| 3 | CURRENT RATE OF RETURN (L2 / L1) | 6.61% | 3.85% |
| 4 | REQUIRED OPERATING INCOME (L5 * L1) | 87,335,219 | |
| 5 | REQUIRED RATE OF RETURN | 8.18% | |
| 6 | OPERATING INCOME DEFICIENCY (L4 - L2) | 16,773,329 | |
| 7 | GROSS REVENUE CONVERSION FACTOR | 1.6579 | |
| 8 | REVENUE REQUIREMENT | $27,808,502 | |

REFERENCES:
COLUMN (A): RUCO SCHEDULES BJ-2, BJ-5, BJ-6, SWG SCHEDULE C-3
COLUMN (B): RUCO SCHEDULES BJ-3
COLUMN (C): JOHNSON TESTIMONY, SWG SCHEDULE C-3

**SOUTHWEST GAS CORPORATION**
**ADJUSTED TEST YEAR ENDED JUNE 30, 2010**
**ORIGINAL COST RATE BASE**

**DOCKET NO. G-(**
**SCHEDULE BJ-2**

| LINE NO. | DESCRIPTION | (A) Balance at End of Test Period | (B) RUCO Adjustments | (C) RUCO Adjusted |
|---|---|---|---|---|
| 1 | GROSS UTILITY PLANT IN SERVICE | | | |
| | Direct | $2,252,566,706 | $575,976 | $2,253,14: |
| | System Allocable | 101,255,058 | - | 101,25! |
| | Total Gas Plant | $2,353,821,764 | $575,976 | $2,354,39 |
| 2 | Less: Accumulated depreciation & amortization | 955,200,740 | | 955,20( |
| 3 | NET UTILITY PLANT IN SERVICE | **$1,398,621,024** | **$575,976** | **$1,399,19** |
| | DEDUCTIONS: | | | |
| 8 | Customer advances for construction | (62,033,165) | | (62,03: |
| 9 | Customer deposits | (48,475,278) | | (48,47! |
| 10 | Accumulated Deferred Income Taxes | (230,694,907) | | (230,69 |
| 11 | TOTAL DEDUCTIONS | **$(341,203,349)** | | **$(341,20:** |
| | ADDITIONS: | | | |
| 12 | Allowance for working capital | $9,674,058 | | 9,67 |
| 15 | TOTAL ADDITIONS | **$9,674,058** | | **$9,67** |
| 16 | TOTAL ORGINAL COST RATE BASE | **$1,067,091,733** | **$575,976** | **$1,067,66** |

REFERENCES:
COLUMN (A): SWG SCHEDULE B-1
COLUMN (B): SWG ADJUSTMENT 17, AS MODIFIED BY RUCO
COLUMN (C): COLUMN (A) + COLUMN (B)

**SOUTHWEST GAS CORPORATION**
**ADJUSTED TEST YEAR ENDED JUNE 30, 2010**
**RCND RATE BASE**

**DOCKE**
**SCHED**

| LINE NO. | DESCRIPTION | (A) Balance at End of Test Period | (B) RUCO Adjustments | F Ac |
|---|---|---|---|---|
| 1 | GROSS UTILITY PLANT IN SERVICE | | | |
| | Direct | $3,731,878,011 | $575,976 | $3,7 |
| | System Allocable | 109,795,518 | - | |
| | Total Gas Plant | $3,841,673,528 | $575,976 | $3,8 |
| 2 | Less: Accumulated depreciation & amortization | 1,556,335,737 | | 1,5 |
| 3 | NET UTILITY PLANT IN SERVICE | **$2,285,337,791** | **$575,976** | **$2,2** |
| | DEDUCTIONS: | | | |
| 8 | Customer advances for construction | (62,033,165) | | ( |
| 9 | Customer deposits | (48,475,278) | | ( |
| 10 | Accumulated Deferred Income Taxes | (351,778,007) | | (3 |
| 11 | TOTAL DEDUCTIONS | **$(462,286,449)** | **$-** | **$(4** |
| | ADDITIONS: | | | |
| 12 | Allowance for working capital | $9,674,058 | | |
| 15 | TOTAL ADDITIONS | **$9,674,058** | | |
| 16 | TOTAL ORGINAL COST RATE BASE | **$1,832,725,400** | **$575,976** | **$1,8** |

REFERENCES:
COLUMN (A): COMPANY SCHEDULE B-3
COLUMN (B): COMPANY SCHEDULE C-2 ADJUSTMENT 17, AS MODIFIED BY RUCO
COLUMN (C): COLUMN (A) + COLUMN (B)

**SOUTHWEST GAS CORPORATION**
**ADJUSTED TEST YEAR ENDED JUNE 30, 2010**
**OPERATING INCOME**

**DOCKET NO. G-01551A-10-(**
**SCHEDULE BJ-4**

| LINE NO. | DESCRIPTION | (A) AS FILED TOTAL COMPANY | (B) RUCO ADJUSTMENTS TOTAL COMPANY | A+B (C) RUCO AS ADJUSTED TOTAL COMPANY |
|---|---|---|---|---|
| 1 | OPERATING REVENUES | $834,756,858 | $(420,471,656) | $414,285,202 |
| 2 | GAS COST | 407,320,096 | (407,320,096) | - |
| 3 | TOTAL MARGIN | 427,436,762 | (13,151,560) | 414,285,202 |
| | OPERATING EXPENSES: | | | |
| 4 | Other Gas Supply | $1,080,748 | $44,279 | $1,125,027 |
| 5 | Distribution | $96,282,901 | $2,980,810 | $99,263,712 |
| 6 | Customer Accounts | $31,334,890 | $2,147,254 | $33,482,145 |
| 7 | Customer Information | $1,296,429 | $(100,317) | $1,196,112 |
| 8 | Sales | $58,740 | $(58,740) | $- |
| | Administrative and General | | | |
| 9 | Direct | $5,944,630 | $261,150 | $6,205,780 |
| 10 | System Allocable | $56,860,171 | $(3,440,027) | $53,420,145 |
| | Depreciation and Amortization | | | |
| 11 | Direct | $90,832,850 | $2,131,366 | $92,964,216 |
| 12 | System Allocable | $5,333,983 | $349,741 | $5,683,724 |
| 13 | Regulatory Amortizations | $4,083,462 | $(3,798,881) | $284,581 |
| 14 | Other Taxes | $25,746,383 | $2,769,463 | $28,515,846 |
| 15 | Interest on Customer Deposits | $2,615,905 | $292,612 | $2,908,517 |
| 16 | Income Taxes | $24,860,511 | $(6,187,002) | $18,673,509 |
| 17 | Total Expenses | $346,331,603 | $(2,608,290) | $343,723,312 |
| 18 | NET INCOME | 81,105,159 | $(10,543,270) | $70,561,890 |

REFERENCES:
COLUMN (A): COMPANY SCHEDULE C1, UNADJUSTED
COLUMN (B): BJ-5, P3
COLUMN (C): COLUMN (A) + COLUMN (B)

**SOUTHWEST GAS CORPORATION**
**ADJUSTED TEST YEAR ENDED JUNE 30, 2010**
**OPERATING INCOME ADJUSTMENTS**

| | DESCRIPTION | Revenues and Volumes (A) | Purchased Gas Cost (B) | Labor / Loading Annualization (C) | Call Center and Support Allocation and Annualization (D) | Cost of Service Analysis (E) | Employee Vehicle Compensation (F) |
|---|---|---|---|---|---|---|---|
| 1 | OPERATING REVENUES | $(420,471,656) | $- | $- | $- | $- | $- |
| 2 | GAS COST | - | (407,320,096) | - | - | - | - |
| 3 | TOTAL MARGIN | (420,471,656) | 407,320,096 | - | - | - | - |
| | OPERATING EXPENSES: | | | | | | |
| 4 | Other Gas Supply | $- | $- | $44,279 | $- | $- | $- |
| 5 | Distribution | $- | $- | $3,239,547 | $- | $(19,076) | $(60,789) |
| 6 | Customer Accounts | $- | $- | $1,059,874 | $690,350 | $(60,073) | $- |
| 7 | Customer Information | $- | $- | $26,543 | $- | $(126,860) | $- |
| 8 | Sales | $- | $- | $- | $- | $(58,740) | $- |
| | Administrative and General | | | | | | |
| 9 | Direct | $- | $- | $45,265 | $- | $- | $- |
| 10 | System Allocable | $- | $- | $1,291,587 | $- | $11,971 | $(166,443) |
| | Depreciation and Amortization | | | | | | |
| 11 | Direct | $- | $- | $- | $- | $- | $- |
| 12 | System Allocable | $- | $- | $- | $- | $- | $- |
| 13 | Regulatory Amortizations | $- | $- | $- | $- | $- | $- |
| 14 | Other Taxes | $- | $- | $- | $- | $- | $- |
| 15 | Interest on Customer Deposits | $- | $- | $- | $- | $- | $- |
| 16 | Income Taxes | | | | | | |
| 17 | Total Expenses | $- | $- | $5,707,094 | $690,350 | $(252,777) | $(227,232) |
| 18 | NET INCOME | (420,471,656) | 407,320,096 | (5,707,094) | (690,350) | 252,777 | 227,232 |

REFERENCES:
COLUMN (A): COMPANY SCHEDULE C-2, ADJUSTMENT 1, AS MODIFIED BY RUCO
COLUMN (B): COMPANY SCHEDULE C-2, ADJUSTMENT 2
COLUMN (C): COMPANY SCHEDULE C-2, ADJUSTMENT 3, AS MODIFIED BY RUCO
COLUMN (D): COMPANY SCHEDULE C-2, ADJUSTMENT 4
COLUMN (E): COMPANY SCHEDULE C-2, ADJUSTMENT 5
COLUMN (F): COMPANY SCHEDULE C-2, ADJUSTMENT 6
COLUMN (G): COMPANY SCHEDULE C-2, ADJUSTMENT 7
COLUMN (H): COMPANY SCHEDULE C-2, ADJUSTMENT 8
COLUMN (I): COMPANY SCHEDULE C-2, ADJUSTMENT 9, AS MODIFIED BY RUCO

SOUTHWEST GAS CORPORATION
ADJUSTED TEST YEAR ENDED JUNE 30, 2010
**OPERATING INCOME ADJUSTMENTS**

| | DESCRIPTION | American Gas Association ("AGA") Dues (J) | Paiute Pipeline/SGTC Annualization (K) | Rate Case Expense (L) | Depreciation and Amortization Expense Annualization (M) | Property Tax Annualization (N) | Interest c Custome Deposit: (O) |
|---|---|---|---|---|---|---|---|
| 1 | OPERATING REVENUES | $- | $- | $- | $- | $- | |
| 2 | GAS COST | - | - | - | - | - | |
| 3 | TOTAL MARGIN | - | - | - | - | - | |
| | OPERATING EXPENSES: | | | | | | |
| 4 | Other Gas Supply | $- | $- | $- | $- | $- | |
| 5 | Distribution | $- | $- | $- | $- | $- | |
| 6 | Customer Accounts | $- | $- | $- | $- | $- | |
| 7 | Customer Information | $- | $- | $- | $- | $- | |
| 8 | Sales | $- | $- | $- | $- | $- | |
| | Administrative and General | | | | | | |
| 9 | Direct | $- | $- | $33,386 | $- | $- | |
| 10 | System Allocable | $(93,815) | $44,593 | $- | $- | $- | |
| | Depreciation and Amortization | | | | | | |
| 11 | Direct | $- | $- | $- | $2,131,366 | $- | |
| 12 | System Allocable | $- | $- | $- | $349,741 | $- | |
| 13 | Regulatory Amortizations | $- | $- | $- | $- | $- | |
| 14 | Other Taxes | $- | $- | $- | $- | $2,769,463 | |
| 15 | Interest on Customer Deposits | $- | $- | $- | $- | $- | $292 |
| 16 | Income Taxes | | | | | | |
| 17 | Total Expenses | $(93,815) | $44,593 | $33,386 | $2,481,107 | $2,769,463 | $292 |
| 18 | NET INCOME | 93,815 | (44,593) | (33,386) | (2,481,107) | (2,769,463) | (292, |

REFERENCES:
COLUMN (J): COMPANY SCHEDULE C-2, ADJUSTMENT 10, AS MODIFIED BY RUCO
COLUMN (K): COMPANY SCHEDULE C-2, ADJUSTMENT 11
COLUMN (L): COMPANY SCHEDULE C-2, ADJUSTMENT 12
COLUMN (M): COMPANY SCHEDULE C-2, ADJUSTMENT 13, AS MODIFIED BY RUCO
COLUMN (N): COMPANY SCHEDULE C-2, ADJUSTMENT 14, AS MODIFIED BY RUCO
COLUMN (O): COMPANY SCHEDULE C-2, ADJUSTMENT 15
COLUMN (P): COMPANY SCHEDULE C-2, ADJUSTMENT 16

| | DESCRIPTION | SERP (Q) | MIP (R) | Other Stock-Based Compensation (S) | Total Adjustments (T) |
|---|---|---|---|---|---|
| 1 | OPERATING REVENUES | | | | $(420,471,656) |
| 2 | GAS COST | | | | $(407,320,096) |
| 3 | TOTAL MARGIN | | | | $(13,151,560) |
| | OPERATING EXPENSES: | | | | |
| 4 | Other Gas Supply | | | | $44,279 |
| 5 | Distribution | | | | $2,980,810 |
| 6 | Customer Accounts | | | | $2,147,254 |
| 7 | Customer Information | | | | $(100,317) |
| 8 | Sales | | | | $(58,740) |
| | Administrative and General | | | | |
| 9 | Direct | | | | $261,150 |
| 10 | System Allocable | $(1,725,839) | $(1,768,249) | $(1,033,831) | $(3,440,027) |
| | Depreciation and Amortization | | | | |
| 11 | Direct | | | | $2,131,366 |
| 12 | System Allocable | | | | $349,741 |
| 13 | Regulatory Amortizations | | | | $(3,798,881) |
| 14 | Other Taxes | | | | $2,769,463 |
| 15 | Interest on Customer Deposits | | | | $292,612 |
| 16 | Income Taxes | | | | |
| 17 | Total Expenses | $(1,725,839) | $(1,768,249) | $(1,033,831) | $(2,677,671) |
| 18 | NET INCOME | 1,725,839 | 1,768,249 | 1,033,831 | (10,473,889) |

REFERENCES:
COLUMN (Q): COMPANY RESPONSE TO RUCO DR 4-3 AND STAFF DR 17-1
COLUMN (R): COMPANY RESPONSE TO STAFF DR 17-2
COLUMN (S): COMPANY RESPONSE TO STAFF DR 17-2

**SOUTHWEST GAS CORPORATION**
**ADJUSTED TEST YEAR ENDED JUNE 30, 2010**
**COST OF CAPITAL**

**DOCKET NO. G-015**
**SCHEDULE BJ-6**

| LINE NO. | TYPE OF CAPITAL | (A) PERCENT | (B) COST RATE |
|---|---|---|---|
| 1 | COMMON EQUITY | 50.15% | 9.00% |
| 2 | TOTAL DEBT | 49.85% | 7.35% |
| 3 | TOTALS | 100.00% | |

REFERENCES:
WAR-1

**SOUTHWEST GAS CORPORATION**
**ADJUSTED TEST YEAR ENDED JUNE 30, 2010**
**OPERATING INCOME ADJUSTMENT: SYNCHRONIZE INCOME TAXES**

**DOCKET NO. G-01551A-10-04**
**SCHEDULE BJ-7**

| LINE NO. | DESCRIPTION | TOTAL COMPANY AMOUNT | REFERENCE |
|---|---|---|---|
| | FEDERAL INCOME TAXES: | | |
| 1 | OPERATING INCOME BEFORE INCOME TAXES | $89,235,399 | SCHEDULE BJ-4, LINE 3 · |
| | LESS: | | |
| 2 | ARIZONA STATE TAX | 3,492,105 | LINE 11 |
| 3 | INTEREST EXPENSE | 39,119,078 | NOTE (a) |
| 4 | FEDERAL TAXABLE INCOME | 46,624,216 | LINE 1 - LINES 2 & 3 |
| 5 | FEDERAL INCOME TAX RATE | 32.561% | COMPANY SCHEDULE C |
| 6 | FEDERAL INCOME TAX EXPENSE | 15,181,404 | LINE 4 X LINE 5 |
| | STATE INCOME TAXES: | | |
| 7 | OPERATING INCOME BEFORE INCOME TAXES | 89,235,399 | LINE 1 |
| | LESS: | | |
| 8 | INTEREST EXPENSE | 39,119,078 | LINE 17 |
| 9 | STATE TAXABLE INCOME | 50,116,321 | LINE 7 - LINE 8 |
| 10 | STATE TAX RATE | 6.968% | COMPANY SCHEDULE C |
| 11 | STATE INCOME TAX EXPENSE | 3,492,105 | LINE 9 X LINE 10 |
| 12 | TOTAL INCOME TAXES | 18,673,509 | LINE 6 + LINE 11 |
| 13 | INCOME TAXES PER COMPANY | 24,860,511 | SCHEDULE BJ-4 |
| 14 | ADJUSTMENT | **$(6,187,002)** | LINE 12 - LINE 13 |

NOTE (a)
INTEREST SYCHRONIZATION

| | | | |
|---|---|---|---|
| 15 | ADJUSTED RATE BASE | $1,067,667,709 | SCHEDULE BJ-2 |
| 16 | WEIGHTED COST OF DEBT | 3.66% | SCHEDULE BJ-6 |
| 17 | INTEREST EXPENSE | $39,119,078 | |

# SOUTHWEST GAS CORPORATION

## DOCKET NO. G-01551A-10-0458

## DIRECT TESTIMONY

## OF

## WILLIAM A. RIGSBY, CRRA

## ON BEHALF OF

## THE

## RESIDENTIAL UTILITY CONSUMER OFFICE

## JUNE 10, 2011

## TABLE OF CONTENTS

**INTRODUCTION**

Q. Please state your name, occupation, and business address.

A. My Name is William A. Rigsby. I am a Public Utilities Analyst V employed by the Residential Utility Consumer Office ("RUCO") located at 1110 W. Washington, Suite 220, Phoenix, Arizona 85007.

Q. Please describe your qualifications in the field of utilities regulation and your educational background.

A. I have been involved with utilities regulation in Arizona since 1994. During that period of time I have worked as a utilities rate analyst for both the Arizona Corporation Commission ("ACC" or "Commission") and for RUCO. I hold a Bachelor of Science degree in the field of finance from Arizona State University and a Master of Business Administration degree, with an emphasis in accounting, from the University of Phoenix. I have been awarded the professional designation, Certified Rate of Return Analyst ("CRRA") by the Society of Utility and Regulatory Financial Analysts ("SURFA"). The CRRA designation is awarded based upon experience and the successful completion of a written examination. Appendix I, which is attached to my direct testimony further describes my educational background and also includes a list of the rate cases and regulatory matters that I have been involved with.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to present recommendations based on my analysis of Southwest Gas Corporation's ("SWG" or the "Company") application for a permanent increase in rates ("Application").

Q. Is this your first case involving SWG?

A. No. I've testified in the last two SWG rate cases that have come before the ACC.

Q. Briefly describe SWG and the Company's filing.

A. SWG is a local distribution company ("LDC") based in Las Vegas, NV, and is publicly-traded on the New York Stock Exchange ("NYSE"). The Company is the dominant provider of natural gas distribution services in the state of Arizona, and provides service to customers in Cochise, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Pima, Pinal and Yuma counties. SWG also provides natural gas in the states of California and Nevada. The Company's last rate increase was approved in Decision No. 70665, dated December 24, 2008. SWG filed its Application with the ACC on November 12, 2010. The Company has chosen the operating period ended June 30, 2010 for the test year ("Test Year") in this proceeding. SWG is seeking a revenue increase of $73.2 million, or 17.8 percent, over adjusted test year revenues of $410,9 million which will result in a 7.50 percent return on SWG's fair value rate base of $1.5 billion. According to the Company's Application, the proposed increase would raise the current average monthly winter residential bill of $58.10 by $9.01 to $67.11 or a 15.5 percent increase. The present average monthly summer residential bill of $24.07 would increase by $2.54 to $26.61 or 10.55 percent. In addition to seeking a permanent increase in rates, SWG is also requesting approval of an Energy Efficiency Enabling Provision ("EEP"), which is a general decoupling methodology that will allow SWG to collect, from the Company's ratepayers, lost revenues attributable to declining sales due to conservation and energy efficiency programs.

Q. Has SWG elected to perform a reconstruction cost new less depreciation study in this case?

A. Yes. SWG elected to perform a reconstruction cost new less depreciation ("RCND") study and is proposing a fair value rate base ("FVRB") that is an average of the Company's original cost rate base ("OCRB") and its RCND rate base for ratemaking purposes. For this reason RUCO is recommending a fair value rate of return ("FVROR") to be applied to SWG's FVRB.

Q. Please explain your role in RUCO's analysis of SWG's Application.

A. I reviewed SWG's Application and performed a cost of capital analysis to determine an original cost rate of return ("OCROR") on the Company's invested capital. In addition to my recommended capital structure, my direct testimony will present my recommended cost of common equity (the Company has no preferred stock) and my recommended cost of long-term debt. The recommendations contained in this testimony are based on information obtained from Company responses to data requests, SWG's Application, and from market-based research that I conducted during my analysis.

Q. Will you also be testifying on RUCO's recommended FVROR to be applied to SWG's FVRB?

A. No. That aspect off the case will be addressed in the direct testimony of Ben Johnson, Ph.D. of Ben Johnson Associates. Dr. Johnson has testified as an expert witness for RUCO on FVROR issues in several prior cases before the ACC (most notably on the Chaparral City Water Company remand proceeding) and has extensive knowledge on Arizona's constitutionally mandated fair value requirement. Dr. Johnson was also retained by RUCO to testify on the required revenue, rate base and rate design issues in this proceeding. Dr. Johnson's rate design testimony, which is scheduled to be filed on June 24, 2011, will present RUCO's recommendation on the Company-proposed EEP.

Q. What areas will you address in your testimony?

A. I will address the cost of capital issues associated with the case and will present RUCO's OCROR recommendation.

Q. Please identify the exhibits that you are sponsoring.

A. I am sponsoring Schedules WAR-1 through WAR-9.

**SUMMARY OF TESTIMONY AND RECOMMENDATIONS**

Q. Briefly summarize how your cost of capital testimony is organized.

A. My cost of capital testimony is organized into five sections. First, the introduction I have just presented and second, a summary of my testimony that I am about to give. Third, I will present the findings of my cost of equity capital analysis, which utilized both the discounted cash flow ("DCF") method, and the capital asset pricing model ("CAPM"). These are the two methods that RUCO and ACC Staff have consistently used for calculating the cost of equity capital in rate case proceedings in the past, and are the methodologies that the ACC has given the most weight to in setting allowed rates of return for utilities that operate in the Arizona jurisdiction. In this third section I will also provide a brief overview of the current economic climate within which the Company is operating. Fourth, I will discuss my recommended capital structure, my recommended cost of long-term debt and my recommended weighted average cost of capital which represents the OCROR. Fifth, I will comment on the Company's cost of capital testimony. Schedules WAR-1 through WAR-9 will provide support for my cost of capital analysis.

Q. Please summarize the recommendations and adjustments that you will address in your testimony.

A. Based on the results of my analysis, I am making the following recommendations:

<u>Cost of Equity Capital</u> – I am recommending a 9.00 percent cost of equity capital. This 9.00 percent figure falls on the high side of the range of results that I obtained in my cost of equity analysis, which employed both the DCF and CAPM methodologies. My 9.00 percent cost of equity capital is 200 basis points lower than the 11.00 percent cost of equity capital being proposed by the Company and is 165 basis points higher than my recommended cost of long-term debt.

<u>Capital Structure</u> – I am recommending that the Commission adopt a capital structure comprised of 50.15 percent common equity and 49.85 percent long-term debt as opposed to the Company-proposed capital structure which is comprised of approximately 52.30 percent common equity and 47.70 percent long-term debt.

<u>Cost of Long-Term Debt</u> – I am recommending that the Commission adopt a cost of long-term debt of 7.35 percent, which is 99 basis points lower than the company-proposed 8.34 percent cost of debt. My recommended cost of long-term debt is based on information provided by SWG in a

response to ACC Staff Data Request 2.22 and reflects the impact of debt retirements and new bond issuances since the end of the Test Year.

Weighted Average Cost of Capital – Based on the results of my recommended capital structure, I am recommending an 8.18 percent weighted average cost of capital ("WACC") for SWG, which is the weighted cost of my recommended costs of common equity and long-term debt and also represents my recommended OCROR in this case. This 8.18 percent OCROR is the basis for RUCO's recommended FVROR that will be presented in Dr. Johnson's testimony.

Q Why do you believe that RUCO's recommended 8.18 percent WACC is an appropriate rate of return for the Company to earn on its invested capital?

A. The 8.18 percent WACC figure that I am recommending meets the criteria established in the landmark Supreme Court cases of Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia (262 U.S. 679, 1923) and Federal Power Commission v. Hope Natural Gas Company (320 U.S. 391, 1944). Simply stated, these two cases affirmed that a public utility that is efficiently and economically managed is entitled to a return on investment that instills confidence in its financial soundness, allows the utility to attract capital, and also allows the utility to perform its duty to provide service to ratepayers. The rate of return adopted for the utility should also be comparable to a return that investors would expect to receive from investments with similar risk.

The Hope decision allows for the rate of return to cover both the operating expenses and the "capital costs of the business" which includes interest on debt and dividend payment to shareholders. This is predicated on the belief that, in the long run, a company that cannot meet its debt obligations and provide its shareholders with an adequate rate of return will not continue to supply adequate public utility service to ratepayers.

Q. Do the Bluefield and Hope decisions indicate that a rate of return sufficient to cover all operating and capital costs is guaranteed?

A. No. Neither case *guarantees* a rate of return on utility investment. What the Bluefield and Hope decisions *do allow*, is for a utility to be provided with the *opportunity* to earn a reasonable rate of return on its investment. That is to say that a utility, such as BVWC, is provided with the opportunity to earn an appropriate rate of return if the Company's management exercises good judgment and manages its assets and resources in a manner that is both prudent and economically efficient.

**COST OF EQUITY CAPITAL**

Q. What is your final recommended cost of equity capital for BVWC?

A. I am recommending a cost of equity of 9.00 percent. My recommended 9.00 percent cost of equity figure falls on the high side of the range of results derived from my DCF and CAPM analyses, which utilized a sample of publicly traded LDCs. The results of my DCF and CAPM analyses are summarized on page 2 of my Schedule WAR-1.

**Discounted Cash Flow (DCF) Method**

Q. Please explain the DCF method that you used to estimate the Company's cost of equity capital.

A. The DCF method employs a stock valuation model known as the constant growth valuation model, that bears the name of Dr. Myron J. Gordon (i.e. the Gordon model), the professor of finance who was responsible for its development. Simply stated, the DCF model is based on the premise that the current price of a given share of common stock is determined by the present value of all of the future cash flows that will be generated by that share of common stock. The rate that is used to discount these cash flows back to their present value is often referred to as the investor's cost of capital (i.e. the cost at which an investor is willing to forego other investments in favor of the one that he or she has chosen).

Another way of looking at the investor's cost of capital is to consider it from the standpoint of a company that is offering its shares of stock to the investing public. In order to raise capital, through the sale of common stock, a company must provide a required rate of return on its stock that will attract investors to commit funds to that particular investment. In this respect, the terms "cost of capital" and "investor's required return" are one in the same. For common stock, this required return is a function of the dividend that is paid on the stock. The investor's required rate of return can be expressed as the percentage of the dividend that is paid on the stock (dividend yield) plus an expected rate of future dividend growth. This is illustrated in mathematical terms by the following formula:

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

where: $k$ = the required return (cost of equity, equity capitalization rate),

$\frac{D_1}{P_0}$ = the dividend yield of a given share of stock calculated by dividing the expected dividend by the current market price of the given share of stock, and

$g$ = the expected rate of future dividend growth

This formula is the basis for the standard growth valuation model that I used to determine the Company's cost of equity capital.

...

Q. In determining the rate of future dividend growth for the Company, what assumptions did you make?

A. There are two primary assumptions regarding dividend growth that must be made when using the DCF method. First, dividends will grow by a constant rate into perpetuity, and second, the dividend payout ratio will remain at a constant rate. Both of these assumptions are predicated on the traditional DCF model's basic underlying assumption that a company's earnings, dividends, book value and share growth all increase at the same constant rate of growth into infinity. Given these assumptions, if the dividend payout ratio remains constant, so does the earnings retention ratio (the percentage of earnings that are retained by the company as opposed to being paid out in dividends). This being the case, a company's dividend growth can be measured by multiplying its retention ratio (1 - dividend payout ratio) by its book return on equity. This can be stated as $g = b \times r$.

Q. Would you please provide an example that will illustrate the relationship that earnings, the dividend payout ratio and book value have with dividend growth?

A. RUCO consultant Stephen Hill illustrated this relationship in a Citizens Utilities Company 1993 rate case by using a hypothetical utility.[1]

[1] Citizens Utilities Company, Arizona Gas Division, Docket No. E-1032-93-111, Prepared Testimony, dated December 10, 1993, p. 25.

Table I

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Growth |
|---|---|---|---|---|---|---|
| Book Value | $10.00 | $10.40 | $10.82 | $11.25 | $11.70 | 4.00% |
| Equity Return | 10% | 10% | 10% | 10% | 10% | N/A |
| Earnings/Sh. | $1.00 | $1.04 | $1.082 | $1.125 | $1.170 | 4.00% |
| Payout Ratio | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | N/A |
| Dividend/Sh | $0.60 | $0.624 | $0.649 | $0.675 | $0.702 | 4.00% |

Table I of Mr. Hill's illustration presents data for a five-year period on his hypothetical utility. In Year 1, the utility had a common equity or book value of $10.00 per share, an investor-expected equity return of ten percent, and a dividend payout ratio of sixty percent. This results in earnings per share of $1.00 ($10.00 book value x 10 percent equity return) and a dividend of $0.60 ($1.00 earnings/sh. x 0.60 payout ratio) during Year 1. Because forty percent (1 - 0.60 payout ratio) of the utility's earnings are retained as opposed to being paid out to investors, book value increases to $10.40 in Year 2 of Mr. Hill's illustration. Table I presents the results of this continuing scenario over the remaining five-year period.

The results displayed in Table I demonstrate that under "steady-state" (i.e. constant) conditions, book value, earnings and dividends all grow at the same constant rate. The table further illustrates that the dividend growth rate, as discussed earlier, is a function of (1) the internally generated funds or earnings that are retained by a company to become new equity, and (2) the return that an investor earns on that new equity. The DCF dividend growth rate, expressed as g = b x r, is also referred to as the internal or sustainable growth rate.

Q. If earnings and dividends both grow at the same rate as book value, shouldn't that rate be the sole factor in determining the DCF growth rate?

A. No. Possible changes in the expected rate of return on either common equity or the dividend payout ratio make earnings and dividend growth by themselves unreliable. This can be seen in the continuation of Mr. Hill's illustration on a hypothetical utility.

Table II

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Growth |
|---|---|---|---|---|---|---|
| Book Value | $10.00 | $10.40 | $10.82 | $11.47 | $12.158 | 5.00% |
| Equity Return | 10% | 10% | 15% | 15% | 15% | 10.67% |
| Earnings/Sh | $1.00 | $1.04 | $1.623 | $1.720 | $1.824 | 16.20% |
| Payout Ratio | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | N/A |
| Dividend/Sh | $0.60 | $0.624 | $0.974 | $1.032 | $1.094 | 16.20% |

In the example displayed in Table II, a sustainable growth rate of four percent[2] exists in Year 1 and Year 2 (as in the prior example). In Year 3, Year 4 and Year 5, however, the sustainable growth rate increases to six

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[2] [ ( Year 2 Earnings/Sh – Year 1 Earnings/Sh ) ÷ Year 1 Earnings/Sh ] = [ ( $1.04 - $1.00 ) ÷ $1.00 ] = [ $0.04 ÷ $1.00 ] = 4.00%

percent.[3] If the hypothetical utility in Mr. Hill's illustration were expected to earn a fifteen-percent return on common equity on a continuing basis, then a six percent long-term rate of growth would be reasonable. However, the compound growth rate for earnings and dividends, displayed in the last column, is 16.20 percent. If this rate was to be used in the DCF model, the utility's return on common equity would be expected to increase by fifty percent every five years, [(15 percent ÷ 10 percent) – 1]. This is clearly an unrealistic expectation.

Although it is not illustrated in Mr. Hill's hypothetical example, a change in only the dividend payout ratio will eventually result in a utility paying out more in dividends than it earns. While it is not uncommon for a utility in the real world to have a dividend payout ratio that exceeds one hundred percent on occasion, it would be unrealistic to expect the practice to continue over a sustained long-term period of time.

Q. Other than the retention of internally generated funds, as illustrated in Mr. Hill's hypothetical example, are there any other sources of new equity capital that can influence an investor's growth expectations for a given company?

A. Yes, a company can raise new equity capital externally. The best example of external funding would be the sale of new shares of common

[3] [ ( 1 – Payout Ratio ) x Rate of Return ] = [ ( 1 - 0.60 ) x 15.00% ] = 0.40 x 15.00% = <u>6.00%</u>

stock. This would create additional equity for the issuer and is often the case with utilities that are either in the process of acquiring smaller systems or providing service to rapidly growing areas.

Q. How does external equity financing influence the growth expectations held by investors?

A. Rational investors will put their available funds into investments that will either meet or exceed their given cost of capital (i.e. the return earned on their investment). In the case of a utility, the book value of a company's stock usually mirrors the equity portion of its rate base (the utility's earning base). Because regulators allow utilities the opportunity to earn a reasonable rate of return on rate base, an investor would take into consideration the effect that a change in book value would have on the rate of return that he or she would expect the utility to earn. If an investor believes that a utility's book value (i.e. the utility's earning base) will increase, then he or she would expect the return on the utility's common stock to increase. If this positive trend in book value continues over an extended period of time, an investor would have a reasonable expectation for sustained long-term growth.

...

Q. Please provide an example of how external financing affects a utility's book value of equity.

A. As I explained earlier, one way that a utility can increase its equity is by selling new shares of common stock on the open market. If these new shares are purchased at prices that are higher than those shares sold previously, the utility's book value per share will increase in value. This would increase both the earnings base of the utility and the earnings expectations of investors. However, if new shares sold at a price below the pre-sale book value per share, the after-sale book value per share declines in value. If this downward trend continues over time, investors might view this as a decline in the utility's sustainable growth rate and will have lower expectations regarding growth. Using this same logic, if a new stock issue sells at a price per share that is the same as the pre-sale book value per share, there would be no impact on either the utility's earnings base or investor expectations.

Q. Please explain how the external component of the DCF growth rate is determined.

A. In his book, The Cost of Capital to a Public Utility,[4] Dr. Gordon (the individual responsible for the development of the DCF or constant growth model) identified a growth rate that includes both expected internal and

[4] Gordon, M.J., The Cost of Capital to a Public Utility, East Lansing, MI: Michigan State University, 1974, pp. 30-33.

external financing components. The mathematical expression for Dr. Gordon's growth rate is as follows:

$$g = ( br ) + ( sv )$$

| | | | |
|---|---|---|---|
| where: | g | = | DCF expected growth rate, |
| | b | = | the earnings retention ratio, |
| | r | = | the return on common equity, |
| | s | = | the fraction of new common stock sold that accrues to a current shareholder, and |
| | v | = | funds raised from the sale of stock as a fraction of existing equity. |
| and | v | = | 1 - [ ( BV ) ÷ ( MP ) ] |
| where: | BV | = | book value per share of common stock, and |
| | MP | = | the market price per share of common stock. |

Q. Did you include the effect of external equity financing on long-term growth rate expectations in your analysis of expected dividend growth for the DCF model?

A. Yes. The external growth rate estimate (sv) is displayed on Page 1 of Schedule WAR-4, where it is added to the internal growth rate estimate (br) to arrive at a final sustainable growth rate estimate.

Q. Please explain why your calculation of external growth on page 2 of Schedule WAR-4, is the current market-to-book ratio averaged with 1.0 in the equation $[(M \div B) + 1] \div 2$.

A. The market price of a utility's common stock will tend to move toward book value, or a market-to-book ratio of 1.0, if regulators allow a rate of return that is equal to the cost of capital (one of the desired effects of regulation). As a result of this situation, I used $[(M \div B) + 1] \div 2$ as opposed to the current market-to-book ratio by itself to represent investor's expectations that, in the future, a given utility will achieve a market-to-book ratio of 1.0.

Q. Has the Commission ever adopted a cost of capital estimate that included this assumption?

A. Yes. In a prior SWG rate case[5], the Commission adopted the recommendations of ACC Staff's cost of capital witness, Stephen Hill, who I noted earlier in my testimony. In that case, Mr. Hill used the same methods that I have used in arriving at the inputs for the DCF model. His final recommendation for SWG was largely based on the results of his DCF analysis, which incorporated the same valid market-to-book ratio assumption that I have used consistently in the DCF model as a cost of capital witness for RUCO.

[5] Decision No. 68487, Dated February 23, 2006 (Docket No. G-01551A-04-0876)

Q. How did you develop your dividend growth rate estimate?

A. I analyzed data on a proxy group comprised of eight LDCs.

Q. Why did you use a proxy group methodology as opposed to a direct analysis of the Company?

A. One of the problems in performing this type of analysis is that the utility applying for a rate increase is not always a publicly traded company. Although SWG is publicly-traded on the NYSE, SWG's Arizona operations are not. Because of this situation, I used the aforementioned proxy that includes eight publicly-traded LDCs with similar risk characteristics to SWG in order to derive a cost of common equity for the Company.

Q. Are there any other advantages to the use of a proxy?

A. Yes. As I noted earlier, the U.S. Supreme Court ruled in the Hope decision that a utility is entitled to earn a rate of return that is commensurate with the returns on investments of other firms with comparable risk. The proxy technique that I have used derives that rate of return. One other advantage to using a sample of companies is that it reduces the possible impact that any undetected biases, anomalies, or measurement errors may have on the DCF growth estimate.

...

Q. What criteria did you use in selecting the natural gas LDC's included in your proxy for the Company?

A. Each of the LDCs in my sample are tracked in the Value Line Investment Survey's ("Value Line") natural gas Utility industry segment. All of the companies in the proxy are engaged in the provision of regulated natural gas distribution services. Attachment A of my testimony contains Value Line's most recent evaluation of the natural gas proxy group that I used for my cost of common equity analysis.

Q. What companies are included your natural gas proxy?

A. The eight natural gas LDC's included in my proxy (and their NYSE ticker symbols) are AGL Resources, Inc. ("AGL"), Atmos Energy Corp. ("ATO"), Laclede Group, Inc. ("LG"), New Jersey Resources Corporation ("NJR"), Northwest Natural Gas Co. ("NWN"), Piedmont Natural Gas Company ("PNY"), South Jersey Industries, Inc. ("SJI") and WGL Holdings, Inc. ("WGL").

Q. Are these the same LDC's that you have used in prior rate case proceedings?

A. Yes, I have used these same LDC's in prior rate cases including the most recent UNS Gas, Inc. proceeding.[6] However, in those prior proceedings I also included another natural gas provider known as Nicor, Inc. Nicor, Inc.

[6] Docket No. G-04204A-06-0463

is currently being acquired by AGL Resources, Inc. Since Nicor, Inc.'s stock price is now being driven by the aforementioned acquisition, I did not believe it should be included in my proxy group.

Q. Are these same LDCs included in the proxy used by SWG's witness?

A. Yes. However SWG's witness, Mr. Robert V. Hevert also included Nicor, Inc., in his analysis which would have been conducted prior to the December 7, 2011 announcement of the merger between AGL and Nicor, Inc.

Q. Briefly describe the regions of the U.S. served by the natural gas LDC's that make up your sample proxy.

A. The LDC's listed above provide natural gas service to customers in the Middle Atlantic region (i.e. NJI which serves portions of northern New Jersey, SJI which serves southern New Jersey and WGL which serves the Washington D.C. metro area), the Southeast and South Central portions of the U.S. (i.e. AGL which serves Virginia, southern Tennessee and the Atlanta, Georgia area and PNY which serves customers in North Carolina, South Carolina and Tennessee), the South, deep South and Midwest (i.e. ATO which serves customers in Kentucky, Mississippi, Louisiana, Texas, Colorado and Kansas, LG which serves the St. Louis area), and the Pacific Northwest (i.e. NWN which serves Washington state and Oregon).

Q. Please explain your DCF growth rate calculations for the sample LDCs used in your proxy.

A. Schedule WAR-5 provides retention ratios, returns on book equity, internal growth rates, book values per share, numbers of shares outstanding, and the compounded share growth for each of the LDCs included in the sample for an historical 5-year observation period from the beginning of 2006 to the end of 2010. Schedule WAR-5 also includes Value Line's projected 2011, 2012 and 2014-16 values for the retention ratio, equity return, book value per share growth rate, and number of shares outstanding for the sample LDC's.

Q. Please describe how you used the information displayed in Schedule WAR-5 to estimate each comparable utility's dividend growth rate.

A. In explaining my analysis, I will use AGL as an example. The first dividend growth component that I evaluated was the internal growth rate. I used the "b x r" formula (described on pages 11 and 12) to multiply AWR's earned return on common equity by its earnings retention ratio for each year in the 2006 to 2010 observation period to derive the utility's annual internal growth rates. I used the mean average of this five-year period as a benchmark against which I compared the projected growth rate trends provided by Value Line. Because an investor is more likely to be influenced by recent growth trends, as opposed to historical averages, the five-year mean noted earlier was used only as a benchmark figure. As shown on Schedule WAR-5, Page 1, AGL's average internal growth rate of 5.24 percent over the 2006 to 2010 time frame reflects an up and down pattern of growth that ranged from a low of 4.79 percent in 2008 to a high of 6.02 percent during 2006. Value Line is predicting that growth will increase steadily from 5.33 percent in 2010, to 5.73 percent by the end of the 2014-16 time frame. After weighing Value Line's projections on earnings and dividend growth, I believe that a 5.50% rate of internal growth is reasonable for AGL (Schedule WAR-4, Page 1 of 2).

Q. Please continue with the external growth rate component portion of your analysis.

A. Schedule WAR-5 demonstrates that the number of shares outstanding for AGL increased from 77.70 million to 78.00 million from 2006 to 2010. Value Line is predicting that this level will increase from 78.50 million in 2011 to 80.50 million by the end of 2016. Based on this data, I believe that a 0.65 percent growth in shares is not unreasonable for AGL (Page 2 of Schedule WAR-4). My final dividend growth rate estimate for AGL is 5.70 percent (5.50 percent internal growth + 0.20 percent external growth) and is shown on Page 1 of Schedule WAR-4.

…

Q. What is the average DCF dividend growth rate estimate for your sample utilities?

A. The average DCF dividend growth rate estimate for my sample is 5.42 percent as displayed on page 1 of Schedule WAR-4.

Q. How does your average dividend growth rate estimates on your sample companies compare to the growth rate data published by Value Line and other analysts?

A. Schedule WAR-6 compares my growth estimates with the five-year projections of analysts at both Value Line and Zacks Investment Research, Inc. ("Zacks") (Attachment B). My 5.42 percent estimate exceeds Zacks' average long-term EPS projection of 4.31 percent but is 10 basis points lower than Value Line's growth projection of 5.52 percent (which is an average of EPS, DPS and BVPS). My 5.42 percent estimate is 29 basis points lower than the 5.71 percent average of Value Line's historical growth results and 8 basis points lower than the 5.50 percent average of the growth data published by both Value Line and Zacks. My 5.42 percent growth estimate is 113 basis points higher than Value Line's 4.29 percent 5-year compound historical average of EPS, DPS and BVPS. The estimates of analysts at Value Line indicate that investors are expecting somewhat lower growth rates from the natural gas utility industry in the future. On balance, I would say my 5.42 percent estimate is a good representation of the growth projections that are available to the investing public.

Q. How did you calculate the dividend yields displayed in Schedule WAR-3?

A. I used the estimated annual dividends, for the next twelve-month period, that appeared in Value Line's June 10, 2011 Ratings and Reports Natural Gas Utility industry update. I then divided those figures by the eight-week average daily adjusted closing price per share of the appropriate utility's common stock. The eight-week observation period ran from April 11, 2011 to June 3, 2011, and the average dividend yield was 3.80 as exhibited on Schedule WAR-3.

Q. Based on the results of your DCF analysis, what is your cost of equity capital estimate for the LDCs included in your sample?

A. As shown on Schedule WAR-2, the cost of equity capital derived from my DCF analysis is 9.22 percent for the LDCs included in my sample.

**Capital Asset Pricing Model (CAPM) Method**

Q. Please explain the theory behind CAPM and why you decided to use it as an equity capital valuation method in this proceeding.

A. CAPM is a mathematical tool that was developed during the early 1960's by William F. Sharpe[7], the Timken Professor Emeritus of Finance at Stanford University, who shared the 1990 Nobel Prize in Economics for research that eventually resulted in the CAPM model. CAPM is used to analyze the relationships between rates of return on various assets and risk as measured by beta.[8] In this regard, CAPM can help an investor to determine how much risk is associated with a given investment so that he or she can decide if that investment meets their individual preferences. Finance theory has always held that as the risk associated with a given investment increases, so should the expected rate of return on that investment and vice versa. According to CAPM theory, risk can be classified into two specific forms: nonsystematic or diversifiable risk, and systematic or non-diversifiable risk. While nonsystematic risk can be virtually eliminated through diversification (i.e. by including stocks of various companies in various industries in a portfolio of securities), systematic risk, on the other hand, cannot be eliminated by diversification.

[7] William F. Sharpe, "A Simplified Model of Portfolio Analysis," Management Science, Vol. 9, No. 2 (January 1963), pp. 277-93.

[8] Beta is defined as an index of volatility, or risk, in the return of an asset relative to the return of a market portfolio of assets. It is a measure of systematic or non-diversifiable risk. The returns on a stock with a beta of 1.0 will mirror the returns of the overall stock market. The returns on stocks with betas greater than 1.0 are more volatile or riskier than those of the overall stock market; and if a stock's beta is less than 1.0, its returns are less volatile or riskier than the overall stock market.

Thus, systematic risk is the only risk of importance to investors. Simply stated, the underlying theory behind CAPM is that the expected return on a given investment is the sum of a risk-free rate of return plus a market risk premium that is proportional to the systematic (non-diversifiable risk) associated with that investment. In mathematical terms, the formula is as follows:

$$k = r_f + [\ ß\ (r_m - r_f)\ ]$$

| | | | |
|---|---|---|---|
| where: | $k$ | = | the expected return of a given security, |
| | $r_f$ | = | risk-free rate of return, |
| | ß | = | beta coefficient, a statistical measurement of a security's systematic risk, |
| | $r_m$ | = | average market return (e.g. S&P 500), and |
| | $r_m - r_f$ | = | market risk premium. |

Q. What types of financial instruments are generally used as a proxy for the risk-free rate of return in the CAPM model?

A. Generally speaking, the yields of U.S. Treasury instruments are used by analysts as a proxy for the risk-free rate of return component.

. . .

Q. Please explain why U.S. Treasury instruments are regarded as a suitable proxy for the risk-free rate of return?

A. As citizens and investors, we would like to believe that U.S. Treasury securities (which are backed by the full faith and credit of the United States Government) pose no threat of default no matter what their maturity dates are. However, a comparison of various Treasury instruments (Attachment C) will reveal that those with longer maturity dates do have slightly higher yields. Treasury yields are comprised of two separate components,[9] a real rate of interest (believed to be approximately 2.00 percent) and an inflationary expectation. When the real rate of interest is subtracted from the total treasury yield, all that remains is the inflationary expectation. Because increased inflation represents a potential capital loss, or risk, to investors, a higher inflationary expectation by itself represents a degree of risk to an investor. Another way of looking at this is from an opportunity cost standpoint. When an investor locks up funds in long-term T-Bonds, compensation must be provided for future investment opportunities foregone. This is often described as maturity or interest rate risk and it can affect an investor adversely if market rates increase before the instrument matures (a rise in interest rates would decrease the value of the debt instrument). As discussed earlier in the DCF portion of my

[9] As a general rule of thumb, there are three components that make up a given interest rate or rate of return on a security: the real rate of interest, an inflationary expectation, and a risk premium. The approximate risk premium of a given security can be determined by simply subtracting a 91-day T-Bill rate from the yield on the security.

testimony, this compensation translates into higher rates of returns to the investor.

Q. What security did you use for a risk-free rate of return in your CAPM analysis?

A. I used an eight-week average of the yield on a 5-year U.S. Treasury instrument. The yields were published in Value Line's Selection and Opinion publication dated April 22, 2011 through June 10, 2011 (Attachment C). This resulted in a risk-free ($r_f$) rate of return of 1.91 percent.

Q. Why did you use the yield on a 5-year year U.S. Treasury instrument as opposed to a short-term T-Bill?

A. While a shorter term instrument, such as a 91-day T-Bill, presents the lowest possible total risk to an investor, a good argument can be made that the yield on an instrument that matches the investment period of the asset being analyzed in the CAPM model should be used as the risk-free rate of return. Since utilities in Arizona generally file for rates every three to five years, the yield on a 5-year U.S. Treasury Instrument closely matches the investment period or, in the case of regulated utilities, the period that new rates will be in effect.

Q. How did you calculate the market risk premium used in your CAPM analysis?

A. I used both a geometric and an arithmetic mean of the historical total returns on the S&P 500 index from 1926 to 2010 as the proxy for the market rate of return ($r_m$). For the risk-free portion of the risk premium component ($r_f$), I used the geometric mean of the total returns of intermediate-term government bonds for the same eighty-four year period. The market risk premium ($r_m$ - $r_f$) that results by using the geometric mean of these inputs is 4.50 percent (9.90% - 5.40% = 4.50%). The market risk premium that results by using the arithmetic mean calculation is 6.40 percent (11.90% - 5.50% = 6.40%).

Q. How did you select the beta coefficients that were used in your CAPM analysis?

A. The beta coefficients (ß), for the individual utilities used in both my proxies, were calculated by Value Line and were current as of June 10, 2011 for the LDCs in my proxy. Value Line calculates its betas by using a regression analysis between weekly percentage changes in the market price of the security being analyzed and weekly percentage changes in the NYSE Composite Index over a five-year period. The betas are then adjusted by Value Line for their long-term tendency to converge toward 1.00. The beta coefficients for the LDCs included in my sample ranged from 0.60 to 0.75 with an average beta of 0.66.

Q. What are the results of your CAPM analysis?

A. As shown on pages 1 and 2 of Schedule WAR-7, my CAPM calculation using a geometric mean to calculate the risk premium results in an average expected return of 4.87 percent. My calculation using an arithmetic mean results in an average expected return of 6.11 percent.

Q. Please summarize the results derived under each of the methodologies presented in your testimony.

A. The following is a summary of the cost of equity capital derived under each methodology used:

| **METHOD** | **RESULTS** |
|---|---|
| DCF | 9.22% |
| CAPM | 4.87% – 6.11% |

Based on these results, my best estimate of an appropriate range for a cost of common equity for the Company is 4.87 percent to 9.22 percent. My final recommended cost of common equity figure is 9.00 percent.

Q. How does your recommended cost of equity capital compare with the cost of equity capital proposed by the Company?

A. The 11.00 percent cost of equity capital proposed by the Company is 200 basis points higher than the 9.00 percent cost of equity capital that I am recommending.

Q How did you arrive at your final recommended 9.00 percent cost of common equity?

A. My recommended 9.00 percent cost of common equity falls on the high side of the range of estimates obtained from my DCF and CAPM analyses. As I will discuss in more detail in the next section of my testimony, my final estimate takes into consideration current interest rates (as the cost of equity moves in the same direction as interest rates), and the current state of the national and state economies. My final estimate also takes into consideration a general belief among economists and market analysts that the U.S. Federal Reserve will begin raising interest rates as the economy improves (although there is no firm estimate as to when that may occur). I also took into consideration information on Arizona's current rate of unemployment in making my final cost of equity estimate.

**Current Economic Environment**

Q. Please explain why it is necessary to consider the current economic environment when performing a cost of equity capital analysis for a regulated utility.

A. Consideration of the economic environment is necessary because trends in interest rates, present and projected levels of inflation, and the overall state of the U.S. economy determine the rates of return that investors earn on their invested funds. Each of these factors represent potential risks that must be weighed when estimating the cost of equity capital for a regulated utility and are, most often, the same factors considered by individuals who are also investing in non-regulated entities.

Q. Please describe your analysis of the current economic environment.

A. My analysis begins with a review of the economic events that have occurred between 1990 and the present in order to provide a background on how we got to where we are now. It also describes how the Board of Governors of the Federal Reserve System ("Federal Reserve" or "Fed") and its Federal Open Market Committee ("FOMC") used its interest rate-setting authority to stimulate the economy by cutting interest rates during recessionary periods and by raising interest rates to control inflation during times of robust economic growth. Schedule WAR-8 displays various economic indicators and other data that I will refer to during this portion of my testimony.

In 1991, as measured by the most recently revised annual change in gross domestic product ("GDP"), the U.S. economy experienced a rate of growth of negative 0.20 percent. This decline in GDP marked the beginning of a mild recession that ended sometime before the end of the first half of 1992. Reacting to this situation, the Federal Reserve, then chaired by noted economist Alan Greenspan, lowered its benchmark federal funds rate[10] in an effort to further loosen monetary constraints - an action that resulted in lower interest rates.

During this same period, the nation's major money center banks followed the Federal Reserve's lead and began lowering their interest rates as well. By the end of the fourth quarter of 1993, the prime rate (the rate charged by banks to their best customers) had dropped to 6.00 percent from a 1990 level of 10.01 percent. In addition, the Federal Reserve's discount rate on loans to its member banks had fallen to 3.00 percent and short-term interest rates had declined to levels that had not been seen since 1972.

Although GDP increased in 1992 and 1993, the Federal Reserve took steps to increase interest rates beginning in February of 1994, in order to keep inflation under control. By the end of 1995, the Federal discount rate had risen to 5.21 percent. Once again, the banking community followed the Federal Reserve's moves. The Fed's strategy, during this period, was to engineer a "soft landing." That is to say that the Federal Reserve wanted to foster a situation in which economic growth would be stabilized without incurring either a prolonged recession or runaway inflation.

[10] This is the interest rate charged by banks with excess reserves at a Federal Reserve district bank to banks needing overnight loans to meet reserve requirements. The federal funds rate is the most sensitive indicator of the direction of interest rates, since it is set daily by the market, unlike the prime rate and the discount rate, which are periodically changed by banks and by the Federal Reserve Board, respectively.

Q. Did the Federal Reserve achieve its goals during this period?

A. Yes. The Fed's strategy of decreasing interest rates to stimulate the economy worked. The annual change in GDP began an upward trend in 1992. A change of 4.50 percent and 4.20 percent were recorded at the end of 1997 and 1998 respectively. Based on daily reports that were presented in the mainstream print and broadcast media during most of 1999, there appeared to be little doubt among both economists and the public at large that the U.S. was experiencing a period of robust economic growth highlighted by low rates of unemployment and inflation. Investors, who believed that technology stocks and Internet company start-ups (with little or no history of earnings) had high growth potential, purchased these types of issues with enthusiasm. These types of investors, who exhibited what former Chairman Greenspan described as “irrational exuberance,” pushed stock prices and market indexes to all time highs from 1997 to 2000. Over the next ten years, the FOMC continued to stimulate the economy and keep inflation in check by raising and lowering the federal funds rate.

Q. How did the U.S. economy fare between 2001 and 2007?

A. The U.S. economy entered into a recession near the end of the first quarter of 2001. The bullish trend, which had characterized the last half of the 1990’s, had already run its course sometime during the third quarter of 2000. Disappointing economic data releases, since the beginning of

2001, preceded the September 11, 2001 terrorist attacks on the World Trade Center and the Pentagon which are now regarded as a defining point during this economic slump. From January 2001 to June 2003 the Federal Reserve cut interest rates a total of thirteen times in order to stimulate growth. During this period, the federal funds rate fell from 6.50 percent to 1.00 percent. The FOMC reversed this trend on June 29, 2004 and raised the federal funds rate 25 basis points to 1.25 percent. From June 29, 2004 to January 31, 2006, the FOMC raised the federal funds rate thirteen more times to a level of 4.50 percent during a period in which the economic picture turned considerably brighter as both Inflation and unemployment fell, wages increased and the overall economy, despite continued problems in housing, grew briskly.[11]

The FOMC's January 31, 2006 meeting marked the final appearance of Alan Greenspan, who had presided over the rate setting body for a total of eighteen years. On that same day, Greenspan's successor, Ben Bernanke, the former chairman of the President's Council of Economic Advisers, and a former Fed governor under Greenspan from 2002 to 2005, was confirmed by the U.S. Senate to be the new Federal Reserve chief. As expected by Fed watchers, Chairman Bernanke picked up where his predecessor left off and increased the federal funds rate by 25 basis points during each of the next three FOMC meetings for a total of

[11] Henderson, Nell, "Bullish on Bernanke" The Washington Post, January 30, 2007.

seventeen consecutive rate increases since June 2004, and raising the federal funds rate to a level of 5.25 percent. The Fed's rate increase campaign finally came to a halt at the FOMC meeting held on August 8, 2006, when the FOMC decided not to raise rates. Once again, the Fed managed to engineer a soft landing.

Q. What has been the state of the economy since 2007?

A. Reports in the mainstream financial press during the majority of 2007 reflected the view that the U.S. economy was slowing as a result of a worsening situation in the housing market and higher oil prices. The overall outlook for the economy was one of only moderate growth at best. Also during this period the Fed's key measure of inflation began to exceed the rate setting body's comfort level.

On August 7, 2007, the beginning of what is now being referred to as the Great Recession; the FOMC decided not to increase or decrease the federal funds rate for the ninth straight time and left its target rate unchanged at 5.25 percent.[12] At the time of the Fed's decision, analysts speculated that a rate cut over the next several months was unlikely given the Fed's concern that inflation would fail to moderate. However, during this same period, evidence of an even slower economy and a possible

[12] Ip, Greg, "Markets Gyrate As Fed Straddles Inflation, Growth" The Wall Street Journal, August 8, 2007

recession was beginning to surface. Within days of the Fed's decision to stand pat on rates, a borrowing crisis rooted in a deterioration of the market for subprime mortgages and securities linked to them, forced the Fed to inject $24 billion in funds (raised through its open market operations) into the credit markets.[13] By Friday, August 17, 2007, after a turbulent week on Wall Street, the Fed made the decision to lower its discount rate (i.e. the rate charged on direct loans to banks) by 50 basis points, from 6.25 percent to 5.75 percent, and took steps to encourage banks to borrow from the Fed's discount window in order to provide liquidity to lenders. According to an article that appeared in the August 18, 2007 edition of The Wall Street Journal,[14] the Fed had used all of its tools to restore normalcy to the financial markets. If the markets failed to settle down, the Fed's only weapon left was to cut the Federal Funds rate – possibly before the next FOMC meeting scheduled on September 18, 2007.

Q. Did the Fed cut rates as a result of the subprime mortgage borrowing crises?

A. Yes. At its regularly scheduled meeting on September 18, 2007, the FOMC surprised the investment community and cut both the federal funds rate and the discount rate by 50 basis points (25 basis points more than

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[13] Ip, Greg, "Fed Enters Market To Tamp Down Rate" The Wall Street Journal, August 9, 2007

[14] Ip, Greg, Robin Sidel and Randall Smith, "Fed Offers Banks Loans Amid Crises" The Wall Street Journal, August 9, 2007

what was anticipated). This brought the federal funds rate down to a level of 4.75 percent. The Fed's action was seen as an effort to curb the aforementioned slowdown in the economy. Over the course of the next four months, the FOMC reduced the Federal funds rate by a total 175 basis points to a level of 3.00 percent – mainly as a result of concerns that the economy was slipping into a recession. This included a 75 basis point reduction that occurred one week prior to the FOMC's meeting on January 29, 2008.

Q. What actions has the Fed taken in regard to interest rates since the beginning of 2008?

A. The Fed made two more rate cuts which included a 75 basis point reduction in the federal funds rate on March 18, 2008 and an additional 25 basis point reduction on April 30, 2008. The Fed's decision to cut rates was based on its belief that the slowing economy was a greater concern than the current rate of inflation (which the majority of FOMC members believed would moderate during the economic slowdown).[15] As a result of the Fed's actions, the federal funds rate was reduced to a level of 2.00 percent. From April 30, 2008 through September 16, 2008, the Fed took no further action on its key interest rate. However, the days before and after the Fed's September 16, 2008 meeting saw longstanding Wall Street

[15] Ip, Greg, "Credit Worries Ease as Fed Cuts, Hints at More Relief" The Wall Street Journal, March 19, 2008

firms such as Lehman Brothers, Merrill Lynch and AIG failing as a result of their subprime holdings. By the end of the week, the Bush administration had announced plans to deal with the deteriorating financial condition which had now become a worldwide crisis. The administrations actions included former Treasury Secretary Henry Paulson's request to Congress for $700 billion to buy distressed assets as part of a plan to halt what has been described as the worst financial crisis since the 1930's[16]. Amidst this turmoil, the Fed made the decision to cut the federal funds rate by another 50 basis points in a coordinated move with foreign central banks on October 8, 2008. This was followed by another 50 basis point cut during the regular FOMC meeting on October 29, 2008. At the time of this writing, the federal funds target rate now stands at 0.25 percent, the result of a 75 basis point cut announced on December 16, 2008.

Q. What is the current rate of inflation in the U.S.?

A. As can be seen on Schedule WAR-8, the current rate of inflation is at 3.20 percent according to information provided by the U.S. Department of Labor's Bureau of Labor Statistics.[17]

. . .

[16] Soloman, Deborah, Michael R. Crittenden and Damian Paletta, "U.S. Bailout Plan Calms Markets, But Struggle Looms Over Details" The Wall Street Journal, September 20, 2008

[17] http://www.bls.gov/news.release/cpi.nr0.htm

Q. Has the Fed raised interest rates in anticipation of higher inflation?

A. No. Despite encouraging signs of recovery, with the exception of recent higher prices for food and oil, the FOMC has not raised interest rates to date. Furthermore, during the first week of November 2010, Chairman Bernanke announced plans to buy $600 billion of U.S. government bonds over the next eight months in order to drive down long-term interest rates and encourage more borrowing and growth.[18] During its March 15, 2011 meeting, the FOMC unanimously voted to press on with its $600 billion bond-buying plan despite a considerably more upbeat assessment of the economy and the job market. In a prepared statement, the FOMC announced that "The economic recovery is on a firmer footing, and overall conditions in the labor market appear to be improving gradually." However, the rate-setting body of the Fed also reiterated its pledge to keep interest rates, currently near zero, at very low levels for an extended period.[19]

Q. Putting this all into perspective, how have the Fed's actions since 2000 affected the yields on Treasury Instruments and benchmark interest rates?

A. As can be seen on Schedule WAR-8, current Treasury yields are considerably lower than corresponding yields that existed during the year

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[18] Hilsenrath, Jon, "Fed Fires $600 Billion Stimulus Shot" The Wall Street Journal, November 4, 2010

[19] da Costa, Pedro and Mark Felsenthal, "Fed says economic recovery on firmer footing," MSNBC, March 15, 2011

2000 and U.S. Treasury instruments, are for the most part, still at historically low levels. As can be seen on the first page of Attachment C, the previously mentioned federal discount rate (the rate charged to the Fed's member banks), has remained steady at 0.75 percent since March of 2010.

As of June 1, 2011, leading interest rates that include the 3-month, 6-month and 1-year treasury yields have dropped from their June 2010 levels. Longer term yields including the 5-year, 10-year and 30-year have all fallen from levels that existed a year ago. Only the 30-year Zero rate saw a 5 basis point increase since June 2010 (Attachment C, Value Line Selection & Opinion page 2193). The prime rate has remained constant at 3.25 percent over the past year, as has the benchmark federal funds rate discussed above. A previous trend, described by former Chairman Greenspan as a "conundrum"[20], in which long-term rates fell as short-term rates increased, thus creating a somewhat inverted yield curve that existed as late as June 2007, is completely reversed and a more traditional yield curve (one where yields increase as maturity dates lengthen) presently exists. The 5-year Treasury yield, used in my CAPM analysis, has decreased 54 basis points from 2.13 percent, in June 2010, to 1.59 percent as of June 1, 2011.

[20] Wolk, Martin, "Greenspan wrestling with rate 'conundrum'," MSNBC, June 8, 2005

Q. What are the current yields on utility bonds?

A. Referring again to Attachment C, as of June 1, 2011, 25/30-year A-rated utility bonds were yielding 5.14 percent (28 basis points lower than a year ago) and 25/30-year Baa/BBB-rated utility bonds were yielding 5.69 percent (down 34 basis points from a year earlier).

Q. What is the current outlook for the economy?

A. Value line's analysts had this to say in the June 10, 2011 edition of Value Line's Selection and Opinion publication:

> **Recent sluggishness aside, we still expect second-quarter GDP growth to narrowly push past the tepid 1.8% gain recorded during the first three months of this year.** Our sense is that gross domestic product growth may edge up to 2.5%, or so, in the current period, as the effects of Japan's earthquake and the harsh winter storms that blanketed so much of our nation fade. We also look for the recent moderation in the price of oil and other key commodities to encourage a still-reticent consumer to gradually pick up the spending pace.

Value Line's analysts went on to explain

> **Even so, our optimism has been tempered by less-than-compelling recent data,** which include declining durable goods orders, unrelenting softness in housing, some developing listlessness in consumer confidence, and slowing growth in manufacturing. Our feeling is that some of these problems will start to fade after midyear, although even then, we no longer sense that GDP growth will move beyond 3% in the final half.

Value Line's analysts also stated

> **We are a little more optimistic about 2012,** and believe that the up cycle will broaden to incorporate the still-troubled housing market by then. For now, a bottoming-out process is the best we see ahead for housing in 2011. Our 2012 economic model calls for modestly better housing numbers and GDP growth of just over 3%.

Value Line's analysts went on to say

> **Meanwhile, the Federal Reserve is likely to continue its support for the economy,** even as it prepares to conclude its quantitative easing, or QE2, monetary stimulus program late this month. Our sense is that the lead bank will not move to tighten the reins by raising interest rates for another six months to a year. But for now, we do not see a new stimulus, or QE3, endeavor being forthcoming. Even here though, our certainty is less than it has been.

Q. How are LDCs such as SWG faring in the current economic environment?

A. In the June 10, 2011 quarterly update on the natural gas utility industry Mr. Richard Gallagher stated the following:

> The weakness in the U.S. economy continues to affect this group's results. On point, the lackluster housing market remains a challenge. In fact, one key measure for this sector, housing starts, declined 10.6% in in April. This suggests demand will probably continue to be weak in the near term. Moreover, tight consumer spending has led to customer conservation. These factors, along with low natural gas prices, will likely continue to pressure revenues for the foreseeable future. What's more, low interest rates have led to an unfavorable rate environment, which has hurt these utilities returns of late.
>
> The primary appeal of these utility stocks is their above-average dividend yields. Indeed, the average yield for this group is about 3.6%, which is well above the *Value Line* median. Most notably, *NiSource, AGL Resources* and *Laclede Group* all offer particularly attractive dividend yields in this sector.

Q. How has Arizona fared in terms of the overall economy and home foreclosures?

A. Arizona was one of the states hit the hardest during the Great Recession and has lagged during the current recovery.[21] During the period between 2006 and 2009, statewide construction spending fell by 40.00 percent. According to information provided by Irvine, California-based RealtyTrac, Arizona is currently ranked third in the nation behind California and

[21] Beard, Betty, "Recession hit Arizona hardest" The Arizona Republic, March 6, 2011

Nevada (all areas that SWG operates in) in terms of home foreclosures with the largest number of foreclosures occurring in Maricopa, Pinal and Pima Counties.[22]

Q. What is the current unemployment situation in Arizona during this period of economic recovery?

A. According to information displayed on the website of the Arizona Department of Administration's Office of Employment and Population Statistics[23], Arizona's jobless rate stood at 9.30 percent in April 2011 which is down from 10.10 percent in April 2010. As of June 3, 2011, nationwide unemployment remained unchanged at 9.10 percent according to the U.S. Bureau of Labor Statistics.[24] So Arizona's unemployment rate is slightly higher than the national average.

Q. After weighing the economic information that you've just discussed, do you believe that the 9.00 percent cost of equity capital that you have estimated is reasonable for SWG?

A. I believe that my recommended 9.00 percent cost of equity capital, which is 331 basis points higher than the current 5.69 percent yield on a

[22] http://www.realtytrac.com/trendcenter/

[23] Arizona Department of Administration's Office of Employment and Population Statistics http://www.workforce.az.gov/

[24] U.S. Bureau of Labor Statistics Economic News Release dated June 3, 2011 http://www.bls.gov/news.release/empsit.nr0.htm

Baa/BBB-rated utility bond, will provide SWG with a reasonable rate of return on invested capital when data on interest rates (that are low by historical standards), the current state of the economy, current rates of unemployment (both nationally and in Arizona), and the Fed's ability to keep inflation in check are all taken into consideration. As I noted earlier, the Hope decision determined that a utility is entitled to earn a rate of return that is commensurate with the returns it would make on other investments with comparable risk. I believe that my cost of equity analysis has produced such a return. As can be seen in Attachment D, my recommended 9.00 percent cost of common equity exceeds Value Line's projected 2011 and 2012 8.50 percent return on book common equity for SWG. Further, my recommended 9.00 percent cost of common equity matches Value Line's 9.00 percent return on book common equity for SWG over the 2014-2016 time frame.

**CAPITAL STRUCTURE AND COST OF DEBT**

Q. Please describe the Company-proposed capital structure.

A. The Company-proposed capital structure is comprised of approximately 52.30 percent common equity and 47.70 percent long-term debt.

Q. How does the Company-proposed capital structure compare with the capital structures of the LDCs that comprise your sample?

A. The Company-proposed capital structure, comprised of 52.30 percent equity capital is somewhat lower in equity than the capital structures of the LDCs in my sample, which had an average of 56.80 percent common equity, and would be perceived by investors as having slightly higher risk overall. SWG's 47.70 percent level of long-term debt is somewhat higher than the average of 43.10 percent in my sample and would be perceived as having a slightly higher level of financial risk. Overall I would say that SWG's capital structure is well balanced and the Company has improved its equity position since its last rate case proceeding.

Q. What capital structure are you recommending for SWG?

A. I am recommending a capital structure comprised of 50.15 percent common equity and 49.85 percent long-term debt which is slightly different from the Company-proposed capital structure.

Q. What is the difference between your recommended capital structure and the Company-proposed capital structure?

A. My recommended capital takes into consideration debt refinancing and bond issuances that occurred after the end of the Company's Test Year (Exhibit 2).

Q. What cost of long-term debt are you recommending for SWG?

A. I am recommending that the Commission adopt a cost of debt of 7.3 percent which is 99 basis points lower than the Company-proposed cost of debt of 8.34 percent.

Q. How did your determine your recommended cost of debt?

A. I based my recommended cost of debt on information that was provided by SWG in its response to ACC Staff data request 2.21 (Exhibit 1) which reflects the impact of debt refinancing and bond issuances noted above.

**COMMENTS ON THE COMPANY-PROPOSED COST OF EQUITY CAPITAL**

Q. How does your recommended cost of equity capital compare with the cost of equity capital proposed by the Company?

A. The Company's cost of capital witness, Mr. Hevert, is recommending a cost of common equity of 11.00 percent. His 11.00 percent cost of common equity is 200 basis points higher than the 9.00 percent cost of common equity that I am recommending.

Q. What models and methods did Mr. Hevert use to arrive at his proposed cost of common equity for the Company?

A. Mr. Hevert used both the DCF and CAPM models. Mr. Hevert relies on both the constant growth DCF model that I relied on and a multi-stage version of the DCF model. He also employed a bond yield plus risk premium analysis which I did not rely on since it is a variation on CAPM.

Q. Please describe the methods used by Mr. Hevert and the results produced by his constant growth DCF model?

A. Mr. Hevert relied on growth estimates from analysts at Value Line, Zacks and First Call. He also relied on 30, 90 and 180 day averages of closing stock prices for the inputs to his constant DCF models.

Q. What were the results of Mr. Hevert's constant growth DCF model?

A. Mr. Hevert's constant growth model produced results ranging from 7.43 percent to 9.71 percent.

Q. What results did Mr. Hevert's obtain from his multi-stage DCF model?

A. Mr. Hevert's obtained multi-stage DCF model results ranging from a low of 10.08 percent to a high of 10.66 percent.

Q. How do Mr. Hevert's DCF results compare with the results that you obtained from your DCF analysis?

A. Mr. Hevert's results from both his DCF models range from 7.43 percent to 10.66 compared to my DCF result of 9.22 percent. The mean average of all of his DCF results is 9.50 percent which is 28 basis points higher than the 9.22 percent that I obtained from my constant growth model.

Q. What types of inputs did Mr. Hevert use in the standard Sharpe Litner CAPM model?

A. Mr. Hevert conducted two analyses using the Sharpe Litner CAPM model, one using a Sharpe Ratio derived market risk premium input of approximately 9.89 percent and another which used an ex-ante approach derived market risk premium input of approximately 9.38 percent as opposed to my risk premiums ranging from 4.50 percent to 6.40 percent. He then performed two separate analyses relying on a current average 30-year treasury yield of 3.75 percent and a near-term projected 30-year treasury yield of 4.22 percent as opposed to my 8-week average yield of 1.91 percent on a 5-year Treasury instrument. Each of these analyses used historical betas which averaged 0.67 and betas that were recalculated by Mr. Hevert that averaged 0.88 as opposed to my average beta of 0.66.

Q. How do the results of Mr. Hevert's CAPM analyses compare to the results of your CAPM analyses?

A. Mr. Hevert's CAPM analysis produced results ranging from 10.41 percent to 12.93 percent. As opposed to my CAPM results which ranged from 4.87% to 6.11%.

Q. What concerns do you have with the market risk premium inputs used by Mr. Hevert in his CAPM models?

A. I believe that the market risk premiums that Mr. Hevert developed for his CAPM models are clearly excessive and are not reasonable based on historical averages. I believe that the historical 4.50 percent to 6.40 percent market risk premiums that I have relied on are much more reasonable given the fact that they take into account the broad range of economic conditions that this country has experienced since 1926.

Q. Do you agree with Mr. Hevert's use of recalculated betas?

A. No. Mr. Hevert believes that recalculated betas are necessary because of market volatility during the recent financial crises. I disagree with this rationale because it infers that betas should be adjusted downward during good economic times. Simply put, beta is intended to be reflective of how sensitive a given security is to current market conditions and is central to CAPM. To adjust betas in the manner that Mr. Hevert has essentially undermines the theory behind the CAPM model.

Q. Please explain the differences in your risk free rates of return.

A. I relied on an 8-week average yield of 1.91 percent on a 5-year treasury instrument whereas Mr. Hevert relied on a current average of the yield on a 30-year Treasury bond and near-term projections of a 30-year Treasury bond.

Q. Do you agree with Mr. Hevert's reliance on 30-year Treasury instruments?

A. No. Investor owned utilities do not file for rates every thirty years. .As I stated earlier in my testimony, the yield on an instrument that matches the investment period of the asset being analyzed in the CAPM model should be used as the risk-free rate of return. Since utilities in Arizona generally file for rates every three to five years, the yield on a 5-year U.S. Treasury Instrument more closely matches the investment period or, in the case of regulated utilities, the period that new rates will be in effect.

Q. How did Mr. Hevert arrive at his final 11.00 percent cost of common equity for the Company?

A. Mr. Hevert's proposed 11.00 percent cost of common equity represents his own judgment and relies on the results on the averages of estimates he obtained from his various models.

...

Q. Does your silence on any of the issues, matters or findings addressed in the testimony of Mr. Hevert or any other witness for SWG constitute your acceptance of their positions on such issues, matters or findings?

A. No, it does not.

Q. Does this conclude your testimony on SWG?

A. Yes, it does.

# Qualifications of William A. Rigsby, CRRA

**EDUCATION:**

University of Phoenix
Master of Business Administration, Emphasis in Accounting, 1993

Arizona State University
College of Business
Bachelor of Science, Finance, 1990

Mesa Community College
Associate of Applied Science, Banking and Finance, 1986

Society of Utility and Regulatory Financial Analysts
38th Annual Financial Forum and CRRA Examination
Georgetown University Conference Center, Washington D.C.
Awarded the Certified Rate of Return Analyst designation
after successfully completing SURFA's CRRA examination.

Michigan State University
Institute of Public Utilities
N.A.R.U.C. Annual Regulatory Studies Program, 1997 &1999

Florida State University
Center for Professional Development & Public Service
N.A.R.U.C. Annual Western Utility Rate School, 1996

**EXPERIENCE:**

Public Utilities Analyst V
Residential Utility Consumer Office
Phoenix, Arizona
April 2001 – Present

Senior Rate Analyst
Accounting & Rates - Financial Analysis Unit
Arizona Corporation Commission, Utilities Division
Phoenix, Arizona
July 1999 – April 2001

Senior Rate Analyst
Residential Utility Consumer Office
Phoenix, Arizona
December 1997 – July 1999

Utilities Auditor II and III
Accounting & Rates – Revenue Requirements Analysis Unit
Arizona Corporation Commission, Utilities Division
Phoenix, Arizona
October 1994 – November 1997

Tax Examiner Technician I / Revenue Auditor II
Arizona Department of Revenue
Transaction Privilege / Corporate Income Tax Audit Units
Phoenix, Arizona
July 1991 – October 1994

## RESUME OF RATE CASE AND REGULATORY PARTICIPATION

| Utility Company | Docket No. | Type of Proceeding |
|---|---|---|
| ICR Water Users Association | U-2824-94-389 | Original CC&N |
| Rincon Water Company | U-1723-95-122 | Rate Increase |
| Ash Fork Development Association, Inc. | E-1004-95-124 | Rate Increase |
| Parker Lakeview Estates Homeowners Association, Inc. | U-1853-95-328 | Rate Increase |
| Mirabell Water Company, Inc. | U-2368-95-449 | Rate Increase |
| Bonita Creek Land and Homeowner's Association | U-2195-95-494 | Rate Increase |
| Pineview Land & Water Company | U-1676-96-161 | Rate Increase |
| Pineview Land & Water Company | U-1676-96-352 | Financing |
| Montezuma Estates Property Owners Association | U-2064-96-465 | Rate Increase |
| Houghland Water Company | U-2338-96-603 et al | Rate Increase |
| Sunrise Vistas Utilities Company – Water Division | U-2625-97-074 | Rate Increase |
| Sunrise Vistas Utilities Company – Sewer Division | U-2625-97-075 | Rate Increase |
| Holiday Enterprises, Inc. dba Holiday Water Company | U-1896-97-302 | Rate Increase |
| Gardener Water Company | U-2373-97-499 | Rate Increase |
| Cienega Water Company | W-2034-97-473 | Rate Increase |
| Rincon Water Company | W-1723-97-414 | Financing/Auth. To Issue Stock |
| Vail Water Company | W-01651A-97-0539 et al | Rate Increase |
| Bermuda Water Company, Inc. | W-01812A-98-0390 | Rate Increase |
| Bella Vista Water Company | W-02465A-98-0458 | Rate Increase |
| Pima Utility Company | SW-02199A-98-0578 | Rate Increase |

## RESUME OF RATE CASE AND REGULATORY PARTICIPATION (Cont.)

| Utility Company | Docket No. | Type of Proceeding |
|---|---|---|
| Pineview Water Company | W-01676A-99-0261 | WIFA Financing |
| I.M. Water Company, Inc. | W-02191A-99-0415 | Financing |
| Marana Water Service, Inc. | W-01493A-99-0398 | WIFA Financing |
| Tonto Hills Utility Company | W-02483A-99-0558 | WIFA Financing |
| New Life Trust, Inc. dba Dateland Utilities | W-03537A-99-0530 | Financing |
| GTE California, Inc. | T-01954B-99-0511 | Sale of Assets |
| Citizens Utilities Rural Company, Inc. | T-01846B-99-0511 | Sale of Assets |
| MCO Properties, Inc. | W-02113A-00-0233 | Reorganization |
| American States Water Company | W-02113A-00-0233 | Reorganization |
| Arizona-American Water Company | W-01303A-00-0327 | Financing |
| Arizona Electric Power Cooperative | E-01773A-00-0227 | Financing |
| 360networks (USA) Inc. | T-03777A-00-0575 | Financing |
| Beardsley Water Company, Inc. | W-02074A-00-0482 | WIFA Financing |
| Mirabell Water Company | W-02368A-00-0461 | WIFA Financing |
| Rio Verde Utilities, Inc. | WS-02156A-00-0321 et al | Rate Increase/ Financing |
| Arizona Water Company | W-01445A-00-0749 | Financing |
| Loma Linda Estates, Inc. | W-02211A-00-0975 | Rate Increase |
| Arizona Water Company | W-01445A-00-0962 | Rate Increase |
| Mountain Pass Utility Company | SW-03841A-01-0166 | Financing |
| Picacho Sewer Company | SW-03709A-01-0165 | Financing |
| Picacho Water Company | W-03528A-01-0169 | Financing |
| Ridgeview Utility Company | W-03861A-01-0167 | Financing |
| Green Valley Water Company | W-02025A-01-0559 | Rate Increase |
| Bella Vista Water Company | W-02465A-01-0776 | Rate Increase |
| Arizona Water Company | W-01445A-02-0619 | Rate Increase |

## RESUME OF RATE CASE AND REGULATORY PARTICIPATION (Cont.)

| Utility Company | Docket No. | Type of Proceeding |
|---|---|---|
| Arizona-American Water Company | W-01303A-02-0867 et al. | Rate Increase |
| Arizona Public Service Company | E-01345A-03-0437 | Rate Increase |
| Rio Rico Utilities, Inc. | WS-02676A-03-0434 | Rate Increase |
| Qwest Corporation | T-01051B-03-0454 | Renewed Price Cap |
| Chaparral City Water Company | W-02113A-04-0616 | Rate Increase |
| Arizona Water Company | W-01445A-04-0650 | Rate Increase |
| Tucson Electric Power | E-01933A-04-0408 | Rate Review |
| Southwest Gas Corporation | G-01551A-04-0876 | Rate Increase |
| Arizona-American Water Company | W-01303A-05-0405 | Rate Increase |
| Black Mountain Sewer Corporation | SW-02361A-05-0657 | Rate Increase |
| Far West Water & Sewer Company | WS-03478A-05-0801 | Rate Increase |
| Gold Canyon Sewer Company | SW-02519A-06-0015 | Rate Increase |
| Arizona Public Service Company | E-01345A-05-0816 | Rate Increase |
| Arizona-American Water Company | W-01303A-05-0718 | Transaction Approval |
| Arizona-American Water Company | W-01303A-05-0405 | ACRM Filing |
| Arizona-American Water Company | W-01303A-06-0014 | Rate Increase |
| UNS Gas, Inc. | G-04204A-06-0463 | Rate Increase |
| Arizona-American Water Company | WS-01303A-06-0491 | Rate Increase |
| UNS Electric, Inc. | E-04204A-06-0783 | Rate Increase |
| Arizona-American Water Company | W-01303A-07-0209 | Rate Increase |
| Tucson Electric Power | E-01933A-07-0402 | Rate Increase |
| Southwest Gas Corporation | G-01551A-07-0504 | Rate Increase |
| Chaparral City Water Company | W-02113A-07-0551 | Rate Increase |
| Arizona Public Service Company | E-01345A-08-0172 | Rate Increase |
| Johnson Utilities, LLC | WS-02987A-08-0180 | Rate Increase |
| Arizona-American Water Company | W-01303A-08-0227 et al. | Rate Increase |

## RESUME OF RATE CASE AND REGULATORY PARTICIPATION (Cont.)

| Utility Company | Docket No. | Type of Proceeding |
|---|---|---|
| UNS Gas, Inc. | G-04204A-08-0571 | Rate Increase |
| Arizona Water Company | W-01445A-08-0440 | Rate Increase |
| Far West Water & Sewer Company | WS-03478A-08-0608 | Interim Rate Increase |
| Black Mountain Sewer Corporation | SW-02361A-08-0609 | Rate Increase |
| Global Utilities | SW-02445A-09-0077 et al. | Rate Increase |
| Litchfield Park Service Company | SW-01428A-09-0104 et al. | Rate Increase |
| UNS Electric, Inc. | E-04204A-09-0206 | Rate Increase |
| Rio Rico Utilities, Inc. | WS-02676A-08-09-0257 | Rate Increase |
| Arizona-American Water Company | W-01303A-09-0343 | Rate Increase |
| Bella Vista Water Company | W-02465A-09-0411 et al. | Rate Increase |
| Chaparral City Water Company | W-02113A-10-0309 | Reorganization |
| Qwest Communications International | T-04190A-10-0194 et al. | Merger |
| CenturyLink, Inc. | T-04190A-10-0194 et al. | Merger |
| Goodman Water Company | W-02500A-10-0382 | Rate Increase |

# EXHIBIT 1

**SOUTHWEST GAS CORPORATION**
**2010 GENERAL RATE CASE**
**DOCKET NO. G-01551A-10-0458**
* * *

**ARIZONA CORPORATION COMMISSION**
**DATA REQUEST NO. ACC-STF-2**
**(ACC-STF-2-1 to ACC-STF-2-47)**
* * *

<u>DOCKET NO.</u>: G-01551A-10-0458
<u>COMMISSION</u>: ARIZONA CORPORATION COMMISSION
<u>DATE OF REQUEST</u>: FEBRUARY 11, 2011

<u>Request No. ACC-STF-2-21</u>:

Please indicate if the Company has refinanced the $200 million of long-term debt maturing in February of 2011, as cited on page 16.

<u>Respondent</u>: Treasury

<u>Response</u>:

In December 2010, the Company issued $125 million, 4.45% Senior Notes, due 2020 and in February 2011, the Company issued $125 million 6.10% Senior Notes, due 2041. Of the total amount issued, $75 million of the 4.45% Senior Notes and $125 million of the 6.10% Senior Notes was used to repay the $200 million, 8.375% Notes that matured on February 15, 2011.

# EXHIBIT 2

**SOUTHWEST GAS CORPORATION**
**2010 GENERAL RATE CASE**
**DOCKET NO. G-01551A-10-0458**
* * *

**ARIZONA CORPORATION COMMISSION**
**DATA REQUEST NO. ACC-STF-2**
**(ACC-STF-2-1 to ACC-STF-2-47)**
* * *

| | |
|---|---|
| DOCKET NO.: | G-01551A-10-0458 |
| COMMISSION: | ARIZONA CORPORATION COMMISSION |
| DATE OF REQUEST: | FEBRUARY 11, 2011 |

Request No. ACC-STF-2-22:

Please indicate the cost of debt to Southwest Gas, relative to that shown on Schedule D-1, for any debt retirements and/or new debt issuances subsequent to June 30, 2010.

Respondent: Treasury

Response:

The pro forma cost of debt at June 30, 2010, adjusted for debt retirements and new issuances is 7.35%, which is 99 basis points lower than the actual cost of debt of 8.34% (8.34 - 7.35 = 0.99).

# ATTACHMENT A

**The Natural Gas Utility Industry has fallen to the bottom quartile of our Timeliness Ranking spectrum. A difficult economic environment, low gas prices, and customer conservation will likely be the story here for the foreseeable future. In turn, these companies continue to search for ways to improve their business prospects. Despite their efforts, near-term prospects will probably remain uninspiring until the economic recovery is further along. All told, this sector's main appeal is its above-average dividend yield.**

### Regulation

Rate cases are an important theme for members of this industry. These companies are regulated by state commissions that determine the return on equity that can be achieved. A positive or negative decision in rate cases can have an meaningful impact on these businesses and, as a result, their stock prices. There are a few notable rate cases pending. Prospective investors should look out in the following pages for any utilities that have cases pending before making any investment decisions.

### Macroeconomic Environment

The weakness in the U.S. economy continues to affect this group's results. On point, the lackluster housing market remains a challenge. In fact, one key measure for this sector, housing starts, declined 10.6% in April. This suggests demand will probably continue to be weak in the near term. Moreover, tight consumer spending has led to customer conservation. These factors, along with low natural gas prices, will likely continue to pressure revenues for the foreseeable future. What's more, low interest rates have led to an unfavorable rate environment, which has hurt these utilities' returns of late.

### Other Operating Factors

Often, these companies utilize a variety of strategies to improve their results. Establishing tight cost controls is important given this group's business structure. Furthermore, these utilities have started to look for acquisitions that can create further cost savings. For example, *AGL Resources* is awaiting approval for its purchase of *Nicor*. The combined entity would be the largest gas distributor in the United States and would benefit from various cost synergies.

## INDUSTRY TIMELINESS: 76 (of 98)

Another factor that weighs on this industry is unseasonable weather. Warmer- or colder-than-normal weather can impact natural gas prices. Conservative investors should probably look for utilities that hedge this risk via weather-adjusted rate mechanisms. Additionally, it is worth noting that the sector is currently entering its off season as heating demand will be generally limited over the next few months.

Also, many of these companies have invested in non-regulated operations, which are not dictated a return on equity by the aforementioned state commissions. These operations offer a higher potential for returns, but also add greater risk to the profits of these otherwise stable utilities. However, when natural gas prices are unfavorable, as they are now, these businesses help to buoy profits.

Energy-efficiency programs have become an increasingly important theme here, too. Governments have been advocating these initiatives as a way to promote conservation without impacting profitability in this industry. We expect greater emphasis on these programs in the years ahead.

### Dividends

The primary appeal of these utility stocks is their above-average dividend yields. Indeed, the average yield for this group is about 3.6%, which is well above the *Value Line* median. Most notably, *NiSource*, *AGL Resources*, and *Laclede Group* all offer particularly attractive dividend yields in this sector.

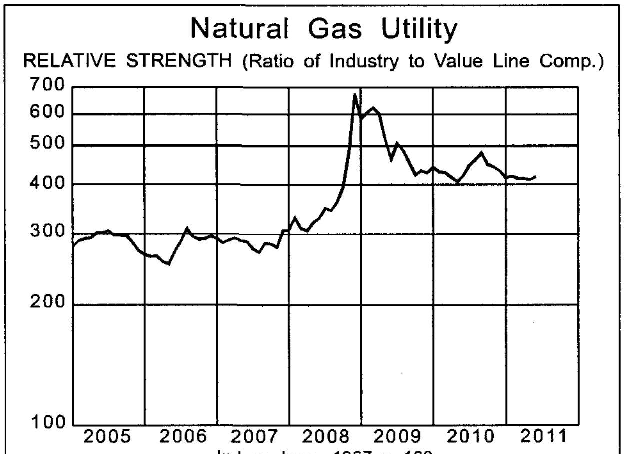
### Conclusion

The Natural Gas Utility Industry is not ranked favorably for Timeliness. Thus, investors interested in stock appreciation in the year ahead would do better to look elsewhere. Longer term, these businesses should rebound due to an improved economic environment and more-favorable natural gas pricing. Therefore, we think conservative investors with an eye toward the 2014-2016 time frame will find a few issues here that offer worthwhile total return potential.

*Richard Gallagher*

**Composite Statistics: Natural Gas Utility**

| 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | | 14-16 |
|---|---|---|---|---|---|---|---|
| 38528 | 44207 | 34909 | 34089 | ***36250*** | ***42500*** | Revenues ($mill) | ***50250*** |
| 1562.4 | 1694.2 | 1677.6 | 1769.4 | ***2250*** | ***2130*** | Net Profit ($mill) | ***2415*** |
| 33.9% | 35.7% | 33.8% | 34.0% | ***36.0%*** | ***36.0%*** | Income Tax Rate | ***36.0%*** |
| 4.1% | 3.8% | 4.8% | 5.2% | ***6.2%*** | ***5.0%*** | Net Profit Margin | ***4.8%*** |
| 50.4% | 50.6% | 49.9% | 46.7% | ***52.0%*** | ***51.0%*** | Long-Term Debt Ratio | ***54.0%*** |
| 49.5% | 49.4% | 50.1% | 53.3% | ***48.0%*** | ***49.0%*** | Common Equity Ratio | ***46.0%*** |
| 32263 | 32729 | 33974 | 33144 | ***33250*** | ***35500*** | Total Capital ($mill) | ***43000*** |
| 33936 | 35342 | 37292 | 39294 | ***40250*** | ***42250*** | Net Plant ($mill) | ***50500*** |
| 6.5% | 6.8% | 6.5% | 6.9% | ***6.5%*** | ***6.0%*** | Return on Total Cap'l | ***5.5%*** |
| 9.8% | 10.5% | 10.0% | 10.0% | ***10.0%*** | ***10.0%*** | Return on Shr. Equity | ***10.5%*** |
| 9.8% | 10.5% | 10.0% | 10.0% | ***10.0%*** | ***10.0%*** | Return on Com Equity | ***10.5%*** |
| 3.7% | 4.3% | 3.8% | 4.0% | ***4.0%*** | ***3.5%*** | Retained to Com Eq | ***4.5%*** |
| 62% | 59% | 61% | 61% | ***61%*** | ***60%*** | All Div'ds to Net Prof | ***61%*** |
| 16.6 | 13.9 | 12.8 | 14.0 | ***Bold figures are*** | ***Value Line estimates*** | Avg Ann'l P/E Ratio | ***13.0*** |
| .88 | .83 | .85 | .90 | | | Relative P/E Ratio | ***.85*** |
| 3.7% | 4.2% | 4.8% | 4.3% | | | Avg Ann'l Div'd Yield | ***4.6%*** |
| 336% | 358% | 381% | 402% | ***400%*** | ***375%*** | Fixed Charge Coverage | ***400%*** |



# AGL RESOURCES NYSE-AGL

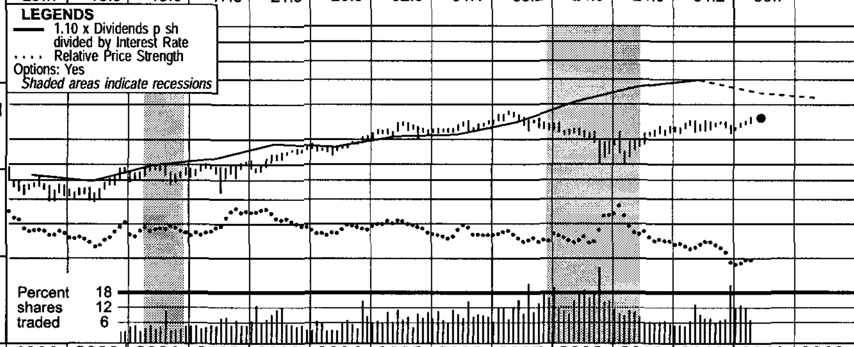
| RECENT PRICE | 41.11 | P/E RATIO | 13.1 (Trailing: 14.4; Median: 13.0) | RELATIVE P/E RATIO | 0.79 | DIV'D YLD | 4.4% | VALUE LINE |
|---|---|---|---|---|---|---|---|---|

TIMELINESS **3** Raised 3/11/11
SAFETY **2** New 7/27/90
TECHNICAL **3** Raised 4/1/11
BETA .75 (1.00 = Market)

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 23.2 | 24.5 | 25.0 | 29.3 | 33.7 | 39.3 | 40.1 | 44.7 | 39.1 | 37.5 | 40.1 | 42.3 | | |
| Low: | 15.5 | 19.0 | 17.3 | 21.9 | 26.5 | 32.0 | 34.4 | 35.2 | 24.0 | 24.0 | 34.2 | 35.7 | | |

Target Price Range 2014 | 2015 | 2016

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




**2014-16 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 65 | (+60%) | 15% |
| Low | 50 | (+20%) | 9% |

**Insider Decisions**

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

**Institutional Decisions**

| | 3Q2010 | 4Q2010 | 1Q2011 |
|---|---|---|---|
| to Buy | 109 | 134 | 103 |
| to Sell | 96 | 95 | 129 |
| Hld's(000) | 46899 | 48498 | 48137 |

**% TOT. RETURN 5/11**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 17.9 | 28.8 |
| 3 yr. | 33.7 | 38.8 |
| 5 yr. | 42.0 | 53.2 |

| 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | © VALUE LINE PUB. LLC | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.32 | 21.91 | 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 | *31.60* | *32.65* | Revenues per sh A | *38.50* |
| 2.33 | 2.49 | 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 | *5.25* | *5.45* | "Cash Flow" per sh | *6.05* |
| 1.33 | 1.37 | 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 | *3.15* | *3.30* | Earnings per sh A B | *3.75* |
| 1.04 | 1.06 | 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 | *1.80* | *1.84* | Div'ds Decl'd per sh C ■ | *1.96* |
| 2.17 | 2.37 | 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 | *4.80* | *5.20* | Cap'l Spending per sh | *6.30* |
| 10.12 | 10.56 | 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 | *24.95* | *26.50* | Book Value per sh D | *31.60* |
| 55.02 | 55.70 | 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 | *78.50* | *79.00* | Common Shs Outst'g E | *80.50* |
| 12.6 | 13.8 | 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 | 12.9 | *Bold figures are* | | Avg Ann'l P/E Ratio | *15.0* |
| .84 | .86 | .85 | .72 | 1.22 | .88 | .75 | .68 | .71 | .69 | .76 | .73 | .78 | .74 | .75 | .79 | *Value Line* | | Relative P/E Ratio | *1.00* |
| 6.2% | 5.6% | 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% | *estimates* | | Avg Ann'l Div'd Yield | *3.5%* |

**CAPITAL STRUCTURE as of 3/31/11**
Total Debt $2199.0 mill. Due in 5 Yrs $600.0 mill.
LT Debt $2173.0 mill. LT Interest $140.0 mill.
(Total interest coverage: 6.5x)

Leases, Uncapitalized Annual rentals $95.0 mill.
Pension Assets-12/10 $344.0 mill. Oblig. $531.0 mill.

Pfd Stock None

Common Stock 78,258,498 shs. as of 4/28/11

**MARKET CAP: $3.2 billion (Mid Cap)**

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1049.3 | 868.9 | 983.7 | 1832.0 | 2718.0 | 2621.0 | 2494.0 | 2800.0 | 2317.0 | 2373.0 | *2480* | *2580* | Revenues ($mill) A | *3100* |
| 82.3 | 103.0 | 132.4 | 153.0 | 193.0 | 212.0 | 211.0 | 207.6 | 222.0 | 234.0 | *250* | *260* | Net Profit ($mill) | *300* |
| 40.7% | 36.0% | 35.9% | 37.0% | 37.7% | 37.8% | 37.6% | 40.5% | 35.2% | 35.9% | *40.0%* | *40.0%* | Income Tax Rate | *40.0%* |
| 7.8% | 11.9% | 13.5% | 8.4% | 7.1% | 8.1% | 8.5% | 7.4% | 9.6% | 9.9% | *10.1%* | *10.1%* | Net Profit Margin | *9.7%* |
| 61.3% | 58.3% | 50.3% | 54.0% | 51.9% | 50.2% | 50.2% | 50.3% | 52.6% | 48.0% | *53.0%* | *50.0%* | Long-Term Debt Ratio | *41.0%* |
| 38.7% | 41.7% | 49.7% | 46.0% | 48.1% | 49.8% | 49.8% | 49.7% | 47.4% | 52.0% | *47.0%* | *50.0%* | Common Equity Ratio | *59.0%* |
| 1736.3 | 1704.3 | 1901.4 | 3008.0 | 3114.0 | 3231.0 | 3335.0 | 3327.0 | 3754.0 | 3486.0 | *4160* | *4190* | Total Capital ($mill) | *4345* |
| 2058.9 | 2194.2 | 2352.4 | 3178.0 | 3271.0 | 3436.0 | 3566.0 | 3816.0 | 4146.0 | 4405.0 | *4660* | *4735* | Net Plant ($mill) | *5100* |
| 6.5% | 8.1% | 8.9% | 6.3% | 7.9% | 8.0% | 7.7% | 7.4% | 6.9% | 7.6% | *7.5%* | *7.5%* | Return on Total Cap'l | *8.0%* |
| 12.3% | 14.5% | 14.0% | 11.0% | 12.9% | 13.2% | 12.7% | 12.6% | 12.5% | 12.9% | *12.5%* | *12.5%* | Return on Shr. Equity | *12.0%* |
| 12.3% | 14.5% | 14.0% | 11.0% | 12.9% | 13.2% | 12.7% | 12.6% | 12.5% | 12.9% | *12.5%* | *12.5%* | Return on Com Equity | *12.0%* |
| 4.2% | 7.0% | 6.6% | 5.6% | 6.2% | 6.3% | 5.3% | 5.1% | 5.3% | 5.6% | *5.5%* | *5.5%* | Retained to Com Eq | *5.5%* |
| 65% | 52% | 53% | 49% | 52% | 52% | 58% | 60% | 57% | 57% | *57%* | *56%* | All Div'ds to Net Prof | *52%* |

| CURRENT POSITION ($MILL.) | 2009 | 2010 | 3/31/11 |
|---|---|---|---|
| Cash Assets | 26 | 24 | 85 |
| Other | 1974 | 2138 | 1502 |
| Current Assets | 2000 | 2162 | 1587 |
| Accts Payable | 237 | 184 | 161 |
| Debt Due | 602 | 1032 | 26 |
| Other | 933 | 1212 | 1126 |
| Current Liab. | 1772 | 2428 | 1313 |
| Fix. Chg. Cov. | 472% | 475% | 820% |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '08-'10 to '14-'16 |
|---|---|---|---|
| Revenues | 6.0% | 5.5% | *3.0%* |
| "Cash Flow" | 6.5% | 6.0% | *4.0%* |
| Earnings | 9.0% | 4.5% | *5.0%* |
| Dividends | 5.0% | 7.5% | *3.0%* |
| Book Value | 7.0% | 5.5% | *6.0%* |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2008 | 1012 | 444.0 | 539.0 | 805.0 | 2800.0 |
| 2009 | 995.0 | 377.0 | 307.0 | 638.0 | 2317.0 |
| 2010 | 1003 | 359.0 | 346.0 | 665.0 | 2373.0 |
| 2011 | 878.0 | *400* | *400* | *802* | *2480* |
| 2012 | *1170* | *360* | *350* | *700* | *2580* |

| Cal-endar | EARNINGS PER SHARE B Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2008 | 1.16 | .30 | .28 | .97 | 2.71 |
| 2009 | 1.55 | .26 | .16 | .91 | 2.88 |
| 2010 | 1.73 | .17 | .29 | .81 | 3.00 |
| 2011 | 1.59 | *.25* | *.35* | *.96* | *3.15* |
| 2012 | *1.60* | *.40* | *.45* | *.85* | *3.30* |

| Cal-endar | QUARTERLY DIVIDENDS PAID C ■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2007 | .41 | .41 | .41 | .41 | 1.64 |
| 2008 | .42 | .42 | .42 | .42 | 1.68 |
| 2009 | .43 | .43 | .43 | .43 | 1.72 |
| 2010 | .44 | .44 | .44 | .44 | 1.76 |
| 2011 | .45 | .45 | | | |

**BUSINESS:** AGL Resources Inc. is a public utility holding company. Its distribution subsidiaries include Atlanta Gas Light, Chattanooga Gas, Elizabethtown Gas and Virginia Natural Gas. The utilities have more than 2.3 million customers in Georgia, Virginia, Tennessee, New Jersey, Florida, and Maryland. Engaged in nonregulated natural gas marketing and other allied services. Deregulated subsidiaries: Georgia Natural Gas markets natural gas at retail. Sold Utilipro, 3/01. Acquired Compass Energy Services, 10/07. BlackRock Inc. owns 7.9% of common stock; off./dir., less than 1.0% (3/11 Proxy). Pres. & CEO: John W. Somerhalder II. Inc.: GA. Addr.: Ten Peachtree Place N.E., Atlanta, GA 30309. Telephone: 404-584-4000. Internet: www.aglresources.com.

**The acquisition of Nicor remains AGL Resources' main focus.** The transaction, announced in December, 2010, is progressing on schedule. The SEC has approved the filed registration statement, and antitrust clearance has been received. The merger looks to be quite beneficial for the company, providing considerable economies of scale. The company hopes to use Nicor's expertise in the Midwest and Chicago area to gain a greater hold in the market, adding considerably to the existing customer base. Furthermore, the integration of Nicor's storage facilities is slated to reduce operating costs and provide expansion opportunities. The merger should result in a considerable boost to both top and bottom lines over the 3 - to 5 -year pull.

**AGL Resources is likely to perform well in 2011.** Favorable rate rulings and expansion projects should result in solid top- and bottom-line performances.

**The company continues to diversify geographically.** It increased its investment during the quarter in South Star Energy, a multistate natural gas provider, from 70% to 85%. AGL Resources is now looking at other investments, though no concrete details are known.

**Rate cases and expansion projects remain earnings drivers.** Due to favorable rulings, rate cases in Georgia and Tennessee are slated to provide a boost to the bottom line. The company is currently focusing on rate cases in Virginia, with plans to file a case in Florida, as well. The Golden Triangle project also remains a key driver, with the expansion of Caravan 2 progressing on schedule. The endeavor is key in increasing storage levels and expanding the customer base in the long term. This should provide a boost to earnings for the 2014-2016 period.

**Long-term prospects appear bright.** Any stress on earnings caused by AGL's supply glut, as well as low natural gas prices, is likely to be more than offset by revenues from mergers, expansion projects, and favorable rate cases.

**Income investors might find this neutrally ranked issue of interest.** This stock has a high dividend yield, with the possibility of increased payouts. Thus, total return potential appears worthwhile.

*Sahana Zutshi* *June 10, 2011*

(A) Fiscal year ends December 31st. Ended September 30th prior to 2002.
(B) Diluted earnings per share. Excl. nonrecurring gains (losses): '95, ($0.83); '99, $0.39; '00, $0.13; '01, $0.13; '03, ($0.07); '08, $0.13. Next earnings report due late July.
(C) Dividends historically paid early March, June, Sept., and Dec. ■ Div'd reinvest. plan available. (D) Includes intangibles. In 2010: $418 million, $5.35/share.
(E) In millions.

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

# ATMOS ENERGY CORP. NYSE-ATO

RECENT PRICE **33.35** | P/E RATIO **13.6** (Trailing: 14.8; Median: 14.0) | RELATIVE P/E RATIO **0.82** | DIV'D YLD **4.1%** | VALUE LINE

**TIMELINESS** 3 Raised 2/25/11
**SAFETY** 2 Raised 12/16/05
**TECHNICAL** 3 Raised 4/8/11
**BETA** .70 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 26.3 | 25.8 | 24.5 | 25.5 | 27.6 | 30.0 | 33.1 | 33.5 | 29.3 | 30.3 | 32.0 | 35.3 |
| Low: | 14.3 | 19.5 | 17.6 | 20.8 | 23.4 | 25.0 | 25.5 | 23.9 | 19.7 | 20.1 | 25.9 | 31.3 |

Target Price Range 2014 | 2015 | 2016

**2014-16 PROJECTIONS**

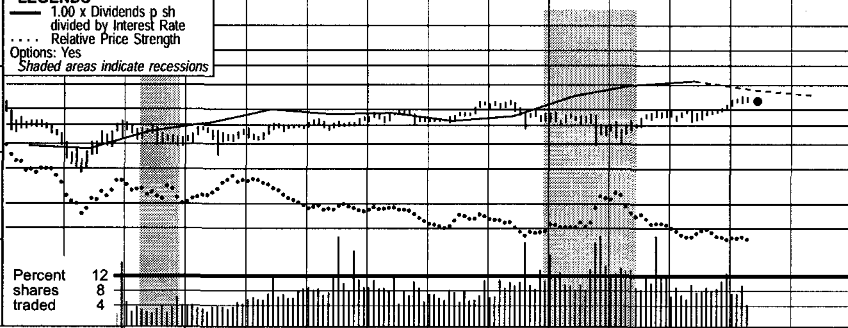
| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 40 | (+20%) | 9% |
| Low | 30 | (-10%) | 2% |

**Insider Decisions**

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

**Institutional Decisions**

| | 3Q2010 | 4Q2010 | 1Q2011 |
|---|---|---|---|
| to Buy | 90 | 102 | 97 |
| to Sell | 106 | 100 | 107 |
| Hld's(000) | 50893 | 51197 | 50750 |




**% TOT. RETURN 5/11**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 28.4 | 28.8 |
| 3 yr. | 40.8 | 38.8 |
| 5 yr. | 56.9 | 53.2 |

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.

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | © VALUE LINE PUB. LLC | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35.36 | 22.82 | 54.39 | 46.50 | 61.75 | 75.27 | 66.03 | 79.52 | 53.69 | 53.12 | *48.35* | *50.55* | Revenues per sh A | *64.75* |
| 3.03 | 3.39 | 3.23 | 2.91 | 3.90 | 4.26 | 4.14 | 4.19 | 4.29 | 4.64 | *4.85* | *5.10* | "Cash Flow" per sh | *5.55* |
| 1.47 | 1.45 | 1.71 | 1.58 | 1.72 | 2.00 | 1.94 | 2.00 | 1.97 | 2.16 | *2.30* | *2.40* | Earnings per sh A B | *2.70* |
| 1.16 | 1.18 | 1.20 | 1.22 | 1.24 | 1.26 | 1.28 | 1.30 | 1.32 | 1.34 | *1.36* | *1.38* | Div'ds Decl'd per sh C ■ | *1.45* |
| 2.77 | 3.17 | 3.10 | 3.03 | 4.14 | 5.20 | 4.39 | 5.20 | 5.51 | 6.02 | *6.45* | *6.75* | Cap'l Spending per sh | *7.65* |
| 14.31 | 13.75 | 16.66 | 18.05 | 19.90 | 20.16 | 22.01 | 22.60 | 23.52 | 24.16 | *26.10* | *27.50* | Book Value per sh | *30.10* |
| 40.79 | 41.68 | 51.48 | 62.80 | 80.54 | 81.74 | 89.33 | 90.81 | 92.55 | 90.16 | *91.00* | *92.00* | Common Shs Outst'g D | *105.00* |
| 15.6 | 15.2 | 13.4 | 15.9 | 16.1 | 13.5 | 15.9 | 13.6 | 12.5 | 13.2 | *Bold figures are* | | Avg Ann'l P/E Ratio | *13.0* |
| .80 | .83 | .76 | .84 | .86 | .73 | .84 | .82 | .83 | .84 | *Value Line* | | Relative P/E Ratio | *.85* |
| 5.1% | 5.4% | 5.2% | 4.9% | 4.5% | 4.7% | 4.2% | 4.8% | 5.3% | 4.7% | *estimates* | | Avg Ann'l Div'd Yield | *4.1%* |
| 1442.3 | 950.8 | 2799.9 | 2920.0 | 4973.3 | 6152.4 | 5898.4 | 7221.3 | 4969.1 | 4789.7 | *4400* | *4650* | Revenues ($mill) A | *6800* |
| 56.1 | 59.7 | 79.5 | 86.2 | 135.8 | 162.3 | 170.5 | 180.3 | 179.7 | 201.2 | *210* | *220* | Net Profit ($mill) | *285* |
| 37.3% | 37.1% | 37.1% | 37.4% | 37.7% | 37.6% | 35.8% | 38.4% | 34.4% | 38.5% | *38.5%* | *38.5%* | Income Tax Rate | *40.5%* |
| 3.9% | 6.3% | 2.8% | 3.0% | 2.7% | 2.6% | 2.9% | 2.5% | 3.6% | 4.2% | *4.8%* | *4.7%* | Net Profit Margin | *4.2%* |
| 54.3% | 53.9% | 50.2% | 43.2% | 57.7% | 57.0% | 52.0% | 50.8% | 49.9% | 45.4% | *45.0%* | *45.0%* | Long-Term Debt Ratio | *49.0%* |
| 45.7% | 46.1% | 49.8% | 56.8% | 42.3% | 43.0% | 48.0% | 49.2% | 50.1% | 54.6% | *55.0%* | *55.0%* | Common Equity Ratio | *51.0%* |
| 1276.3 | 1243.7 | 1721.4 | 1994.8 | 3785.5 | 3828.5 | 4092.1 | 4172.3 | 4346.2 | 3987.9 | *4315* | *4600* | Total Capital ($mill) | *6200* |
| 1335.4 | 1300.3 | 1516.0 | 1722.5 | 3374.4 | 3629.2 | 3836.8 | 4136.9 | 4439.1 | 4793.1 | *5100* | *5400* | Net Plant ($mill) | *6400* |
| 5.9% | 6.8% | 6.2% | 5.8% | 5.3% | 6.1% | 5.9% | 5.9% | 5.9% | 6.9% | *6.0%* | *6.0%* | Return on Total Cap'l | *6.0%* |
| 9.6% | 10.4% | 9.3% | 7.6% | 8.5% | 9.8% | 8.7% | 8.8% | 8.3% | 9.2% | *9.0%* | *8.5%* | Return on Shr. Equity | *9.0%* |
| 9.6% | 10.4% | 9.3% | 7.6% | 8.5% | 9.8% | 8.7% | 8.8% | 8.3% | 9.2% | *9.0%* | *8.5%* | Return on Com Equity | *9.0%* |
| 2.1% | 1.9% | 2.8% | 1.7% | 2.3% | 3.6% | 3.0% | 3.1% | 2.7% | 3.5% | *3.5%* | *3.5%* | Retained to Com Eq | *4.0%* |
| 79% | 82% | 70% | 77% | 73% | 63% | 65% | 65% | 68% | 62% | *59%* | *58%* | All Div'ds to Net Prof | *53%* |

**CAPITAL STRUCTURE as of 3/31/11**
**Total Debt** \$2159.7 mill. **Due in 5 Yrs** \$1240.0 mill.
**LT Debt** \$1807.3 mill. **LT Interest** \$110.0 mill.
(LT interest earned: 3.2x; total interest coverage: 3.1x)
**Leases, Uncapitalized** Annual rentals \$18.2 mill.
**Pfd Stock** None
**Pension Assets-9/10** \$301.7 mill. **Oblig.** \$407.5 mill.
**Common Stock** 90,329,899 shs. as of 4/29/11
**MARKET CAP: \$3.0 billion (Mid Cap)**

| CURRENT POSITION ($MILL.) | 2009 | 2010 | 3/31/11 |
|---|---|---|---|
| Cash Assets | 111.2 | 132.0 | 153.2 |
| Other | 717.7 | 743.2 | 830.9 |
| Current Assets | 828.9 | 875.2 | 984.1 |
| Accts Payable | 207.4 | 266.2 | 423.7 |
| Debt Due | 72.7 | 486.2 | 352.4 |
| Other | 457.3 | 413.7 | 301.9 |
| Current Liab. | 737.4 | 1166.1 | 1078.0 |
| Fix. Chg. Cov. | 416% | 440% | 435% |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '08-'10 to '14-'16 |
|---|---|---|---|
| Revenues | 9.5% | 3.0% | *1.0%* |
| "Cash Flow" | 4.0% | 5.5% | *4.0%* |
| Earnings | 5.0% | 4.0% | *5.0%* |
| Dividends | 2.0% | 1.5% | *2.0%* |
| Book Value | 6.5% | 5.0% | *4.5%* |

| Fiscal Year Ends | QUARTERLY REVENUES ($ mill.) A Dec.31 | Mar.31 | Jun.30 | Sep.30 | Full Fiscal Year |
|---|---|---|---|---|---|
| 2008 | 1657.5 | 2484.0 | 1639.1 | 1440.7 | 7221.3 |
| 2009 | 1716.3 | 1821.4 | 780.8 | 650.6 | 4969.1 |
| 2010 | 1292.9 | 1940.3 | 770.2 | 786.3 | 4789.7 |
| 2011 | 1157.0 | 1617.3 | *820* | *805.7* | *4400* |
| 2012 | *1255* | *1740* | *850* | *805* | *4650* |

| Fiscal Year Ends | EARNINGS PER SHARE A B E Dec.31 | Mar.31 | Jun.30 | Sep.30 | Full Fiscal Year |
|---|---|---|---|---|---|
| 2008 | .82 | 1.24 | d.07 | .02 | 2.00 |
| 2009 | .83 | 1.29 | .02 | d.17 | 1.97 |
| 2010 | 1.00 | 1.17 | d.03 | .02 | 2.16 |
| 2011 | .81 | 1.40 | *.06* | *.03* | *2.30* |
| 2012 | *.97* | *1.35* | *.06* | *.02* | *2.40* |

| Cal-endar | QUARTERLY DIVIDENDS PAID C ■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2007 | .32 | .32 | .32 | .325 | 1.29 |
| 2008 | .325 | .325 | .325 | .33 | 1.31 |
| 2009 | .33 | .33 | .33 | .335 | 1.33 |
| 2010 | .335 | .335 | .335 | .34 | 1.35 |
| 2011 | .34 | .34 | | | |

**BUSINESS:** Atmos Energy Corporation is engaged primarily in the distribution and sale of natural gas to over three million customers via six regulated natural gas utility operations: Louisiana Division, West Texas Division, Mid-Tex Division, Mississippi Division, Colorado-Kansas Division, and Kentucky/Mid-States Division. Combined 2010 gas volumes: 323 MMcf. Breakdown: 59%, residential; 32%, commercial; 6%, industrial; and 3% other. 2010 depreciation rate 3.3%. Has around 4,915 employees. Officers and directors own 1.4% of common stock (12/10 Proxy). President and Chief Executive Officer: Kim R. Cocklin. Inc.: Texas. Address: Three Lincoln Centre, Suite 1800, 5430 LBJ Freeway, Dallas, Texas 75240. Telephone: 972-934-9227. Internet: www.atmosenergy.com.

**Coming off a disappointing first quarter, Atmos Energy's share net jumped almost 20% in the March interim.** (Fiscal 2011 ends on September 30th.) The natural gas distribution segment was aided by higher rates in such states as Texas, Louisiana, and Kentucky. But results here were constrained a bit by an 11% decline in throughput, reflecting warmer temperatures. Meanwhile, the regulated transmission and storage unit benefited from lower operating expenses and revenues from filings under the Texas Gas Reliability Infrastructure Program. Diminished per-unit transportation margins were somewhat of an offset here.

**For the full fiscal year, the bottom line stands to advance about 6%, to \$2.30 a share.** That's based partly on our assumption that the natural gas utility and regulated transmission and storage unit continue to perform nicely. Next year, share earnings may increase at a similar rate, to \$2.40, as we look for a further expansion of operating margins.

**The company intends to sell its noncore natural gas distribution assets in Missouri, Iowa, and Illinois to an affiliate of Algonquin Power & Utilities Corp.** The estimated \$124 million in proceeds would be used to support growth initiatives in such key states as Texas and Louisiana. Pending regulatory approvals, the transaction is expected to close in fiscal 2012.

**We expect unspectacular results for the company over the 2014-2016 period.** The utility is one of the country's biggest natural gas-only distributors. Also, the unregulated units, especially pipelines, possess healthy overall growth prospects. Lastly, management may resume its successful strategy of purchasing less efficient utilities and shoring up their profitability via expense-reduction initiatives, rate relief, and aggressive marketing efforts. But excluding future acquisitions, due to many uncertainties, annual share-net growth may be in the mid-single-digit range over the 3- to 5-year horizon.

**The good-quality equity's dividend yield is a bit higher than the average gas utility stock tracked by *Value Line*.** Further increases in the payout, though modest, seem likely.

*Frederick L. Harris, III* *June 10, 2011*

(A) Fiscal year ends Sept. 30th. (B) Diluted shrs. Excl. nonrec. items: '03, d17¢; '06, d18¢; '07, d2¢; '09, 12¢; '10, 5¢; Q2 '11, 5¢. Next egs. rpt. due early Aug. (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 | 50 |
| Earnings Predictability | 90 |

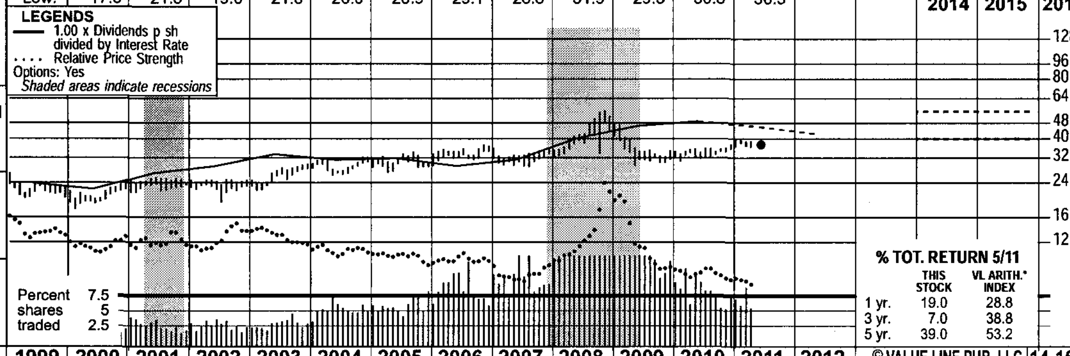
# LACLEDE GROUP NYSE-LG

| RECENT PRICE | P/E RATIO | (Trailing / Median) | RELATIVE P/E RATIO | DIV'D YLD | |
|---|---|---|---|---|---|
| 37.61 | 15.4 | (Trailing: 15.4; Median: 14.0) | 0.93 | 4.4% | VALUE LINE |

**TIMELINESS** 3 Raised 11/19/10
**SAFETY** 2 Raised 6/20/03
TECHNICAL 3 Raised 4/1/11
**BETA** .60 (1.00 = Market)

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 24.8 | 25.5 | 25.0 | 30.0 | 32.5 | 34.3 | 37.5 | 36.0 | 55.8 | 48.3 | 37.8 | 40.0 |
| Low: | 17.5 | 21.3 | 19.0 | 21.8 | 26.0 | 26.9 | 29.1 | 28.8 | 31.9 | 29.3 | 30.8 | 36.3 |

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




**Target Price Range**

| 2014 | 2015 | 2016 |
|---|---|---|

**2014-16 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 55 | (+45%) | *13%* |
| Low | 40 | (+5%) | *6%* |

**Insider Decisions**

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

**Institutional Decisions**

| | 3Q2010 | 4Q2010 | 1Q2011 |
|---|---|---|---|
| to Buy | 54 | 49 | 52 |
| to Sell | 53 | 62 | 58 |
| Hld's(000) | 10165 | 10026 | 10275 |

**% TOT. RETURN 5/11**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 19.0 | 28.8 |
| 3 yr. | 7.0 | 38.8 |
| 5 yr. | 39.0 | 53.2 |

| 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | © VALUE LINE PUB. LLC | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24.79 | 31.03 | 34.33 | 31.04 | 26.04 | 29.99 | 53.08 | 39.84 | 54.95 | 59.59 | 75.43 | 93.51 | 93.40 | 100.44 | 85.49 | 77.83 | **71.10** | **73.90** | Revenues per sh | **86.55** |
| 2.55 | 3.29 | 3.32 | 3.02 | 2.56 | 2.68 | 3.00 | 2.56 | 3.15 | 2.79 | 2.98 | 3.81 | 3.87 | 4.22 | 4.56 | 4.11 | **4.20** | **4.40** | "Cash Flow" per sh | **5.20** |
| 1.27 | 1.87 | 1.84 | 1.58 | 1.47 | 1.37 | 1.61 | 1.18 | 1.82 | 1.82 | 1.90 | 2.37 | 2.31 | 2.64 | 2.92 | 2.43 | **2.45** | **2.55** | Earnings per sh A B | **3.05** |
| 1.24 | 1.26 | 1.30 | 1.32 | 1.34 | 1.34 | 1.34 | 1.34 | 1.34 | 1.35 | 1.37 | 1.40 | 1.45 | 1.49 | 1.53 | 1.57 | **1.61** | **1.65** | Div'ds Decl'd per sh C ■ | **1.80** |
| 2.63 | 2.35 | 2.44 | 2.68 | 2.58 | 2.77 | 2.51 | 2.80 | 2.67 | 2.45 | 2.84 | 2.97 | 2.72 | 2.57 | 2.36 | 2.56 | **2.70** | **2.80** | Cap'l Spending per sh | **3.15** |
| 13.05 | 13.72 | 14.26 | 14.57 | 14.96 | 14.99 | 15.26 | 15.07 | 15.65 | 16.96 | 17.31 | 18.85 | 19.79 | 22.12 | 23.32 | 24.02 | **26.00** | **26.60** | Book Value per sh D | **31.15** |
| 17.42 | 17.56 | 17.56 | 17.63 | 18.88 | 18.88 | 18.88 | 18.96 | 19.11 | 20.98 | 21.17 | 21.36 | 21.65 | 21.99 | 22.17 | 22.29 | **22.50** | **23.00** | Common Shs Outst'g E | **26.00** |
| 15.5 | 11.9 | 12.5 | 15.5 | 15.8 | 14.9 | 14.5 | 20.0 | 13.6 | 15.7 | 16.2 | 13.6 | 14.2 | 14.3 | 13.4 | 13.7 | *Bold figures are* | | Avg Ann'l P/E Ratio | **15.5** |
| 1.04 | .75 | .72 | .81 | .90 | .97 | .74 | 1.09 | .78 | .83 | .86 | .73 | .75 | .86 | .89 | .87 | *Value Line* | | Relative P/E Ratio | **1.05** |
| 6.3% | 5.6% | 5.6% | 5.4% | 5.8% | 6.6% | 5.7% | 5.7% | 5.4% | 4.7% | 4.4% | 4.3% | 4.4% | 3.9% | 3.9% | 4.7% | *estimates* | | Avg Ann'l Div'd Yield | **3.8%** |

**CAPITAL STRUCTURE as of 3/31/11**
**Total Debt** $364.3 mill. **Due in 5 Yrs** $155.0 mill.
**LT Debt** $364.3 mill. **LT Interest** $20.0 mill.
(Total interest coverage: 4.0x)

**Leases, Uncapitalized** Annual rentals $.9 mill.
**Pension Assets-9/10** $240.9 mill.
**Oblig.** $398.4 mill.
**Pfd Stock** None
**Common Stock** 22,408,718 shs.
**as of 4/28/11**

**MARKET CAP: $850 million (Small Cap)**

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1002.1 | 755.2 | 1050.3 | 1250.3 | 1597.0 | 1997.6 | 2021.6 | 2209.0 | 1895.2 | 1735.0 | **1600** | **1700** | Revenues ($mill) A | **2250** |
| 30.5 | 22.4 | 34.6 | 36.1 | 40.1 | 50.5 | 49.8 | 57.6 | 64.3 | 54.0 | **55.0** | **58.5** | Net Profit ($mill) | **80.0** |
| 32.7% | 35.4% | 35.0% | 34.8% | 34.1% | 32.5% | 33.4% | 31.3% | 33.6% | 33.4% | **35.5%** | **36.0%** | Income Tax Rate | **36.5%** |
| 3.0% | 3.0% | 3.3% | 2.9% | 2.5% | 2.5% | 2.5% | 2.6% | 3.4% | 3.1% | **3.4%** | **3.4%** | Net Profit Margin | **3.5%** |
| 49.5% | 47.5% | 50.4% | 51.6% | 48.1% | 49.5% | 45.3% | 44.4% | 42.9% | 40.5% | **40.0%** | **40.0%** | Long-Term Debt Ratio | **40.0%** |
| 50.2% | 52.3% | 49.4% | 48.3% | 51.8% | 50.4% | 54.6% | 55.5% | 57.1% | 59.5% | **60.0%** | **60.0%** | Common Equity Ratio | **60.0%** |
| 574.1 | 546.6 | 605.0 | 737.4 | 707.9 | 798.9 | 784.5 | 876.1 | 906.3 | 899.9 | **975** | **1020** | Total Capital ($mill) | **1350** |
| 602.5 | 594.4 | 621.2 | 646.9 | 679.5 | 763.8 | 793.8 | 823.2 | 855.9 | 884.1 | **915** | **960** | Net Plant ($mill) | **1300** |
| 6.9% | 6.0% | 7.4% | 6.6% | 7.6% | 8.4% | 8.5% | 8.1% | 8.7% | 7.4% | **7.0%** | **7.0%** | Return on Total Cap'l | **7.0%** |
| 10.5% | 7.8% | 11.5% | 10.1% | 10.9% | 12.5% | 11.6% | 11.8% | 12.4% | 10.1% | **9.5%** | **9.5%** | Return on Shr. Equity | **10.0%** |
| 10.5% | 7.8% | 11.6% | 10.1% | 10.9% | 12.5% | 11.6% | 11.8% | 12.4% | 10.1% | **9.5%** | **9.5%** | Return on Com Equity | **10.0%** |
| 1.8% | NMF | 3.1% | 2.7% | 3.1% | 5.1% | 4.3% | 5.2% | 5.9% | 3.6% | **3.0%** | **3.5%** | Retained to Com Eq | **4.0%** |
| 83% | 113% | 74% | 73% | 72% | 59% | 63% | 56% | 53% | 64% | **66%** | **65%** | All Div'ds to Net Prof | **58%** |

| CURRENT POSITION ($MILL.) | 2009 | 2010 | 3/31/11 |
|---|---|---|---|
| Cash Assets | 74.6 | 86.9 | 23.0 |
| Other | 294.2 | 327.3 | 328.1 |
| Current Assets | 368.8 | 414.2 | 351.1 |
| Accts Payable | 72.8 | 95.6 | 96.8 |
| Debt Due | 129.8 | 154.6 | -- |
| Other | 96.5 | 83.7 | 92.3 |
| Current Liab. | 299.1 | 333.9 | 189.1 |
| Fix. Chg. Cov. | 420% | 391% | 400% |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '08-'10 to '14-'16 |
|---|---|---|---|
| Revenues | 11.5% | 7.0% | *Nil* |
| "Cash Flow" | 4.5% | 7.5% | *3.5%* |
| Earnings | 6.0% | 7.5% | *2.5%* |
| Dividends | 1.5% | 2.5% | *2.5%* |
| Book Value | 4.5% | 7.0% | *5.0%* |

| Fiscal Year Ends | QUARTERLY REVENUES ($ mill.)A Dec.31 | Mar.31 | Jun.30 | Sep.30 | Full Fiscal Year |
|---|---|---|---|---|---|
| 2008 | 504.0 | 747.7 | 505.5 | 451.8 | 2209.0 |
| 2009 | 674.3 | 659.1 | 309.9 | 251.9 | 1895.2 |
| 2010 | 491.2 | 635.3 | 324.5 | 284.0 | 1735.0 |
| 2011 | 444.2 | 543.8 | **326** | **286** | **1600** |
| 2012 | **465** | **625** | **348** | **262** | **1700** |

| Fiscal Year Ends | EARNINGS PER SHARE A B F Dec.31 | Mar.31 | Jun.30 | Sep.30 | Full Fiscal Year |
|---|---|---|---|---|---|
| 2008 | .99 | 1.39 | .41 | d.14 | 2.64 |
| 2009 | 1.42 | 1.40 | .31 | d.22 | 2.92 |
| 2010 | 1.03 | 1.26 | .21 | d.07 | 2.43 |
| 2011 | 1.05 | 1.25 | **.23** | **d.08** | **2.45** |
| 2012 | **1.05** | **1.31** | **.30** | **d.11** | **2.55** |

| Cal-endar | QUARTERLY DIVIDENDS PAID C ■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2007 | .365 | .365 | .365 | .365 | 1.46 |
| 2008 | .375 | .375 | .375 | .375 | 1.50 |
| 2009 | .385 | .385 | .385 | .385 | 1.54 |
| 2010 | .395 | .395 | .395 | .395 | 1.58 |
| 2011 | .405 | .405 | | | |

**BUSINESS:** Laclede Group, Inc., is a holding company for Laclede Gas, which distributes natural gas in eastern Missouri, including the city of St. Louis, St. Louis County, and parts of 10 other counties. Has roughly 630,000 customers. Purchased SM&P Utility Resources, 1/02; divested, 3/08. Therms sold and transported in fiscal 2010: .97 mill. Revenue mix for regulated operations: residential, 68%; commercial and industrial, 24%; transportation, 2%; other, 6%. Has around 1,700 employees. Officers and directors own approximately 8% of common shares (1/11 proxy). Chairman, Chief Executive Officer, and President: Douglas H. Yaeger. Incorporated: Missouri. Address: 720 Olive Street, St. Louis, Missouri 63101. Telephone: 314-342-0500. Internet: www.thelacledegroup.com.

**Laclede Group's utility unit, Laclede Gas, enjoyed a decent rise in profits during the first half of fiscal 2011 (ends September 30th), versus the year-ago figure.** That was brought about, in part, by a rate hike that went into effect on September 1, 2010. Furthermore, operating costs were lower, reflecting effective collections efforts and expense-containment initiatives.

**But the performance of Laclede Energy Resources was disappointing.** Indeed, margins were lower, due to narrower regional price differentials (given a less-than-optimal economic environment). Unfortunately, it seems that difficult business conditions will continue a while longer.

**In all, share net may only be about flat for the full fiscal year**, as continued strength of Laclede Gas is offset by further weakness in Laclede Resources. But the bottom line stands to perk up some in fiscal 2012, perhaps to $2.55 a share, assuming further expansion of operating margins. (We expect the recent storms in Missouri to have minimal impact on the company's results.)

**Prospects over the 2014-2016 time frame are not exciting.** Annual growth in the customer base for the natural gas distributor will probably remain sluggish. (In fact, the number of customers in fiscal 2010 was only around 1,000 more *than in* fiscal 2000.) Laclede Energy Resources seems to have promising potential, but it has contributed just a small portion to total profits, on a historical basis. As a result, consolidated annual share-earnings advances may only be in the mid-single-digit range over the 3- to 5-year horizon. A significant acquisition could brighten things, but management appears to be satisfied with the way things are at this juncture.

**The good-quality equity's dividend yield compares favorably to the average of all natural gas utility stocks covered by *Value Line*.** The payout should continue to be well covered by the company's earnings. But future hikes will probably be moderate, given Laclede Gas' unexciting long-term prospects. Meanwhile, these shares' Timeliness rank stands at 3 (Average).

*Frederick L. Harris, III* *June 10, 2011*

(A) Fiscal year ends Sept. 30th.
(B) Based on average shares outstanding thru. '97, then diluted. Excludes nonrecurring loss: '06, 7¢. Excludes gain from discontinued operations: '08, 94¢. Next earnings report due late July. (C) Dividends historically paid in early January, April, July, and October. ■ Dividend reinvestment plan available. (D) Incl. deferred charges. In '10: $487.1 mill., $21.85/sh.
(E) In millions.
(F) Qtly. egs. may not sum due to rounding or change in shares outstanding.

| | |
|---|---|
| Company's Financial Strength | B++ |
| Stock's Price Stability | 100 |
| Price Growth Persistence | 55 |
| Earnings Predictability | 80 |

# NEW JERSEY RES. NYSE-NJR

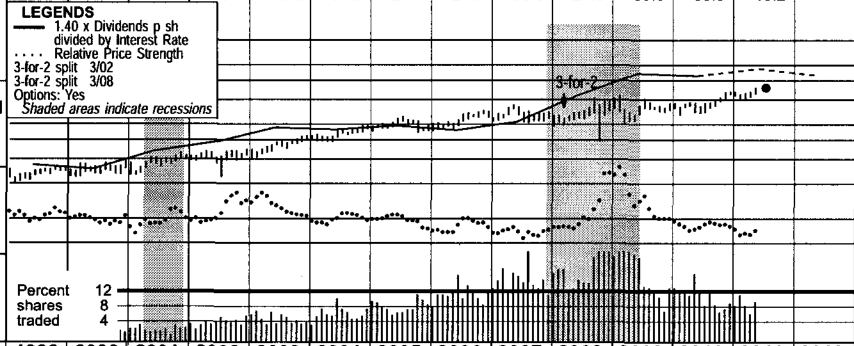
RECENT PRICE **46.08** | P/E RATIO **17.1** (Trailing: 17.9; Median: 15.0) | RELATIVE P/E RATIO **1.04** | DIV'D YLD **3.1%** | VALUE LINE

| | | |
|---|---|---|
| TIMELINESS | 4 | Lowered 3/11/11 |
| SAFETY | 1 | Raised 9/15/06 |
| TECHNICAL | 3 | Raised 4/1/11 |

BETA .65 (1.00 = Market)

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 19.8 | 21.7 | 22.4 | 26.4 | 29.7 | 32.9 | 35.4 | 37.6 | 41.1 | 42.4 | 44.1 | 46.3 |
| Low: | 16.1 | 16.6 | 16.2 | 20.0 | 24.3 | 27.1 | 27.7 | 30.3 | 24.6 | 30.0 | 33.5 | 40.2 |

**LEGENDS**
— 1.40 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
2014 | 2015 | 2016

**2014-16 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 50 | (+10%) | 5% |
| Low | 40 | (-15%) | Nil |

**Insider Decisions**

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

**Institutional Decisions**

| | 3Q2010 | 4Q2010 | 1Q2011 |
|---|---|---|---|
| to Buy | 60 | 65 | 67 |
| to Sell | 64 | 56 | 57 |
| Hld's(000) | 23366 | 24033 | 23545 |

**% TOT. RETURN 5/11**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 34.7 | 28.8 |
| 3 yr. | 53.8 | 38.8 |
| 5 yr. | 82.2 | 53.2 |

| 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | © VALUE LINE PUB. LLC | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11.36 | 13.48 | 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 | 63.81 | *70.10* | *74.00* | Revenues per sh A | *80.90* |
| 1.42 | 1.48 | 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 | 3.28 | *3.55* | *3.80* | "Cash Flow" per sh | *4.25* |
| .86 | .92 | .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 | *2.65* | *2.85* | Earnings per sh B | *3.20* |
| .68 | .69 | .71 | .73 | .75 | .76 | .78 | .80 | .83 | .87 | .91 | .96 | 1.01 | 1.11 | 1.24 | 1.36 | *1.44* | *1.48* | Div'ds Decl'd per sh C■ | *1.60* |
| 1.18 | 1.19 | 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 | 2.09 | *1.95* | *2.00* | Cap'l Spending per sh | *2.00* |
| 6.47 | 6.73 | 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 | 17.53 | *18.75* | *19.45* | Book Value per sh D | *24.15* |
| 40.03 | 40.69 | 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 | 41.36 | *41.00* | *40.00* | Common Shs Outst'g E | *40.00* |
| 11.8 | 13.6 | 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 | *Bold figures are* | | Avg Ann'l P/E Ratio | *14.0* |
| .79 | .85 | .78 | .80 | .87 | .96 | .73 | .80 | .80 | .81 | .89 | .87 | 1.15 | .74 | .99 | .96 | *Value Line* | | Relative P/E Ratio | *.95* |
| 6.7% | 5.6% | 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% | *estimates* | | Avg Ann'l Div'd Yield | *3.6%* |

**CAPITAL STRUCTURE as of 3/31/11**
Total Debt $589.8 mill. Due in 5 Yrs $544.5 mill.
LT Debt $430.0 mill. LT Interest $11.7 mill.
Incl. $14.6 mill. capitalized leases.
(LT interest earned: 7.5x; total interest coverage: 7.5x)
Pension Assets-9/10 $150.5 mill. Oblig. $244.5 mill.
Pfd Stock None

Common Stock 41,370,942 shs. as of 5/2/11
MARKET CAP: $1.9 billion (Mid Cap)

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2048.4 | 1830.8 | 2544.4 | 2533.6 | 3148.3 | 3299.6 | 3021.8 | 3816.2 | 2592.5 | 2639.3 | *2875* | *2960* | Revenues ($mill) A | *3235* |
| 52.3 | 56.8 | 65.4 | 71.6 | 74.4 | 78.5 | 65.3 | 113.9 | 101.0 | 102.4 | *110* | *115* | Net Profit ($mill) | *130* |
| 38.0% | 38.7% | 39.4% | 39.1% | 39.1% | 38.9% | 38.8% | 37.8% | 27.1% | 37.6% | *35.0%* | *35.0%* | Income Tax Rate | *35.0%* |
| 2.6% | 3.1% | 2.6% | 2.8% | 2.4% | 2.4% | 2.2% | 3.0% | 3.9% | 3.9% | *4.0%* | *4.0%* | Net Profit Margin | *4.0%* |
| 50.1% | 50.6% | 38.1% | 40.3% | 42.0% | 34.8% | 37.3% | 38.5% | 39.8% | 37.2% | *37.0%* | *39.0%* | Long-Term Debt Ratio | *34.0%* |
| 49.9% | 49.4% | 61.9% | 59.7% | 58.0% | 65.2% | 62.7% | 61.5% | 60.2% | 62.8% | *63.0%* | *61.0%* | Common Equity Ratio | *66.0%* |
| 706.2 | 732.4 | 676.8 | 783.8 | 755.3 | 954.0 | 1028.0 | 1182.1 | 1144.8 | 1154.4 | *1220* | *1275* | Total Capital ($mill) | *1465* |
| 743.9 | 756.4 | 852.6 | 880.4 | 905.1 | 934.9 | 970.9 | 1017.3 | 1064.4 | 1135.7 | *1160* | *1180* | Net Plant ($mill) | *1255* |
| 8.5% | 8.7% | 10.7% | 10.1% | 11.2% | 9.6% | 7.7% | 10.7% | 9.7% | 9.8% | *10.0%* | *10.0%* | Return on Total Cap'l | *9.5%* |
| 14.8% | 15.7% | 15.6% | 15.3% | 17.0% | 12.6% | 10.1% | 15.7% | 14.6% | 14.1% | *14.5%* | *15.0%* | Return on Shr. Equity | *13.5%* |
| 14.9% | 15.7% | 15.6% | 15.3% | 17.0% | 12.6% | 10.1% | 15.7% | 14.6% | 14.1% | *14.5%* | *15.0%* | Return on Com Equity | *13.5%* |
| 6.1% | 6.9% | 7.7% | 7.8% | 8.5% | 6.3% | 3.6% | 9.5% | 7.2% | 6.8% | *6.5%* | *7.0%* | Retained to Com Eq | *6.5%* |
| 59% | 56% | 51% | 49% | 50% | 50% | 64% | 40% | 50% | 52% | *54%* | *51%* | All Div'ds to Net Prof | *50%* |

| CURRENT POSITION ($MILL.) | 2009 | 2010 | 3/31/11 |
|---|---|---|---|
| Cash Assets | 36.2 | .9 | 76.4 |
| Other | 648.0 | 784.1 | 633.2 |
| Current Assets | 684.2 | 785.0 | 709.6 |
| Accts Payable | 44.4 | 47.3 | 44.6 |
| Debt Due | 149.9 | 178.9 | 159.8 |
| Other | 361.9 | 479.6 | 380.8 |
| Current Liab. | 556.2 | 705.8 | 585.2 |
| Fix. Chg. Cov. | 711% | 700% | 700% |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '08-'10 to '14-'16 |
|---|---|---|---|
| Revenues | 12.0% | 1.5% | 2.0% |
| "Cash Flow" | 6.0% | 6.0% | 4.0% |
| Earnings | 8.5% | 8.5% | 4.0% |
| Dividends | 5.0% | 7.5% | 4.5% |
| Book Value | 8.5% | 10.0% | 6.0% |

| Fiscal Year Ends | QUARTERLY REVENUES ($ mill.) A Dec.31 | Mar.31 | Jun.30 | Sep.30 | Full Fiscal Year |
|---|---|---|---|---|---|
| 2008 | 811.1 | 1178 | 1000 | 827.1 | 3816.2 |
| 2009 | 801.3 | 937.5 | 441.1 | 412.6 | 2592.5 |
| 2010 | 609.6 | 918.4 | 479.8 | 631.5 | 2639.3 |
| 2011 | 713.2 | 977.0 | *510* | *674.8* | *2875* |
| 2012 | *735* | *1000* | *530* | *695* | *2960* |

| Fiscal Year Ends | EARNINGS PER SHARE A B Dec.31 | Mar.31 | Jun.30 | Sep.30 | Full Fiscal Year |
|---|---|---|---|---|---|
| 2008 | 1.31 | 1.86 | d.10 | d.39 | 2.70 |
| 2009 | .77 | 1.71 | .03 | d.12 | 2.40 |
| 2010 | .66 | 1.55 | .28 | d.03 | 2.46 |
| 2011 | .71 | 1.62 | *.30* | *.02* | *2.65* |
| 2012 | *.75* | *1.67* | *.35* | *.08* | *2.85* |

| Cal-endar | QUARTERLY DIVIDENDS PAID C E■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2007 | .253 | .253 | .253 | .253 | 1.01 |
| 2008 | .267 | .28 | .28 | .28 | 1.11 |
| 2009 | .31 | .31 | .31 | .31 | 1.24 |
| 2010 | .34 | .34 | .34 | .34 | 1.36 |
| 2011 | .36 | .36 | | | |

**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 490,310 customers at 9/30/10 in Monmouth and Ocean Counties, and other N.J. Counties. Fiscal 2010 volume: 150 bill. cu. ft. (5% interruptible, 39% residential and commercial and electric utility, 56% incentive programs). N.J. Natural Energy subsidiary provides unregulated retail/wholesale natural gas and related energy svcs. 2010 dep. rate: 2.2%. Has 887 empls. Off./dir. own about 1.5% of common (12/10 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 is on pace to log solid top- and bottom-line gains this year.** This ought to be supported by customer growth at the New Jersey Natural Gas (NJNG) unit. Thus far in 2011, NJNG has added 3,070 new customers, as natural gas continues to maintain its price advantage over other home heating fuels in NJNG's service territory. Further contributions will likely stem from the Midstream Asset division, which focuses on storage and pipelines.

**Meanwhile, the NJR Clean Energy Ventures division is benefiting from solar project startups.** That unit has already placed two rooftop applications into service, that generate about two megawatts of power. It also has two similar projects planned for completion this summer. And another 3.6 megawatt ground-mounted facility is slated to be in service this fall. Aside from generating green power, these facilities qualify for investment tax credits, which should lower NJR's effective tax rate down the road.

**Accelerated infrastructure projects (AIP) augur well for longer-term prospects.** AIP-phase I is comprised of 14 projects, of which seven have been completed. The remainder are expected to be done by the end of summer. Additionally, AIP-phase II was recently approved, and contains another nine projects to help ensure the safety, integrity, and reliability of NJR's system. These investments are expected to add over $60 million to the company's asset base, which could lead to a rate case filing down the road.

**The balance sheet is improving.** The company's cash reserved skyrocketed to more than $75 million since the beginning of the year. At the same time, the debt load has remained relatively constant.

**These shares may appeal to income-seeking, conservative investors,** thanks to an above-average dividend yield, Highest Safety rank, top mark for Price Stability, and good Financial Strength. Meanwhile, since our March review, the equity has advanced about 10% in price. This move places NJR's quotation inside our Target Price Range, which may limit capital appreciation potential. Also, the stock is ranked to lag the broader market averages in the coming year.

*Bryan J. Fong* *June 10, 2011*

(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 July.
(C) Dividends historically paid in early January, April, July, and October. ■ Dividend reinvestment plan available.
(D) Includes regulatory assets in 2010: $454.6 million, $10.99/share.
(E) In millions, adjusted for splits.

| | |
|---|---|
| Company's Financial Strength | A |
| Stock's Price Stability | 100 |
| Price Growth Persistence | 60 |
| Earnings Predictability | 50 |

# N.W. NAT'L GAS NYSE-NWN

| RECENT PRICE | 45.17 | P/E RATIO | 19.2 (Trailing: 17.2; Median: 17.0) | RELATIVE P/E RATIO | 1.16 | DIV'D YLD | 3.9% | VALUE LINE |
|---|---|---|---|---|---|---|---|---|

**TIMELINESS** 4 Lowered 5/13/11
**SAFETY** 1 Raised 3/18/05
**TECHNICAL** 3 Raised 5/20/11
**BETA** .60 (1.00 = Market)

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 27.5 | 26.8 | 30.7 | 31.3 | 34.1 | 39.6 | 43.7 | 52.8 | 55.2 | 46.5 | 50.9 | 48.7 | | |
| Low: | 17.8 | 21.7 | 23.5 | 24.0 | 27.5 | 32.4 | 32.8 | 39.8 | 37.7 | 37.7 | 41.1 | 43.9 | | |

**Target Price Range**
2014 | 2015 | 2016

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

**2014-16 PROJECTIONS**

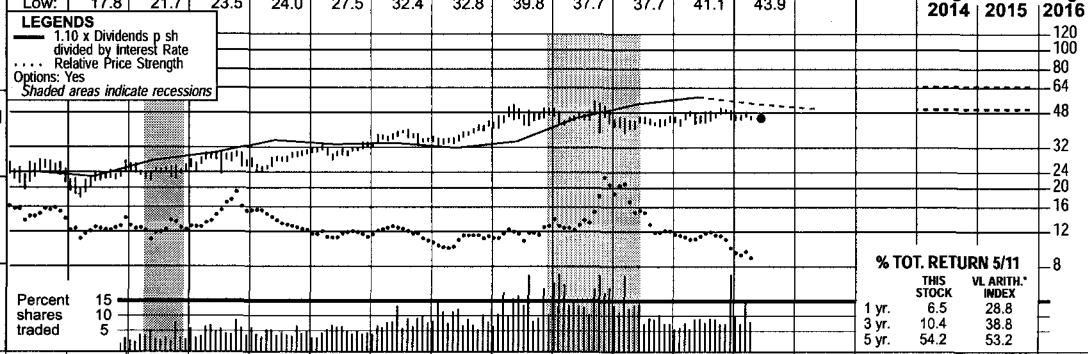
| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 65 | (+45%) | 13% |
| Low | 50 | (+10%) | 6% |

**Insider Decisions**

| | J | A | S | O | N | D | J | F | M |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Options | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| to Sell | 0 | 3 | 4 | 0 | 0 | 1 | 2 | 0 | 0 |

**Institutional Decisions**

| | 3Q2010 | 4Q2010 | 1Q2011 |
|---|---|---|---|
| to Buy | 63 | 74 | 53 |
| to Sell | 59 | 56 | 73 |
| Hld's(000) | 15723 | 15297 | 15073 |




**% TOT. RETURN 5/11**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 6.5 | 28.8 |
| 3 yr. | 10.4 | 38.8 |
| 5 yr. | 54.2 | 53.2 |

| 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | © VALUE LINE PUB. LLC | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16.02 | 16.86 | 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 | 30.45 | ***34.20*** | ***37.30*** | Revenues per sh | ***49.35*** |
| 3.41 | 3.86 | 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 | 5.15 | ***5.20*** | ***5.60*** | "Cash Flow" per sh | ***6.75*** |
| 1.61 | 1.97 | 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 | ***2.35*** | ***2.80*** | Earnings per sh A | ***3.40*** |
| 1.18 | 1.20 | 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 | ***1.74*** | ***1.78*** | Div'ds Decl'd per sh B■ | ***1.90*** |
| 3.02 | 3.70 | 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 | 9.30 | ***3.75*** | ***5.20*** | Cap'l Spending per sh | ***9.65*** |
| 14.55 | 15.37 | 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 | 25.95 | ***27.15*** | ***28.95*** | Book Value per sh | ***34.65*** |
| 22.24 | 22.56 | 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 | 26.67 | ***26.75*** | ***26.80*** | Common Shs Outst'g C | ***26.95*** |
| 12.9 | 11.7 | 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 | 17.9 | *Bold figures are* | *Value Line estimates* | Avg Ann'l P/E Ratio | ***17.0*** |
| .86 | .73 | .83 | 1.39 | .83 | .81 | .66 | .94 | .90 | .88 | .91 | .86 | .89 | 1.09 | 1.01 | 1.10 | | | Relative P/E Ratio | ***1.15*** |
| 5.7% | 5.2% | 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% | 3.8% | | | Avg Ann'l Div'd Yield | ***3.3%*** |

**CAPITAL STRUCTURE as of 3/31/11**
*Total Debt* $788.1 *mill.* **Due in 5 Yrs** $200 mill.
**LT Debt** $551.7 mill. **LT Interest** $38.5 mill.

(Total interest coverage: 7.0x)

**Pension Assets-12/10** $219 mill. **Oblig.** $337.3 mill.

**Pfd Stock** None

**Common Stock** 26,672,812 shares

**MARKET CAP $1.2 billion (Mid Cap)**

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 650.3 | 641.4 | 611.3 | 707.6 | 910.5 | 1013.2 | 1033.2 | 1037.9 | 1012.7 | 812.1 | ***915*** | ***1000*** | Revenues ($mill) | ***1330*** |
| 50.2 | 43.8 | 46.0 | 50.6 | 58.1 | 65.2 | 74.5 | 68.5 | 75.1 | 72.7 | ***65.0*** | ***75.0*** | Net Profit ($mill) | ***90.0*** |
| 35.4% | 34.9% | 33.7% | 34.4% | 36.0% | 36.3% | 37.2% | 36.9% | 38.3% | 31.4% | ***30.0%*** | ***30.0%*** | Income Tax Rate | ***30.0%*** |
| 7.7% | 6.8% | 7.5% | 7.1% | 6.4% | 6.4% | 7.2% | 6.6% | 7.4% | 8.9% | ***7.0%*** | ***7.5%*** | Net Profit Margin | ***7.0%*** |
| 43.0% | 47.6% | 49.7% | 46.0% | 47.0% | 46.3% | 46.3% | 44.9% | 47.7% | 46.5% | ***43%*** | ***40%*** | Long-Term Debt Ratio | ***33%*** |
| 53.2% | 51.5% | 50.3% | 54.0% | 53.0% | 53.7% | 53.7% | 55.1% | 52.3% | 53.5% | ***57%*** | ***60%*** | Common Equity Ratio | ***67%*** |
| 880.5 | 937.3 | 1006.6 | 1052.5 | 1108.4 | 1116.5 | 1106.8 | 1140.4 | 1261.8 | 1294.8 | ***1275*** | ***1300*** | Total Capital ($mill) | ***1385*** |
| 965.0 | 995.6 | 1205.9 | 1318.4 | 1373.4 | 1425.1 | 1495.9 | 1549.1 | 1670.1 | 1854.2 | ***1930*** | ***2035*** | Net Plant ($mill) | ***2530*** |
| 6.9% | 5.9% | 5.7% | 5.9% | 6.5% | 7.1% | 8.5% | 7.7% | 7.3% | 5.6% | ***6.5%*** | ***7.0%*** | Return on Total Cap'l | ***8.0%*** |
| 10.0% | 8.9% | 9.1% | 8.9% | 9.9% | 10.9% | 12.5% | 10.9% | 11.4% | 10.5% | ***9.0%*** | ***9.5%*** | Return on Shr. Equity | ***10.0%*** |
| 10.2% | 8.5% | 9.0% | 8.9% | 9.9% | 10.9% | 12.5% | 10.9% | 11.4% | 10.5% | ***9.0%*** | ***9.5%*** | Return on Com Equity | ***10.0%*** |
| 3.5% | 1.9% | 2.6% | 2.7% | 3.7% | 4.5% | 6.0% | 4.5% | 5.0% | 4.0% | ***2.5%*** | ***3.5%*** | Retained to Com Eq | ***4.5%*** |
| 67% | 79% | 72% | 69% | 63% | 59% | 52% | 59% | 56% | 61% | ***74%*** | ***63%*** | All Div'ds to Net Prof | ***56%*** |

| CURRENT POSITION ($MILL.) | 2009 | 2010 | 3/31/11 |
|---|---|---|---|
| Cash Assets | 8.4 | 3.5 | 3.5 |
| Other | 319.8 | 326.8 | 277.2 |
| Current Assets | 328.2 | 330.3 | 280.7 |
| Accts Payable | 123.7 | 93.2 | 71.8 |
| Debt Due | 137.0 | 267.4 | 236.4 |
| Other | 131.9 | 107.6 | 114.7 |
| Current Liab. | 392.6 | 468.2 | 422.9 |
| Fx. Chg. Cov. | 395% | 495% | 745% |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '08-'10 to '14-'16 |
|---|---|---|---|
| Revenues | 8.5% | 9.5% | 6.0% |
| "Cash Flow" | 4.0% | 7.0% | 4.5% |
| Earnings | 6.0% | 9.5% | 4.5% |
| Dividends | 2.0% | 3.5% | 3.5% |
| Book Value | 3.5% | 4.0% | 6.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2008 | 387.7 | 191.3 | 109.7 | 349.2 | 1037.9 |
| 2009 | 437.4 | 149.1 | 116.9 | 309.3 | 1012.7 |
| 2010 | 286.5 | 162.4 | 95.1 | 268.1 | 812.1 |
| 2011 | 323.1 | *190* | *130* | *271.9* | *915* |
| 2012 | *340* | *190* | *160* | *310* | *1000* |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2008 | 1.62 | .08 | d.38 | 1.25 | 2.57 |
| 2009 | 1.78 | .12 | d.25 | 1.18 | 2.83 |
| 2010 | 1.64 | .26 | d.28 | 1.11 | 2.73 |
| 2011 | 1.53 | *.03* | *d.30* | *1.09* | *2.35* |
| 2012 | *1.78* | *.18* | *d.45* | *1.29* | *2.80* |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2007 | .355 | .355 | .355 | .375 | 1.44 |
| 2008 | .375 | .375 | .375 | .395 | 1.52 |
| 2009 | .395 | .395 | .395 | .415 | 1.60 |
| 2010 | .415 | .415 | .415 | .435 | 1.68 |
| 2011 | .435 | .435 | | | |

**BUSINESS:** Northwest Natural Gas Co. distributes natural gas to 90 communities, 668,000 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, 57%; commercial, 26%; industrial, gas transportation, and other, 17%. Employs 1,061. BlackRock Inc. owns 7.9% of shares; officers and directors, 1.5% (4/11 proxy). CEO: Gregg S. Kantor. Inc.: Oregon. Address: 220 NW 2nd Ave., Portland, OR 97209. Telephone: 503-226-4211. Internet: www.nwnatural.com.

**We have reduced our earnings estimates for Northwest Natural Gas.** The one-time charge relating to Oregon's Senate Bill 408 and Senate Bill 967, as well as the upswing in expenses for the Gill Ranch project, has caused us to revise our forecasts down to $2.35 and $2.80 for 2011 and 2012, respectively.

**Senate Bill 967 is expected to put considerable stress on earnings for the year.** This was introduced on March 29th and was designed to repeal Senate Bill 408. The latter was an unusual state tax, which had distorted utility earnings, increasing them in good years and lowering them in bad ones. Since Northwest benefited from the bill in 2010, it had to take a one-time charge, to reverse the income booked last year. This action will bite into earnings in 2011.

**The company has filed a major rate case in Oregon**, its first such case since 2003. Management plans for this to be its primary focus this year and into 2012. In a best-case scenario, this whould provide a considerable boost to the bottom line over the 2014-2016 period. Also. . .

**There are several major prospects on the horizon.** The joint venture with Encana, to develop natural gas reserves in Wyoming, remains on schedule. These reserves are slated to increase Northwest's supply over a 30-year period. Also, the Palomar project is on its way to being resolved. In March, the initial application was withdrawn from the Federal Energy Regulatory Commission, but a new application is slated to be filed in its place in the near future. The changes include eliminating the troublesome western section of the pipeline, as well as rerouting the eastern section for greater efficiency. Northwest has decided to remain on board with the new project, and plans to begin negotiations with potential shippers by the end of this year, or the beginning of 2012. Should this project progress on schedule, and without major hindrances, it would likely provide a considerable boost to the bottom line by mid-decade.

**There are better options in the industry.** This untimely stock has below average long-term appreciation potential. That said, the dividend yield is slightly above the industry average.

*Sahana Zutshi* *June 10, 2011*

(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 late July.
(B) Dividends historically paid in mid-February, May, August, and November.
■ Dividend reinvestment plan available.
(C) In millions.

| | |
|---|---|
| Company's Financial Strength | A |
| Stock's Price Stability | 100 |
| Price Growth Persistence | 65 |
| Earnings Predictability | 95 |

# PIEDMONT NAT'L. GAS NYSE-PNY

| RECENT PRICE | 31.47 | P/E RATIO | 19.5 (Trailing: 20.3 Median: 17.0) | RELATIVE P/E RATIO | 1.18 | DIV'D YLD | 3.7% | VALUE LINE |
|---|---|---|---|---|---|---|---|---|

**TIMELINESS** 3 Raised 5/20/11

**SAFETY** 2 New 7/27/90

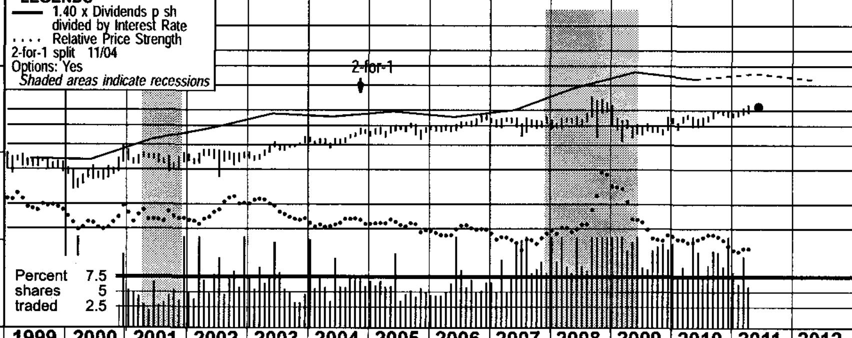
**TECHNICAL** 3 Raised 4/29/11

**BETA** .65 (1.00 = Market)

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 19.7 | 19.0 | 19.0 | 22.0 | 24.3 | 25.8 | 28.4 | 28.0 | 35.3 | 32.0 | 30.1 | 32.0 |
| Low: | 11.8 | 14.6 | 13.7 | 16.6 | 19.2 | 21.3 | 23.2 | 22.0 | 21.7 | 20.7 | 23.9 | 27.6 |

**Target Price Range** 2014 | 2015 | 2016

**LEGENDS**
— 1.40 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
2-for-1 split 11/04
Options: Yes
Shaded areas indicate recessions




**2014-16 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 40 | (+25%) | 10% |
| Low | 30 | (-5%) | 3% |

**Insider Decisions**

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

**Institutional Decisions**

| | 3Q2010 | 4Q2010 | 1Q2011 |
|---|---|---|---|
| to Buy | 87 | 99 | 74 |
| to Sell | 81 | 75 | 89 |
| Hld's(000) | 33260 | 31677 | 31082 |

**% TOT. RETURN 5/11**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 27.5 | 28.8 |
| 3 yr. | 29.7 | 38.8 |
| 5 yr. | 55.6 | 53.2 |

| 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | © VALUE LINE PUB. LLC | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8.76 | 11.59 | 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 | ***21.90*** | ***22.90*** | Revenues per sh A | ***26.10*** |
| 1.25 | 1.49 | 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 | ***3.00*** | ***3.15*** | "Cash Flow" per sh | ***3.45*** |
| .73 | .84 | .93 | .98 | .93 | 1.01 | 1.01 | .95 | 1.11 | 1.27 | 1.32 | 1.28 | 1.40 | 1.49 | 1.67 | 1.55 | ***1.60*** | ***1.70*** | Earnings per sh AB | ***1.90*** |
| .54 | .57 | .61 | .64 | .68 | .72 | .76 | .80 | .82 | .85 | .91 | .95 | .99 | 1.03 | 1.07 | 1.11 | ***1.15*** | ***1.19*** | Div'ds Decl'd per sh C■ | ***1.31*** |
| 1.72 | 1.64 | 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 | ***4.40*** | ***2.80*** | Cap'l Spending per sh | ***2.95*** |
| 6.16 | 6.53 | 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 | ***13.65*** | ***14.05*** | Book Value per sh D | ***15.05*** |
| 57.67 | 59.10 | 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 | ***71.50*** | ***71.00*** | Common Shs Outst'g E | ***68.00*** |
| 13.8 | 13.9 | 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 | *Bold figures are* | *Value Line* | Avg Ann'l P/E Ratio | ***18.0*** |
| .92 | .87 | .78 | .85 | 1.01 | .93 | .86 | 1.01 | .95 | .88 | .95 | 1.04 | .99 | 1.10 | 1.03 | 1.06 | *estimates* | | Relative P/E Ratio | ***1.20*** |
| 5.4% | 4.9% | 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% | | | Avg Ann'l Div'd Yield | ***3.7%*** |

**CAPITAL STRUCTURE as of 3/31/11**
Total Debt $1047.4 mill. Due in 5 Yrs $160.0 mill.
LT Debt $671.9 mill. LT Interest $50.2 mill.
(LT interest earned: 4.1x; total interest coverage: 3.5x)

**Pension Assets-10/10** $228.3 mill. **Oblig.** $211.0 mill.

**Pfd Stock** None

**Common Stock** 71,783,740 shs. as of 3/1/11

**MARKET CAP: $2.3 billion (Mid Cap)**

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1107.9 | 832.0 | 1220.8 | 1529.7 | 1761.1 | 1924.6 | 1711.3 | 2089.1 | 1638.1 | 1552.3 | ***1565*** | ***1625*** | Revenues ($mill) A | ***1775*** |
| 65.5 | 62.2 | 74.4 | 95.2 | 101.3 | 97.2 | 104.4 | 110.0 | 122.8 | 111.8 | ***115*** | ***120*** | Net Profit ($mill) | ***130*** |
| 34.6% | 33.1% | 34.8% | 35.1% | 33.7% | 34.2% | 33.0% | 36.3% | 28.5% | 23.4% | ***30.0%*** | ***30.0%*** | Income Tax Rate | ***30.0%*** |
| 5.9% | 7.5% | 6.1% | 6.2% | 5.8% | 5.0% | 6.1% | 5.3% | 7.5% | 7.2% | ***7.3%*** | ***7.5%*** | Net Profit Margin | ***7.3%*** |
| 47.6% | 43.9% | 42.2% | 43.6% | 41.4% | 48.3% | 48.4% | 47.2% | 44.1% | 41.0% | ***42.0%*** | ***41.0%*** | Long-Term Debt Ratio | ***40.5%*** |
| 52.4% | 56.1% | 57.8% | 56.4% | 58.6% | 51.7% | 51.6% | 52.8% | 55.9% | 59.0% | ***58.0%*** | ***59.0%*** | Common Equity Ratio | ***59.5%*** |
| 1069.4 | 1051.6 | 1090.2 | 1514.9 | 1509.2 | 1707.9 | 1703.3 | 1681.5 | 1660.5 | 1636.9 | ***1675*** | ***1700*** | Total Capital ($mill) | ***1720*** |
| 1114.7 | 1158.5 | 1812.3 | 1849.8 | 1939.1 | 2075.3 | 2141.5 | 2240.8 | 2304.4 | 2437.7 | ***2450*** | ***2500*** | Net Plant ($mill) | ***2650*** |
| 7.9% | 7.8% | 8.6% | 7.8% | 8.2% | 7.2% | 7.8% | 8.2% | 9.1% | 8.4% | ***8.0%*** | ***8.5%*** | Return on Total Cap'l | ***8.5%*** |
| 11.7% | 10.6% | 11.8% | 11.1% | 11.5% | 11.0% | 11.9% | 12.4% | 13.2% | 11.6% | ***12.0%*** | ***12.0%*** | Return on Shr. Equity | ***12.5%*** |
| 11.7% | 10.6% | 11.8% | 11.1% | 11.5% | 11.0% | 11.9% | 12.4% | 13.2% | 11.6% | ***12.0%*** | ***12.0%*** | Return on Com Equity | ***12.5%*** |
| 3.0% | 1.7% | 3.1% | 3.7% | 3.6% | 2.8% | 3.5% | 3.9% | 4.8% | 3.3% | ***3.5%*** | ***3.5%*** | Retained to Com Eq | ***4.0%*** |
| 75% | 83% | 74% | 66% | 68% | 74% | 70% | 69% | 64% | 72% | ***72%*** | ***70%*** | All Div'ds to Net Prof | ***69%*** |

| CURRENT POSITION ($MILL.) | 2009 | 2010 | 3/31/11 |
|---|---|---|---|
| Cash Assets | 7.6 | 5.6 | 20.1 |
| Other | 505.6 | 322.2 | 490.3 |
| Current Assets | 513.2 | 327.8 | 510.4 |
| Accts Payable | 115.4 | 115.7 | 179.6 |
| Debt Due | 366.0 | 302.0 | 375.5 |
| Other | 118.8 | 80.9 | 98.8 |
| Current Liab. | 600.2 | 498.6 | 653.9 |
| Fix. Chg. Cov. | 316% | 323% | 325% |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '08-'10 to '14-'16 |
|---|---|---|---|
| Revenues | 7.0% | 3.5% | *1.5%* |
| "Cash Flow" | 5.5% | 5.0% | *3.0%* |
| Earnings | 5.0% | 5.0% | *3.0%* |
| Dividends | 4.5% | 4.5% | *3.5%* |
| Book Value | 5.0% | 3.5% | *3.0%* |

| Fiscal Year Ends | QUARTERLY REVENUES ($ mill.) A Jan.31 | Apr.30 | Jul.31 | Oct.31 | Full Fiscal Year |
|---|---|---|---|---|---|
| 2008 | 788.5 | 634.2 | 354.7 | 311.7 | 2089.1 |
| 2009 | 779.6 | 455.4 | 180.3 | 222.8 | 1638.1 |
| 2010 | 673.7 | 472.9 | 211.6 | 194.1 | 1552.3 |
| 2011 | 652.1 | ***487.9*** | ***220*** | ***205*** | ***1565*** |
| 2012 | ***665*** | ***505*** | ***235*** | ***220*** | ***1625*** |

| Fiscal Year Ends | EARNINGS PER SHARE A B Jan.31 | Apr.30 | Jul.31 | Oct.31 | Full Fiscal Year |
|---|---|---|---|---|---|
| 2008 | 1.12 | .66 | d.10 | d.18 | 1.49 |
| 2009 | 1.10 | .73 | d.10 | d.06 | 1.67 |
| 2010 | 1.14 | .65 | d.13 | d.13 | 1.55 |
| 2011 | 1.16 | ***.66*** | ***d.10*** | ***d.12*** | ***1.60*** |
| 2012 | ***1.17*** | ***.69*** | ***d.06*** | ***d.10*** | ***1.70*** |

| Cal-endar | QUARTERLY DIVIDENDS PAID C■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2007 | .24 | .25 | .25 | .25 | .99 |
| 2008 | .25 | .26 | .26 | .26 | 1.03 |
| 2009 | .26 | .27 | .27 | .27 | 1.07 |
| 2010 | .27 | .28 | .28 | .28 | 1.11 |
| 2011 | .28 | .29 | | | |

**BUSINESS:** Piedmont Natural Gas Company is primarily a regulated natural gas distributor, serving over 960,801 customers in North Carolina, South Carolina, and Tennessee. 2010 revenue mix: residential (48%), commercial (28%), industrial (7%), other (17%). Principal suppliers: Transco and Tennessee Pipeline. Gas costs: 64.4% of revenues. '10 deprec. rate: 3.2%. Estimated plant age: 9.3 years. Non-regulated operations: sale of gas-powered heating equipment; natural gas brokering; propane sales. Has about 1,788 employees. Off./dir. own about 1.5% of common stock, State Street; 6.4% (1/11 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 is off to a decent start this year.** We look for revenues to advance in the low single-digit range during 2011. This ought to reflect weaker natural gas pricing and customer conservation. However, PNY has been working to offset these trends by gaining new customers. In fact, it grew its core business by about 2,850 additional accounts during the first quarter. Meanwhile, the upside of lower natural gas pricing is a decrease in carrying costs for storage purchases, which has been helping to widen margins. One other drag on profits is the decreased ownership interest in Southstar Energy Holdings. That divestiture took place during the first quarter of 2010, so it wasn't a huge contributing factor. Nonetheless, it did boost the bottom line a bit last year. All told, we think the company will log a decent earnings advance of about 3% this year.

**Meantime, the overall financial position is in good shape.** Cash reserves advanced more than threefold, to $20 million, during the January period. Meanwhile, the long-term debt load has remained relatively flat. In January, the board completed its buyback agreement that resulted in the repurchase of 800,000 shares of stock. We look for this trend to continue and think further buybacks will bolster share net down the road. What's more, a recent 3.6% increase in the quarterly dividend adds to PNY's appeal.

**Capital projects augur well for prospects.** Multiple gas-fired power generation sites are being constructed to provide power to Progress Energy and Duke Energy in North Carolina. Those facilities are progressing well and on schedule.

**Earnings advances may begin to pick up momentum next year.** This ought to stem from customer growth and a pickup in both residential conversions and commercial additions. This may be an early sign of improvements at the residential new construction market, which has performed poorly for some time.

**These shares may appeal to income-oriented investors,** thanks to an attractive dividend yield. Meantime, conservative accounts can take comfort in the Above-Average Safety rank and top mark for Price Stability.

*Bryan J. Fong* *June 10, 2011*

(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 early Aug. Quarters may not add to total due to change in shares outstanding.
(C) Dividends historically paid mid-January, April, July, October.
■ Div'd reinvest. plan available; 5% discount.
(D) Includes deferred charges. In 2010: $14.8 million, 21¢/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 55.97 | P/E RATIO 18.4 (Trailing: 19.7 Median: 15.0) | RELATIVE P/E RATIO 1.12 | DIV'D YLD 2.7% | VALUE LINE

TIMELINESS 3 Lowered 10/15/10

SAFETY 2 Lowered 1/4/91

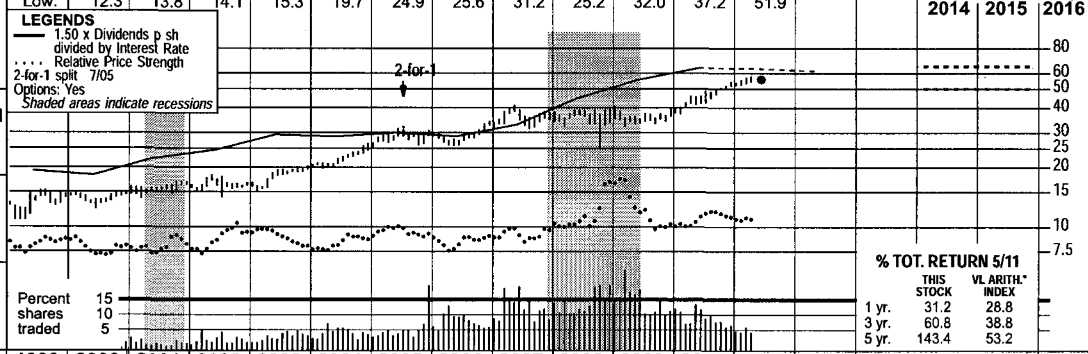
TECHNICAL 3 Raised 5/13/11

BETA .65 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 15.1 | 17.0 | 18.3 | 20.3 | 26.5 | 32.4 | 34.3 | 41.3 | 40.6 | 40.8 | 54.2 | 58.0 |
| Low: | 12.3 | 13.8 | 14.1 | 15.3 | 19.7 | 24.9 | 25.6 | 31.2 | 25.2 | 32.0 | 37.2 | 51.9 |

Target Price Range 2014 | 2015 | 2016

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




**2014-16 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 65 | (+15%) | 7% |
| Low | 50 | (-10%) | 1% |

**Insider Decisions**

| | J | A | S | O | N | D | J | F | M |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Options | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| to Sell | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 5 |

**Institutional Decisions**

| | 3Q2010 | 4Q2010 | 1Q2011 |
|---|---|---|---|
| to Buy | 60 | 61 | 58 |
| to Sell | 50 | 72 | 68 |
| Hld's(000) | 18334 | 17983 | 17863 |

% TOT. RETURN 5/11

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 31.2 | 28.8 |
| 3 yr. | 60.8 | 38.8 |
| 5 yr. | 143.4 | 53.2 |

| 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | © VALUE LINE PUB. LLC | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16.50 | 16.52 | 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 | 30.95 | 32.80 | Revenues per sh | 39.70 |
| 1.65 | 1.54 | 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 | 4.50 | 4.85 | "Cash Flow" per sh | 6.05 |
| .83 | .85 | .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 | 3.05 | 3.35 | Earnings per sh A | 4.10 |
| .72 | .72 | .72 | .72 | .72 | .73 | .74 | .75 | .78 | .82 | .86 | .92 | 1.01 | 1.11 | 1.22 | 1.36 | 1.48 | 1.60 | Div'ds Decl'd per sh B ■ | 2.00 |
| 2.08 | 2.01 | 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 | 4.85 | 5.45 | Cap'l Spending per sh | 7.35 |
| 7.34 | 8.03 | 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 | 20.95 | 21.90 | Book Value per sh C | 26.45 |
| 21.44 | 21.51 | 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 | 31.00 | 32.00 | Common Shs Outst'g D | 34.00 |
| 12.2 | 13.3 | 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 | Bold figures are | | Avg Ann'l P/E Ratio | 14.0 |
| .82 | .83 | .80 | 1.10 | .76 | .85 | .70 | .74 | .76 | .74 | .88 | .64 | .91 | .96 | 1.00 | 1.08 | Value Line | | Relative P/E Ratio | .95 |
| 7.2% | 6.4% | 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% | estimates | | Avg Ann'l Div'd Yield | 3.5% |

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 837.3 | 505.1 | 696.8 | 819.1 | 921.0 | 931.4 | 956.4 | 962.0 | 845.4 | 925.1 | 960 | 1050 | Revenues ($mill) | 1350 |
| 26.8 | 29.4 | 34.6 | 43.0 | 48.6 | 72.0 | 61.8 | 67.7 | 71.3 | 81.0 | 95.0 | 105 | Net Profit ($mill) | 140 |
| 42.2% | 41.4% | 40.6% | 40.9% | 41.5% | 41.3% | 41.9% | 47.7% | 23.0% | 15.2% | 25.0% | 30.0% | Income Tax Rate | 30.0% |
| 3.2% | 5.8% | 5.0% | 5.2% | 5.3% | 7.7% | 6.5% | 7.0% | 8.4% | 8.8% | 9.9% | 10.0% | Net Profit Margin | 10.4% |
| 57.0% | 53.6% | 50.8% | 48.7% | 44.9% | 44.7% | 42.7% | 39.2% | 36.5% | 37.4% | 39.5% | 39.0% | Long-Term Debt Ratio | 38.0% |
| 35.9% | 46.1% | 49.0% | 51.0% | 55.1% | 55.3% | 57.3% | 60.8% | 63.5% | 62.6% | 60.5% | 61.0% | Common Equity Ratio | 62.0% |
| 516.2 | 512.5 | 608.4 | 675.0 | 710.3 | 801.1 | 839.0 | 848.0 | 856.4 | 910.1 | 1075 | 1150 | Total Capital ($mill) | 1450 |
| 607.0 | 666.6 | 748.3 | 799.9 | 877.3 | 920.0 | 948.9 | 982.6 | 1073.1 | 1193.3 | 1250 | 1325 | Net Plant ($mill) | 1500 |
| 6.9% | 7.6% | 7.3% | 7.9% | 8.3% | 10.1% | 8.6% | 8.9% | 9.0% | 9.5% | 10.0% | 10.0% | Return on Total Cap'l | 10.5% |
| 12.1% | 12.4% | 11.5% | 12.4% | 12.4% | 16.3% | 12.8% | 13.1% | 13.1% | 14.2% | 14.5% | 15.0% | Return on Shr. Equity | 15.5% |
| 12.8% | 12.5% | 11.6% | 12.5% | 12.4% | 16.3% | 12.8% | 13.1% | 13.1% | 14.2% | 14.5% | 15.0% | Return on Com Equity | 15.5% |
| 3.5% | 4.7% | 5.0% | 5.9% | 6.2% | 10.2% | 6.7% | 6.7% | 6.4% | 7.1% | 7.5% | 7.5% | Retained to Com Eq | 8.0% |
| 76% | 62% | 57% | 52% | 50% | 37% | 48% | 49% | 51% | 50% | 48% | 49% | All Div'ds to Net Prof | 49% |

**CAPITAL STRUCTURE as of 3/31/11**
Total Debt $603.9 mill. Due in 5 Yrs $420.0 mill.
LT Debt $401.4 mill. LT Interest $24.0 mill.
(Total interest coverage: 6.2x)

Pension Assets-12/10 $120.6 mill. Oblig. $167.5 mill.

Pfd Stock None

Common Stock 29,953,094 common shs. as of 5/2/11

**MARKET CAP: $1.7 billion (Mid Cap)**

| CURRENT POSITION ($MILL.) | 2009 | 2010 | 3/31/11 |
|---|---|---|---|
| Cash Assets | 3.8 | 2.4 | 3.3 |
| Other | 364.6 | 421.4 | 345.4 |
| Current Assets | 368.4 | 423.8 | 348.7 |
| Accts Payable | 123.9 | 165.2 | 154.4 |
| Debt Due | 231.7 | 362.1 | 202.5 |
| Other | 123.2 | 113.2 | 99.9 |
| Current Liab. | 478.8 | 640.5 | 456.8 |
| Fix. Chg. Cov. | 585% | 532% | 571% |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '08-'10 to '14-'16 |
|---|---|---|---|
| Revenues | 4.0% | 1.0% | 4.5% |
| "Cash Flow" | 8.0% | 9.5% | 8.0% |
| Earnings | 10.5% | 9.5% | 9.0% |
| Dividends | 5.5% | 8.5% | 8.5% |
| Book Value | 10.5% | 8.0% | 6.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2008 | 348.1 | 135.8 | 210.4 | 267.7 | 962.0 |
| 2009 | 362.2 | 134.5 | 127.1 | 221.6 | 845.4 |
| 2010 | 329.3 | 151.6 | 160.7 | 283.5 | 925.1 |
| 2011 | 331.9 | 165 | 170 | 293.1 | 960 |
| 2012 | 380 | 180 | 185 | 305 | 1050 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2008 | 1.32 | .26 | .04 | .67 | 2.27 |
| 2009 | 1.46 | .15 | d.06 | .83 | 2.38 |
| 2010 | 1.49 | .24 | .10 | .87 | 2.70 |
| 2011 | 1.63 | .30 | .15 | .97 | 3.05 |
| 2012 | 1.70 | .35 | .20 | 1.10 | 3.35 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B ■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2007 | -- | .245 | .245 | .515 | 1.01 |
| 2008 | -- | .270 | .270 | .568 | 1.11 |
| 2009 | -- | .298 | .298 | .628 | 1.22 |
| 2010 | -- | .330 | .330 | .695 | 1.36 |
| 2011 | -- | .365 | | | |

**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 '10: residential, 44%; commercial, 21%; cogeneration and electric generation, 12%; industrial, 23%. Non-utility operations include: South Jersey Energy, South Jersey Resources Group, Marina Energy, and South Jersey Energy Service Plus. Has 650 employees. Off./dir. control 1.0% of common shares; Black Rock Inc., 8.3% (4/11 proxy). Chrmn. & CEO: Edward Graham. Incorp.: NJ. Address: 1 South Jersey Plaza, Folsom, NJ 08037. Telephone: 609-561-9000. Internet: www.sjindustries.com.

**Shares of South Jersey Industries have been trading in a holding pattern since the beginning of the year,** following a healthy advance in 2010. The company has posted solid results in recent periods, though the stock appears to have gotten ahead of itself somewhat.

**Prospects look favorable for utility South Jersey Gas.** SJG should continue to experience modest customer growth, despite softness in the housing construction market. Natural gas remains the fuel of choice within the utility's service territory. This business should continue to benefit from customer interest in converting from other fuel sources to natural gas. Moreover, rate relief should serve to offset cost pressures for the utility.

**The company's retail energy operations should also continue to perform well.** Demand for renewable and natural gas-fired energy projects will probably remain strong. For the remainder of the year, the company has projects under construction that will produce an additional 19 megawatts of generation capacity, bringing the total capacity from its projects to roughly 64 megawatts. Energenic, South Jersey's joint-venture energy project business, has agreed to provide the energy at the Revel resort complex in Atlantic City. Energenic's $160 million project will be in place to serve Revel when it opens in mid-2012.

**Performance may improve somewhat at the wholesale energy business.** This business has suffered from thin industry-wide storage spreads. Some weakness here may well continue, though this line's natural gas marketing activities have been shifted and expanded to take advantage of opportunities in the Marcellus Shale.

**We anticipate favorable comparisons in the coming quarters.** We expect top-line growth of about 4% for full-year 2011. Profit margins will likely widen, and we look for share-net growth of roughly 13%.

**This stock is neutrally ranked for Timeliness.** We anticipate steady growth through 2014-2016. Moreover, this issue earns high marks for Price Stability and Earnings Predictability. This appears to be partly reflected in the present quotation, and total return potential is unimpressive for the coming years.

*Michael Napoli, CFA* *June 10, 2011*

(A) Based on GAAP egs. through 2006, economic egs. thereafter. GAAP EPS: '07, $2.10; '08, $2.58; '09, $1.94; '10, $2.22. Excl. nonrecur. gain (loss): '01, $0.13; '08, $0.31; '09, ($0.44); '10, ($0.47). Excl gain (losses) from discont. ops.: '01, ($0.02); '02, ($0.04); '03, ($0.09); '05, ($0.02); '06, ($0.02); '07, $0.01. Egs. may not sum due to rounding. Next egs. report due in August. (B) Div'ds paid early April, July, Oct., and late Dec. ■ Div. reinvest. plan avail. (C) Incl. reg. assets. In 2010: $248.4 mill., $8.32 per shr. (D) In mill., adj. for split.

| | |
|---|---|
| Company's Financial Strength | B++ |
| Stock's Price Stability | 100 |
| Price Growth Persistence | 95 |
| Earnings Predictability | 85 |

# WGL HOLDINGS NYSE-WGL

| RECENT PRICE | 39.25 | P/E RATIO | 18.2 (Trailing: 17.9; Median: 15.0) | RELATIVE P/E RATIO | 1.10 | DIV'D YLD | 4.0% | VALUE LINE |
|---|---|---|---|---|---|---|---|---|

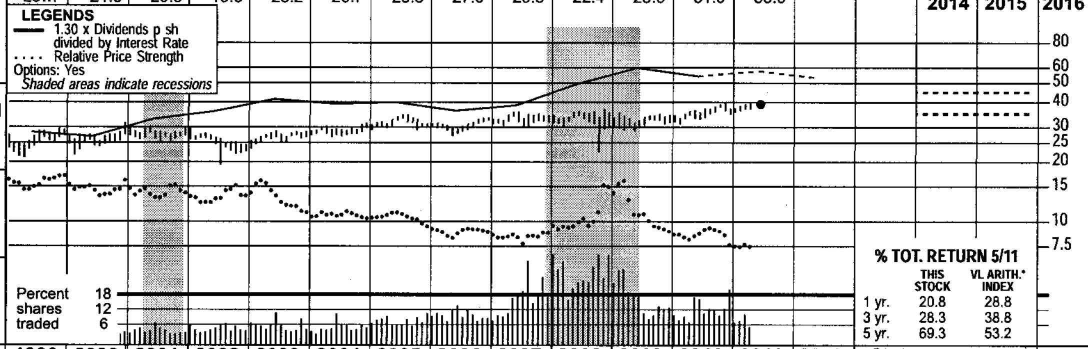
**TIMELINESS** 4 Lowered 5/13/11

**SAFETY** 1 Raised 4/2/93

**TECHNICAL** 3 Raised 6/10/11

**BETA** .65 (1.00 = Market)

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 31.5 | 30.5 | 29.5 | 28.8 | 31.4 | 34.8 | 33.6 | 35.9 | 37.1 | 35.5 | 40.0 | 39.7 |
| Low: | 21.8 | 25.3 | 19.3 | 23.2 | 26.7 | 28.8 | 27.0 | 29.8 | 22.4 | 28.6 | 31.0 | 35.6 |




**2014-16 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 45 | (+15%) | 7% |
| Low | 35 | (-10%) | 2% |

**Insider Decisions**

| | J | A | S | O | N | D | J | F | M |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| Options | 3 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| to Sell | 4 | 4 | 1 | 1 | 2 | 0 | 0 | 1 | 0 |

**Institutional Decisions**

| | 3Q2010 | 4Q2010 | 1Q2011 |
|---|---|---|---|
| to Buy | 76 | 87 | 83 |
| to Sell | 76 | 75 | 83 |
| Hld's(000) | 32221 | 31020 | 31550 |

**% TOT. RETURN 5/11**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 20.8 | 28.8 |
| 3 yr. | 28.3 | 38.8 |
| 5 yr. | 69.3 | 53.2 |

| 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | © VALUE LINE PUB. LLC | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19.30 | 22.19 | 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 | 54.60 | 56.85 | Revenues per sh A | 59.20 |
| 2.51 | 2.93 | 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 | 3.95 | 4.30 | "Cash Flow" per sh | 4.55 |
| 1.45 | 1.85 | 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 | 2.10 | 2.35 | Earnings per sh B | 2.65 |
| 1.12 | 1.14 | 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 | Div'ds Decl'd per sh C■ | 1.71 |
| 2.63 | 2.85 | 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 | 2.45 | 2.45 | Cap'l Spending per sh | 2.40 |
| 11.95 | 12.79 | 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 | 23.50 | 24.20 | Book Value per sh D | 27.15 |
| 42.93 | 43.70 | 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 | 51.00 | 51.00 | Common Shs Outst'g E | 52.00 |
| 12.7 | 11.5 | 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 | *Bold figures are* | | Avg Ann'l P/E Ratio | 15.0 |
| .85 | .72 | .73 | .89 | .99 | .95 | .75 | 1.26 | .63 | .75 | .78 | .84 | .83 | .82 | .84 | .95 | *Value Line* | | Relative P/E Ratio | 1.00 |
| 6.1% | 5.4% | 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% | *estimates* | | Avg Ann'l Div'd Yield | 4.2% |
| | | | | | | 1446.5 | 1584.8 | 2064.2 | 2089.6 | 2186.3 | 2637.9 | 2646.0 | 2628.2 | 2706.9 | 2708.9 | 2785 | 2900 | Revenues ($mill) A | 3075 |
| | | | | | | 89.9 | 55.7 | 112.3 | 98.0 | 104.8 | 96.0 | 102.9 | 122.9 | 128.7 | 115.0 | 110 | 120 | Net Profit ($mill) | 140 |
| | | | | | | 39.6% | 34.0% | 38.0% | 38.2% | 37.4% | 39.0% | 39.1% | 37.1% | 39.1% | 38.7% | 39.0% | 39.0% | Income Tax Rate | 39.0% |
| | | | | | | 6.2% | 3.5% | 5.4% | 4.7% | 4.8% | 3.6% | 3.9% | 4.7% | 4.8% | 4.2% | 3.9% | 4.1% | Net Profit Margin | 4.5% |
| | | | | | | 41.7% | 45.7% | 43.8% | 40.9% | 39.5% | 37.8% | 37.9% | 35.9% | 33.3% | 33.4% | 34.5% | 34.0% | Long-Term Debt Ratio | 32.5% |
| | | | | | | 56.3% | 52.4% | 54.3% | 57.2% | 58.6% | 60.4% | 60.3% | 62.4% | 65.0% | 65.0% | 64.0% | 64.5% | Common Equity Ratio | 66.0% |
| | | | | | | 1400.8 | 1462.5 | 1454.9 | 1443.6 | 1478.1 | 1526.1 | 1625.4 | 1679.5 | 1687.7 | 1774.4 | 1875 | 1915 | Total Capital ($mill) | 2150 |
| | | | | | | 1519.7 | 1606.8 | 1874.9 | 1915.6 | 1969.7 | 2067.9 | 2150.4 | 2208.3 | 2269.1 | 2346.2 | 2425 | 2510 | Net Plant ($mill) | 2775 |
| | | | | | | 7.9% | 5.3% | 9.1% | 8.2% | 8.5% | 7.6% | 7.6% | 8.5% | 8.8% | 7.6% | 7.0% | 7.5% | Return on Total Cap'l | 7.5% |
| | | | | | | 11.0% | 7.0% | 13.7% | 11.5% | 11.7% | 10.1% | 10.2% | 11.4% | 11.4% | 9.7% | 9.0% | 9.5% | Return on Shr. Equity | 10.0% |
| | | | | | | 11.2% | 7.2% | 14.0% | 11.7% | 12.0% | 10.3% | 10.4% | 11.6% | 11.6% | 9.9% | 9.0% | 9.5% | Return on Com Equity | 10.0% |
| | | | | | | 3.8% | NMF | 6.2% | 4.1% | 4.6% | 3.2% | 3.5% | 5.0% | 5.0% | 3.3% | 2.5% | 3.0% | Retained to Com Eq | 3.5% |
| | | | | | | 67% | 112% | 56% | 65% | 62% | 69% | 66% | 57% | 57% | 67% | 74% | 67% | All Div'ds to Net Prof | 64% |

**CAPITAL STRUCTURE as of 3/31/11**
**Total Debt $682.7 mill. Due in 5 Yrs $194.2 mill.**
**LT Debt $614.9 mill. LT Interest $39.4 mill.**
(LT interest earned: 6.2x; total interest coverage: 5.7x)
**Pension Assets-9/10 $1,215.8 mill.** **Oblig.** $678.1 mill.
**Preferred Stock $28.2 mill. Pfd. Div'd $1.3 mill.**

**Common Stock** 51,226,263 shs.
**as of 4/30/11**

**MARKET CAP: $2.0 billion (Mid Cap)**

| CURRENT POSITION ($MILL.) | 2009 | 2010 | 3/31/11 |
|---|---|---|---|
| Cash Assets | 7.9 | 8.9 | 190.0 |
| Other | 675.6 | 708.4 | 730.3 |
| Current Assets | 683.5 | 717.3 | 920.3 |
| Accts Payable | 213.5 | 225.4 | 292.7 |
| Debt Due | 266.5 | 130.5 | 67.8 |
| Other | 154.6 | 188.2 | 249.8 |
| Current Liab. | 634.6 | 544.1 | 610.3 |
| Fix. Chg. Cov. | 533% | 536% | 535% |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '08-'10 to '14-'16 |
|---|---|---|---|
| Revenues | 9.0% | 4.0% | 1.5% |
| "Cash Flow" | 4.0% | 1.5% | 1.0% |
| Earnings | 4.0% | 2.5% | 1.5% |
| Dividends | 2.0% | 2.5% | 2.5% |
| Book Value | 4.0% | 5.0% | 3.5% |

| Fiscal Year Ends | QUARTERLY REVENUES ($ mill.) A Dec.31 | Mar.31 | Jun.30 | Sep.30 | Full Fiscal Year |
|---|---|---|---|---|---|
| 2008 | 751.6 | 1020.0 | 464.7 | 391.9 | 2628.2 |
| 2009 | 826.2 | 1040.9 | 427.0 | 412.8 | 2706.9 |
| 2010 | 727.4 | 1056.6 | 459.7 | 465.2 | 2708.9 |
| 2011 | 795.9 | 1017.2 | 481.9 | 490 | 2785 |
| 2012 | 825 | 1045 | 510 | 520 | 2900 |

| Fiscal Year Ends | EARNINGS PER SHARE A B Dec.31 | Mar.31 | Jun.30 | Sep.30 | Full Fiscal Year |
|---|---|---|---|---|---|
| 2008 | .96 | 1.66 | .06 | d.24 | 2.44 |
| 2009 | 1.03 | 1.65 | .11 | d.25 | 2.53 |
| 2010 | 1.01 | 1.64 | d.07 | d.29 | 2.27 |
| 2011 | 1.02 | 1.53 | d.10 | d.35 | 2.10 |
| 2012 | 1.08 | 1.61 | d.04 | d.30 | 2.35 |

| Cal-endar | QUARTERLY DIVIDENDS PAID C■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2007 | .34 | .34 | .34 | .34 | 1.36 |
| 2008 | .34 | .36 | .36 | .36 | 1.42 |
| 2009 | .36 | .37 | .37 | .37 | 1.47 |
| 2010 | .37 | .378 | .378 | .378 | 1.50 |
| 2011 | .378 | .39 | | | |

**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 (1,073,722 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. Black Rock Inc. owns 9.2% of common stock; Off./dir. less than 1% (1/11 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 lackluster financial results for the March period.** Indeed, the top line declined about 3.5% over that time frame, due to weaker contributions from the Regulated Utility segment. This stemmed from unfavorable changes in the consumption patterns of its natural gas customers. However, this was partially offset by greater earnings contributions at the Retail Energy Marketing and Design-Build Energy System divisions. Still, on balance, WGL's second-quarter bottom line declined almost 7%, to $1.53 a share. And we look for an annual earnings decline this year. But financial results ought to begin to rebound in 2012.

**Rate cases and capital projects, augur well for prospects.** The company recently received approval to raise its rates in Maryland. The proposed increase ought to boost annual revenues by about $30 million from that region, and is slated to go into effect this November. Meanwhile, WGL was also granted a favorable ruling by the Virginia commission to go ahead with a multiyear $115 million accelerated pipeline-replacement program. This should boost the distribution system's reliability and safety.

**Investments in green energy projects may also bear fruit down the road.** WGL has announced an additional 1.7 megawatts worth of solar projects for this year. When combined with existing ventures, the company has a stake in about 4.5 megawatts of clean renewable energy. These moves should also provide the company with federal energy tax credits.

**Meanwhile, the financial position is solid.** Cash reserves have skyrocketed to a seasonal high of $190 million. At the same time, the long-term debt load inched higher but at a much slower clip of about 4%, to $615 million. What's more, the board recently approved a 3.2% hike in the quarterly dividend, to $0.39 a share.

**These shares may appeal to income-seeking investors**, thanks to an above-average dividend yield, Highest Safety rank, and top mark for Price Stability. Meantime, in the event of a market correction, shares of WGL ought to be minimally affected as evidenced by the below-market Beta of .65. But they are ranked to lag the broader markets in the year ahead.

*Bryan J. Fong* *June 10, 2011*

(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 July. (C) Dividends historically paid early February, May, August, and November. ■ Dividend reinvestment plan available.
(D) Includes deferred charges and intangibles. '10: $580.4 million, $11.48/sh.
(E) In millions, adjusted for stock split.

| Company's Financial Strength | A |
|---|---|
| Stock's Price Stability | 100 |
| Price Growth Persistence | 45 |
| Earnings Predictability | 95 |

# ATTACHMENT B

ZACKS
INVESTMENT RESEARCH
*Proven Ratings, Research & Recommendations*
**Zacks.com Quotes and Research**

## AGL RESOURCES INC (NYSE)

Scottrade

| AGL | 41.20 | 0.01 | (0.02%) | Vol. 220,610 | 15:08 ET |
|---|---|---|---|---|---|

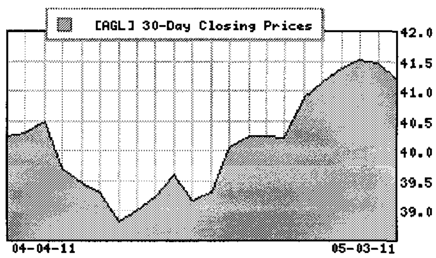
AGL Resources principal business is the distribution of natural gas to customers in central, northwest, northeast and southeast Georgia and the Chattanooga, Tennessee area through its natural gas distribution subsidiary. AGL's major service area is the ten county metropolitan Atlanta area.

### General Information
AGL RESOURCES
TEN PEACHTREE PLACE
ATLANTA, GA 30309
Phone: -
Fax: 404-584-3945
Web: http://www.aglresources.com
Email: scave@aglresources.com

| | |
|---|---|
| Industry | UTIL-GAS DISTR |
| Sector: | Utilities |
| Fiscal Year End | December |
| Last Reported Quarter | 03/31/11 |
| Next EPS Date | 07/28/2011 |

### Price and Volume Information

| | |
|---|---|
| Zacks Rank | |
| Yesterday's Close | 41.19 |
| 52 Week High | 41.96 |
| 52 Week Low | 34.21 |
| Beta | 0.45 |
| 20 Day Moving Average | 338,833.19 |
| Target Price Consensus | 42 |




| % Price Change | | % Price Change Relative to S&P 500 | |
|---|---|---|---|
| 4 Week | 2.18 | 4 Week | 0.38 |
| 12 Week | 9.29 | 12 Week | 6.70 |
| YTD | 14.90 | YTD | 6.79 |

| Share Information | | Dividend Information | |
|---|---|---|---|
| Shares Outstanding (millions) | 77.98 | Dividend Yield | 4.37% |
| | | Annual Dividend | $1.80 |
| Market Capitalization (millions) | 3,212.08 | Payout Ratio | 0.00 |
| Short Ratio | 11.38 | Change in Payout Ratio | 0.00 |
| Last Split Date | 12/04/1995 | Last Dividend Payout / Amount | 02/16/2011 / $0.45 |

| EPS Information | | Consensus Recommendations | |
|---|---|---|---|
| Current Quarter EPS Consensus Estimate | 0.27 | Current (1=Strong Buy, 5=Strong Sell) | 2.13 |
| Current Year EPS Consensus Estimate | 3.15 | 30 Days Ago | 2.13 |
| Estimated Long-Term EPS Growth Rate | 4.00 | 60 Days Ago | 2.13 |
| Next EPS Report Date | 07/28/2011 | 90 Days Ago | 2.13 |

### Fundamental Ratios

| P/E | | EPS Growth | | Sales Growth | |
|---|---|---|---|---|---|
| Current FY Estimate: | 13.10 | vs. Previous Year | -5.78% | vs. Previous Year | -12.46% |
| Trailing 12 Months: | 13.96 | vs. Previous Quarter | 89.53% | vs. Previous Quarter: | 32.03% |
| PEG Ratio | 3.27 | | | | |

| Price Ratios | | ROE | | ROA | |
|---|---|---|---|---|---|
| Price/Book | 1.75 | 03/31/11 | - | 03/31/11 | - |
| Price/Cash Flow | | 12/31/10 | | 12/31/10 | |

| | | | | | |
|---|---|---|---|---|---|
| | 8.08 | | 12.98 | | 3.40 |
| Price / Sales | 1.43 | 09/30/10 | 13.19 | 09/30/10 | 3.50 |
| **Current Ratio** | | **Quick Ratio** | | **Operating Margin** | |
| 03/31/11 | - | 03/31/11 | - | 03/31/11 | - |
| 12/31/10 | 0.89 | 12/31/10 | 0.63 | 12/31/10 | 10.02 |
| 09/30/10 | 0.79 | 09/30/10 | 0.47 | 09/30/10 | 10.27 |
| **Net Margin** | | **Pre-Tax Margin** | | **Book Value** | |
| 03/31/11 | - | 03/31/11 | - | 03/31/11 | - |
| 12/31/10 | 16.43 | 12/31/10 | 16.43 | 12/31/10 | 23.52 |
| 09/30/10 | 17.35 | 09/30/10 | 17.35 | 09/30/10 | 23.28 |
| ***Inventory Turnover*** | | **Debt-to-Equity** | | **Debt to Capital** | |
| 03/31/11 | - | 03/31/11 | - | 03/31/11 | - |
| 12/31/10 | 2.98 | 12/31/10 | 0.91 | 12/31/10 | 47.68 |
| 09/30/10 | 2.87 | 09/30/10 | 0.83 | 09/30/10 | 45.49 |

**ZACKS** INVESTMENT RESEARCH
*Proven Ratings, Research & Recommendations*
**Zacks.com Quotes and Research**

| **ATMOS ENERGY CORP** (NYSE) | | | | | Scottrade |
|---|---|---|---|---|---|
| ATO | 34.61 | 0.41 | (1.20%) | Vol. 120,903 | 14:02 ET |

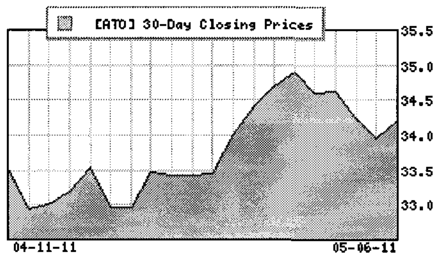
Atmos Energy Corporation distributes and sells natural gas to residential, commercial, industrial, agricultural and other customers. Atmos operates through five divisions in cities, towns and communities in service areas located in Colorado, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Missouri, South Carolina, Tennessee, Texas and Virginia. The Company has entered into an agreement to sell all of its natural gas utility operations in South Carolina. The Company also transports natural gas for others through its distribution system.

### General Information
ATMOS ENERGY CP
-
-, - -
Phone: -
Fax: -
Web: -
Email: None

| | |
|---|---|
| Industry | UTIL-GAS DISTR |
| Sector: | Utilities |
| Fiscal Year End | September |
| Last Reported Quarter | 03/31/11 |
| Next EPS Date | 08/10/2011 |

### Price and Volume Information

| | |
|---|---|
| Zacks Rank | |
| Yesterday's Close | 34.20 |
| 52 Week High | 35.25 |
| 52 Week Low | 25.86 |
| Beta | 0.52 |
| 20 Day Moving Average | 224,307.25 |
| Target Price Consensus | 33.7 |




| % Price Change | | % Price Change Relative to S&P 500 | |
|---|---|---|---|
| 4 Week | 1.18 | 4 Week | 0.28 |
| 12 Week | 2.09 | 12 Week | 1.25 |
| YTD | 9.62 | YTD | 2.86 |

| Share Information | | Dividend Information | |
|---|---|---|---|
| Shares Outstanding (millions) | 90.65 | Dividend Yield | 3.98% |
| | | Annual Dividend | $1.36 |
| Market Capitalization (millions) | 3,100.20 | Payout Ratio | 0.61 |
| Short Ratio | 9.60 | Change in Payout Ratio | -0.02 |
| Last Split Date | 05/17/1994 | Last Dividend Payout / Amount | 02/23/2011 / $0.34 |

| EPS Information | | Consensus Recommendations | |
|---|---|---|---|
| Current Quarter EPS Consensus Estimate | 0.09 | Current (1=Strong Buy, 5=Strong Sell) | 2.89 |
| Current Year EPS Consensus Estimate | 2.30 | 30 Days Ago | 2.89 |
| Estimated Long-Term EPS Growth Rate | 4.50 | 60 Days Ago | 2.89 |
| Next EPS Report Date | 08/10/2011 | 90 Days Ago | 2.89 |

### Fundamental Ratios

| P/E | | EPS Growth | | Sales Growth | |
|---|---|---|---|---|---|
| Current FY Estimate: | 14.85 | vs. Previous Year | -8.28% | vs. Previous Year | -16.65% |
| Trailing 12 Months: | 15.34 | vs. Previous Quarter | 64.20% | vs. Previous Quarter: | 39.78% |
| PEG Ratio | 3.30 | | | | |
| **Price Ratios** | | **ROE** | | **ROA** | |

| | | | | | |
|---|---|---|---|---|---|
| Price/Book | 1.31 | 03/31/11 | 8.87 | 03/31/11 | 2.94 |
| Price/Cash Flow | 7.25 | 12/31/10 | 9.52 | 12/31/10 | 3.17 |
| Price / Sales | 0.72 | 09/30/10 | 9.23 | 09/30/10 | 3.11 |
| **Current Ratio** | | **Quick Ratio** | | **Operating Margin** | |
| 03/31/11 | 0.91 | 03/31/11 | 0.70 | 03/31/11 | 4.68 |
| 12/31/10 | 0.86 | 12/31/10 | 0.63 | 12/31/10 | 4.66 |
| 09/30/10 | 0.75 | 09/30/10 | 0.48 | 09/30/10 | 4.38 |
| **Net Margin** | | **Pre-Tax Margin** | | **Book Value** | |
| 03/31/11 | 7.50 | 03/31/11 | 7.50 | 03/31/11 | 26.19 |
| 12/31/10 | 6.52 | 12/31/10 | 6.52 | 12/31/10 | 25.16 |
| 09/30/10 | 6.99 | 09/30/10 | 6.99 | 09/30/10 | 24.16 |
| **Inventory Turnover** | | **Debt-to-Equity** | | **Debt to Capital** | |
| 03/31/11 | 12.01 | 03/31/11 | 0.76 | 03/31/11 | 43.22 |
| 12/31/10 | 13.40 | 12/31/10 | 0.79 | 12/31/10 | 44.27 |
| 09/30/10 | 13.07 | 09/30/10 | 0.83 | 09/30/10 | 45.38 |

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## LACLEDE GROUP INC (NYSE)



| LG | 38.42 | -0.23 | (-0.60%) | Vol. 71,445 | 15:06 ET |
|---|---|---|---|---|---|

The Laclede Group, Inc. is a public utility engaged in the retail distribution and transportation of natural gas. The Company, which is subject to the jurisdiction of the Missouri Public Service Commission, serves the City of St. Louis, St. Louis County, the City of St. Charles, St. Charles County, the town of Arnold, and parts of Franklin, Jefferson, St. Francois, Ste. Genevieve, Iron, Madison and Butler Counties, all in Missouri.

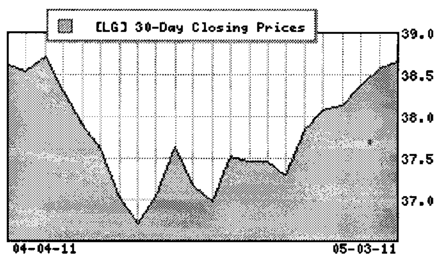
### General Information

LACLEDE GRP INC
720 OLIVE ST
ST LOUIS, MO 63101
Phone: -
Fax: 314-421-1979
Web: http://www.thelacledegroup.com
Email: investorservices@lacledegas.com

| | |
|---|---|
| Industry | UTIL-GAS DISTR |
| Sector: | Utilities |
| Fiscal Year End | September |
| Last Reported Quarter | 03/31/11 |
| Next EPS Date | 07/22/2011 |

### Price and Volume Information

| | |
|---|---|
| Zacks Rank | |
| Yesterday's Close | 38.65 |
| 52 Week High | 39.99 |
| 52 Week Low | 31.65 |
| Beta | 0.08 |
| 20 Day Moving Average | 65,142.10 |
| Target Price Consensus | N/A |




| % Price Change | | % Price Change Relative to S&P 500 | |
|---|---|---|---|
| 4 Week | 0.29 | 4 Week | -1.49 |
| 12 Week | -0.82 | 12 Week | -3.16 |
| YTD | 5.77 | YTD | -3.15 |

| Share Information | | Dividend Information | |
|---|---|---|---|
| Shares Outstanding (millions) | 22.39 | Dividend Yield | 4.19% |
| | | Annual Dividend | $1.62 |
| Market Capitalization (millions) | 865.18 | Payout Ratio | 0.67 |
| Short Ratio | 10.21 | Change in Payout Ratio | 0.05 |
| Last Split Date | 03/08/1994 | Last Dividend Payout / Amount | 03/09/2011 / $0.41 |

| EPS Information | | Consensus Recommendations | |
|---|---|---|---|
| Current Quarter EPS Consensus Estimate | 0.22 | Current (1=Strong Buy, 5=Strong Sell) | 3.00 |
| Current Year EPS Consensus Estimate | 2.45 | 30 Days Ago | 3.00 |
| Estimated Long-Term EPS Growth Rate | 3.00 | 60 Days Ago | 3.00 |
| Next EPS Report Date | 07/22/2011 | 90 Days Ago | 3.00 |

### Fundamental Ratios

| P/E | | EPS Growth | | Sales Growth | |
|---|---|---|---|---|---|
| Current FY Estimate: | 15.80 | vs. Previous Year | 0.00% | vs. Previous Year | -14.41% |
| Trailing 12 Months: | 15.97 | vs. Previous Quarter | 17.14% | vs. Previous Quarter: | 22.42% |
| PEG Ratio | 5.27 | | | | |
| **Price Ratios** | | **ROE** | | **ROA** | |
| Price/Book | 1.52 | 03/31/11 | 9.92 | 03/31/11 | 2.96 |

| | | | | | |
|---|---|---|---|---|---|
| Price/Cash Flow | 9.17 | 12/31/10 | 9.84 | 12/31/10 | 2.95 |
| Price / Sales | 0.54 | 09/30/10 | 9.83 | 09/30/10 | 2.91 |
| **Current Ratio** | | **Quick Ratio** | | **Operating Margin** | |
| 03/31/11 | - | 03/31/11 | - | 03/31/11 | 3.38 |
| 12/31/10 | 1.39 | 12/31/10 | 0.97 | 12/31/10 | 3.18 |
| 09/30/10 | 1.24 | 09/30/10 | 0.84 | 09/30/10 | 3.07 |
| **Net Margin** | | **Pre-Tax Margin** | | **Book Value** | |
| 03/31/11 | - | 03/31/11 | - | 03/31/11 | - |
| 12/31/10 | 4.83 | 12/31/10 | 4.83 | 12/31/10 | 24.51 |
| 09/30/10 | 4.68 | 09/30/10 | 4.68 | 09/30/10 | 24.02 |
| **Inventory Turnover** | | **Debt-to-Equity** | | **Debt to Capital** | |
| 03/31/11 | - | 03/31/11 | - | 03/31/11 | - |
| 12/31/10 | 13.41 | 12/31/10 | 0.66 | 12/31/10 | 39.91 |
| 09/30/10 | 14.62 | 09/30/10 | 0.68 | 09/30/10 | 40.48 |

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| **NEW JERSEY RES** (NYSE) | | | | Scottrade | |
|---|---|---|---|---|---|
| NJR | 44.50 | ▲0.66 | (1.51%) | Vol. 106,324 | 14:03 ET |

NJ RESOURCES is an exempt energy svcs holding company providing retail & wholesale natural gas & related energy services to customers from the Gulf Coast to New England. Subsidiaries include: (1) N J Natural Gas Co, a natural gas distribution company that provides regulated energy & appliance services to residential, commercial & industrial customers in central & northern N J. (2) NJR Energy Holdings Corp formerly NJR Energy Svcs Corp & (3) NJR Development Corp, a sub-holding company of NJR, which includes the Company's remaining unregulated operating subsidiaries.

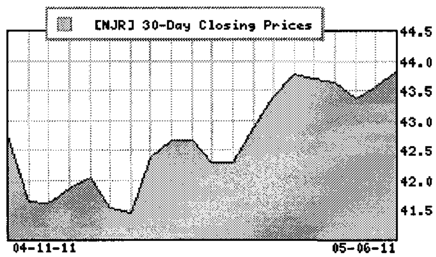
## General Information

NJ RESOURCES
-
-, - -
Phone: -
Fax: -
Web: -
Email: None

| | |
|---|---|
| Industry | UTIL-GAS DISTR |
| Sector: | Utilities |
| Fiscal Year End | September |
| Last Reported Quarter | 03/31/11 |
| Next EPS Date | 08/10/2011 |

## Price and Volume Information

| | |
|---|---|
| Zacks Rank | |
| Yesterday's Close | 43.84 |
| 52 Week High | 45.59 |
| 52 Week Low | 34.07 |
| Beta | 0.20 |
| 20 Day Moving Average | 151,621.20 |
| Target Price Consensus | 46 |




| **% Price Change** | | **% Price Change Relative to S&P 500** | |
|---|---|---|---|
| 4 Week | 2.45 | 4 Week | 1.53 |
| 12 Week | 7.14 | 12 Week | 6.25 |
| YTD | 1.69 | YTD | -4.57 |

| **Share Information** | | **Dividend Information** | |
|---|---|---|---|
| Shares Outstanding (millions) | 41.42 | Dividend Yield | 3.28% |
| | | Annual Dividend | $1.44 |
| Market Capitalization (millions) | 1,815.72 | Payout Ratio | 0.56 |
| Short Ratio | 14.01 | Change in Payout Ratio | 0.02 |
| Last Split Date | 03/04/2008 | Last Dividend Payout / Amount | 03/11/2011 / $0.36 |

| **EPS Information** | | **Consensus Recommendations** | |
|---|---|---|---|
| Current Quarter EPS Consensus Estimate | 0.21 | Current (1=Strong Buy, 5=Strong Sell) | 2.50 |
| Current Year EPS Consensus Estimate | 2.58 | 30 Days Ago | 2.50 |
| Estimated Long-Term EPS Growth Rate | 4.00 | 60 Days Ago | 2.50 |
| Next EPS Report Date | 08/10/2011 | 90 Days Ago | 2.50 |

## Fundamental Ratios

| **P/E** | | **EPS Growth** | | **Sales Growth** | |
|---|---|---|---|---|---|
| Current FY Estimate: | 16.97 | vs. Previous Year | 4.55% | vs. Previous Year | 6.39% |
| Trailing 12 Months: | 17.13 | vs. Previous Quarter | 130.00% | vs. Previous Quarter: | 37.00% |
| PEG Ratio | 4.24 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Price Ratios** | | **ROE** | | **ROA** | |
| Price/Book | 2.45 | 03/31/11 | 14.49 | 03/31/11 | 4.14 |
| Price/Cash Flow | 13.39 | 12/31/10 | 13.92 | 12/31/10 | 4.05 |
| Price / Sales | 0.65 | 09/30/10 | 13.91 | 09/30/10 | 4.14 |
| **Current Ratio** | | **Quick Ratio** | | **Operating Margin** | |
| 03/31/11 | - | 03/31/11 | - | 03/31/11 | 3.80 |
| 12/31/10 | 1.09 | 12/31/10 | 0.65 | 12/31/10 | 3.77 |
| 09/30/10 | 1.11 | 09/30/10 | 0.63 | 09/30/10 | 3.86 |
| **Net Margin** | | **Pre-Tax Margin** | | **Book Value** | |
| 03/31/11 | 3.49 | 03/31/11 | 3.49 | 03/31/11 | - |
| 12/31/10 | 4.61 | 12/31/10 | 4.61 | 12/31/10 | 17.86 |
| 09/30/10 | 6.52 | 09/30/10 | 6.52 | 09/30/10 | 17.61 |
| **Inventory Turnover** | | **Debt-to-Equity** | | **Debt to Capital** | |
| 03/31/11 | 7.51 | 03/31/11 | - | 03/31/11 | - |
| 12/31/10 | 8.34 | 12/31/10 | 0.59 | 12/31/10 | 36.96 |
| 09/30/10 | 8.34 | 09/30/10 | 0.59 | 09/30/10 | 37.15 |

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## NORTHWEST NAT GAS CO (NYSE)

Scottrade

| NWN | 45.09 | ▲0.48 | (1.08%) | Vol. 49,580 | 14:02 ET |
|---|---|---|---|---|---|

NW Natural is principally engaged in the distribution of natural gas.The Oregon Public Utility Commission (OPUC) has allocated to NW Natural as its exclusive service area a major portion of western Oregon, including the Portland metropolitan area, most of the fertile Willamette Valley and the coastal area from Astoria to Coos Bay. NW Natural also holds certificates from the Washington Utilities and Transportation Commission (WUTC) granting it exclusive rights to serve portions of three Washington counties bordering the Columbia River.

### General Information

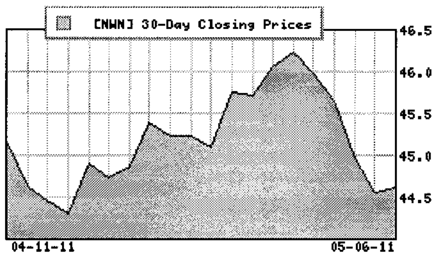
NORTHWEST NAT G
-
-, - -
Phone: -
Fax: -
Web: -
Email: None

| | |
|---|---|
| Industry | UTIL-GAS DISTR |
| Sector: | Utilities |

| | |
|---|---|
| Fiscal Year End | December |
| Last Reported Quarter | 03/31/11 |
| Next EPS Date | 08/10/2011 |

### Price and Volume Information

| | |
|---|---|
| Zacks Rank | |
| Yesterday's Close | 44.61 |
| 52 Week High | 50.86 |
| 52 Week Low | 41.90 |
| Beta | 0.31 |
| 20 Day Moving Average | 114,048.75 |
| Target Price Consensus | 47.33 |




| % Price Change | | % Price Change Relative to S&P 500 | |
|---|---|---|---|
| 4 Week | -1.83 | 4 Week | -2.71 |
| 12 Week | -1.65 | 12 Week | -2.46 |
| YTD | -4.00 | YTD | -9.92 |

| Share Information | | Dividend Information | |
|---|---|---|---|
| Shares Outstanding (millions) | 26.67 | Dividend Yield | 3.90% |
| | | Annual Dividend | $1.74 |
| Market Capitalization (millions) | 1,189.70 | Payout Ratio | 0.66 |
| Short Ratio | 12.96 | Change in Payout Ratio | 0.08 |
| Last Split Date | 09/09/1996 | Last Dividend Payout / Amount | 04/27/2011 / $0.44 |

| EPS Information | | Consensus Recommendations | |
|---|---|---|---|
| Current Quarter EPS Consensus Estimate | 0.18 | Current (1=Strong Buy, 5=Strong Sell) | 2.25 |
| Current Year EPS Consensus Estimate | 2.59 | 30 Days Ago | 2.25 |
| Estimated Long-Term EPS Growth Rate | 4.60 | 60 Days Ago | 2.25 |
| Next EPS Report Date | 08/10/2011 | 90 Days Ago | 2.25 |

### Fundamental Ratios

| P/E | | EPS Growth | | Sales Growth | |
|---|---|---|---|---|---|
| Current FY Estimate: | 17.21 | vs. Previous Year | -6.71% | vs. Previous Year | 12.76% |
| Trailing 12 Months: | 17.03 | vs. Previous Quarter | 37.84% | vs. Previous Quarter: | 20.49% |
| PEG Ratio | 3.72 | | | | |

| Price Ratios | ROE | ROA |
|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Price/Book | 1.64 | 03/31/11 | 10.04 | 03/31/11 | 2.78 |
| Price/Cash Flow | 8.63 | 12/31/10 | 10.56 | 12/31/10 | 2.93 |
| Price / Sales | 1.40 | 09/30/10 | 10.95 | 09/30/10 | 3.07 |
| **Current Ratio** | | **Quick Ratio** | | **Operating Margin** | |
| 03/31/11 | 0.66 | 03/31/11 | 0.54 | 03/31/11 | 8.23 |
| 12/31/10 | 0.71 | 12/31/10 | 0.53 | 12/31/10 | 8.95 |
| 09/30/10 | 0.56 | 09/30/10 | 0.35 | 09/30/10 | 8.73 |
| **Net Margin** | | **Pre-Tax Margin** | | **Book Value** | |
| 03/31/11 | 13.80 | 03/31/11 | 13.80 | 03/31/11 | 27.12 |
| 12/31/10 | 15.04 | 12/31/10 | 15.04 | 12/31/10 | 26.02 |
| 09/30/10 | 14.46 | 09/30/10 | 14.46 | 09/30/10 | 25.41 |
| **Inventory Turnover** | | **Debt-to-Equity** | | **Debt to Capital** | |
| 03/31/11 | 7.69 | 03/31/11 | 0.76 | 03/31/11 | 43.27 |
| 12/31/10 | 6.85 | 12/31/10 | 0.85 | 12/31/10 | 46.05 |
| 09/30/10 | 7.34 | 09/30/10 | 0.88 | 09/30/10 | 46.70 |

**Zacks.com Quotes and Research**

## PIEDMONT NAT GAS INC (NYSE)



| PNY | 31.12 | ▼-0.34 | (-1.08%) | Vol. 133,337 | 15:11 ET |
|---|---|---|---|---|---|

Piedmont Natural Gas Co, Inc., is an energy and services company engaged in the transportation and sale of natural gas and the sale of propane to residential, commercial and industrial customers in North Carolina, South Carolina and Tennessee. The Company is the second-largest natural gas utility in the southeast. The Company and its non-utility subsidiaries and divisions are also engaged in acquiring, marketing and arranging for the transportation and storage of natural gas for large-volume purchasers, and in the sale of propane to customers in the Company's three-state service area.

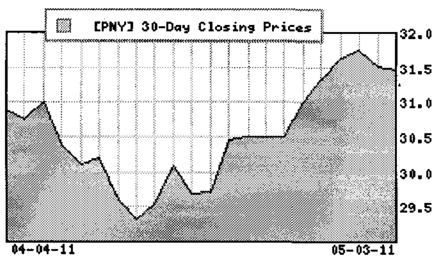
### General Information

PIEDMONT NAT GA
4720 PIEDMONT ROW DR
CHARLOTTE, NC 28233
Phone: -
Fax: 704-365-3849
Web: http://www.piedmontng.com
Email: investorrelations@piedmontng.com

| | |
|---|---|
| Industry | UTIL-GAS DISTR |
| Sector: | Utilities |
| Fiscal Year End | October |
| Last Reported Quarter | 04/30/11 |
| Next EPS Date | 06/07/2011 |

### Price and Volume Information

| | |
|---|---|
| Zacks Rank | 2 |
| Yesterday's Close | 31.46 |
| 52 Week High | 32.00 |
| 52 Week Low | 24.50 |
| Beta | 0.26 |
| 20 Day Moving Average | 207,969.34 |
| Target Price Consensus | 28.5 |




| % Price Change | | % Price Change Relative to S&P 500 | |
|---|---|---|---|
| 4 Week | 2.28 | 4 Week | 0.47 |
| 12 Week | 10.93 | 12 Week | 8.31 |
| YTD | 12.52 | YTD | 4.73 |

| Share Information | | Dividend Information | |
|---|---|---|---|
| Shares Outstanding (millions) | 71.78 | Dividend Yield | 3.69% |
| | | Annual Dividend | $1.16 |
| Market Capitalization (millions) | 2,258.32 | Payout Ratio | 0.00 |
| Short Ratio | 14.55 | Change in Payout Ratio | 0.00 |
| Last Split Date | 11/01/2004 | Last Dividend Payout / Amount | 03/23/2011 / $0.29 |

| EPS Information | | Consensus Recommendations | |
|---|---|---|---|
| Current Quarter EPS Consensus Estimate | 0.67 | Current (1=Strong Buy, 5=Strong Sell) | 3.38 |
| Current Year EPS Consensus Estimate | 1.58 | 30 Days Ago | 3.38 |
| Estimated Long-Term EPS Growth Rate | 4.80 | 60 Days Ago | 3.43 |
| Next EPS Report Date | 06/07/2011 | 90 Days Ago | 3.43 |

### Fundamental Ratios

| P/E | | EPS Growth | | Sales Growth | |
|---|---|---|---|---|---|
| Current FY Estimate: | 19.97 | vs. Previous Year | 1.75% | vs. Previous Year | -3.22% |
| Trailing 12 Months: | 20.17 | vs. Previous Quarter | 1,066.67% | vs. Previous Quarter: | 235.92% |
| PEG Ratio | 4.19 | | | | |

| Price Ratios | | ROE | | ROA | |
|---|---|---|---|---|---|
| Price/Book | 2.24 | 04/30/11 | - | 04/30/11 | - |
| Price/Cash Flow | 10.59 | 01/31/11 | 11.31 | 01/31/11 | 3.67 |
| Price / Sales | 1.48 | 10/31/10 | 11.31 | 10/31/10 | 3.65 |
| **Current Ratio** | | **Quick Ratio** | | **Operating Margin** | |
| 04/30/11 | - | 04/30/11 | - | 04/30/11 | - |
| 01/31/11 | 0.78 | 01/31/11 | 0.62 | 01/31/11 | 7.36 |
| 10/31/10 | 0.66 | 10/31/10 | 0.44 | 10/31/10 | 7.21 |
| **Net Margin** | | **Pre-Tax Margin** | | **Book Value** | |
| 04/30/11 | - | 04/30/11 | - | 04/30/11 | - |
| 01/31/11 | 11.99 | 01/31/11 | 11.99 | 01/31/11 | 14.02 |
| 10/31/10 | 15.06 | 10/31/10 | 15.06 | 10/31/10 | 13.38 |
| **Inventory Turnover** | | **Debt-to-Equity** | | **Debt to Capital** | |
| 04/30/11 | - | 04/30/11 | - | 04/30/11 | - |
| 01/31/11 | 11.84 | 01/31/11 | 0.66 | 01/31/11 | 39.82 |
| 10/31/10 | 11.93 | 10/31/10 | 0.70 | 10/31/10 | 41.05 |

Zacks.com Quotes and Research

**SOUTH JERSEY INDS INC** (NYSE)



| SJI | 53.00 | ▲0.23 | (0.44%) | Vol. 48,702 | 13:07 ET |
|---|---|---|---|---|---|

South Jersey Inds Inc. is engaged in the business of operating, through subsidiaries, various business enterprises. The company's most significant subsidiary is South Jersey Gas Company (SJG). SJG is a public utility company engaged in the purchase, transmission and sale of natural gas for residential, commercial and industrial use. SJG also makes off-system sales of natural gas on a wholesale basis to various customers on the interstate pipeline system and transports natural gas.

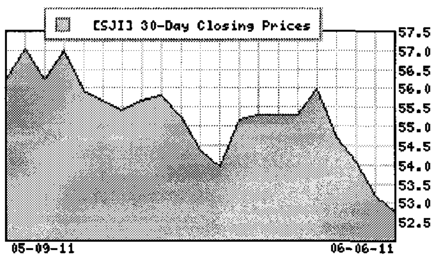
## General Information

SOUTH JERSEY IN
1 SOUTH JERSEY PLAZA ROUTE 54
FOLSOM, NJ 08037
Phone: 609-561-9000
Fax: 609-561-8225
Web: http://www.sjindustries.com
Email: None

| | |
|---|---|
| Industry | UTIL-GAS DISTR |
| Sector: | Utilities |
| Fiscal Year End | December |
| Last Reported Quarter | 03/31/11 |
| Next EPS Date | 08/04/2011 |

## Price and Volume Information

| | |
|---|---|
| Zacks Rank | |
| Yesterday's Close | 52.77 |
| 52 Week High | 58.03 |
| 52 Week Low | 41.96 |
| Beta | 0.30 |
| 20 Day Moving Average | 113,944.45 |
| Target Price Consensus | 59.5 |




| % Price Change | | % Price Change Relative to S&P 500 | |
|---|---|---|---|
| 4 Week | -6.14 | 4 Week | -1.75 |
| 12 Week | -2.84 | 12 Week | -2.06 |
| YTD | -0.09 | YTD | -2.57 |

| Share Information | | Dividend Information | |
|---|---|---|---|
| Shares Outstanding (millions) | 29.95 | Dividend Yield | 2.77% |
| | | Annual Dividend | $1.46 |
| Market Capitalization (millions) | 1,580.62 | Payout Ratio | 0.51 |
| Short Ratio | 21.14 | Change in Payout Ratio | -0.01 |
| Last Split Date | 07/01/2005 | Last Dividend Payout / Amount | 03/08/2011 / $0.37 |

| EPS Information | | Consensus Recommendations | |
|---|---|---|---|
| Current Quarter EPS Consensus Estimate | 0.29 | Current (1=Strong Buy, 5=Strong Sell) | 1.50 |
| Current Year EPS Consensus Estimate | 3.00 | 30 Days Ago | 1.80 |
| Estimated Long-Term EPS Growth Rate | - | 60 Days Ago | 1.67 |
| Next EPS Report Date | 08/04/2011 | 90 Days Ago | 1.57 |

## Fundamental Ratios

| P/E | | EPS Growth | | Sales Growth | |
|---|---|---|---|---|---|
| Current FY Estimate: | 17.57 | vs. Previous Year | 9.40% | vs. Previous Year | 0.80% |
| Trailing 12 Months: | 18.58 | vs. Previous Quarter | 87.36% | vs. Previous Quarter: | 17.09% |
| PEG Ratio | - | | | | |

| Price Ratios | ROE | ROA |
|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Price/Book | 2.58 | 03/31/11 | 14.89 | 03/31/11 | 4.34 |
| Price/Cash Flow | 12.54 | 12/31/10 | 14.42 | 12/31/10 | 4.22 |
| Price / Sales | 1.70 | 09/30/10 | 14.34 | 09/30/10 | 4.32 |
| **Current Ratio** | | **Quick Ratio** | | **Operating Margin** | |
| 03/31/11 | 0.76 | 03/31/11 | 0.70 | 03/31/11 | 9.19 |
| 12/31/10 | 0.66 | 12/31/10 | 0.55 | 12/31/10 | 8.75 |
| 09/30/10 | 0.58 | 09/30/10 | 0.41 | 09/30/10 | 9.22 |
| **Net Margin** | | **Pre-Tax Margin** | | **Book Value** | |
| 03/31/11 | 12.73 | 03/31/11 | 12.73 | 03/31/11 | 20.42 |
| 12/31/10 | 10.72 | 12/31/10 | 10.72 | 12/31/10 | 19.08 |
| 09/30/10 | 11.28 | 09/30/10 | 11.28 | 09/30/10 | 18.62 |
| **Inventory Turnover** | | **Debt-to-Equity** | | **Debt to Capital** | |
| 03/31/11 | 10.02 | 03/31/11 | 0.66 | 03/31/11 | 39.68 |
| 12/31/10 | 9.14 | 12/31/10 | 0.60 | 12/31/10 | 37.36 |
| 09/30/10 | 7.65 | 09/30/10 | 0.51 | 09/30/10 | 33.88 |

ZACKS
INVESTMENT RESEARCH
*Proven Ratings, Research & Recommendations*
**Zacks.com Quotes and Research**

| **WGL HLDGS INC** (NYSE) | | | | Scottrade | |
|---|---|---|---|---|---|
| WGL | 38.85 | ▲0.66 | (1.73%) | Vol. 130,026 | 14:03 ET |

WASHINGTON GAS LIGHT CO is a public utility that delivers and sells natural gas to metropolitan Washington, D.C. and adjoining areas in Maryland and Virginia. A distribution subsidiary serves portions of Virginia and West Virginia. The Company has four wholly-owned active subsidiaries that include: Shenandoah Gas Company (Shenandoah) is engaged in the delivery and sale of natural gas at retail in the Shenandoah Valley, including Winchester, Middletown, Strasburg, Stephens City and New Market, Virginia, and Martinsburg, West Virginia.

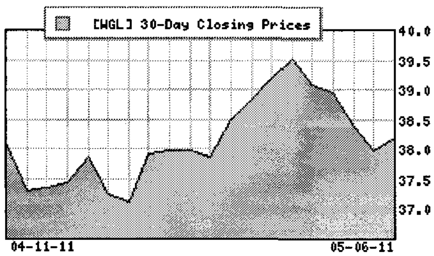
## General Information

WGL HLDGS INC
-
-, - -
Phone: -
Fax: -
Web: -
Email: None

| | |
|---|---|
| Industry | UTIL-GAS DISTR |
| Sector: | Utilities |
| Fiscal Year End | September |
| Last Reported Quarter | 03/31/11 |
| Next EPS Date | 08/10/2011 |

## Price and Volume Information

| | |
|---|---|
| Zacks Rank | |
| Yesterday's Close | 38.19 |
| 52 Week High | N/A |
| 52 Week Low | 32.75 |
| Beta | 0.26 |
| 20 Day Moving Average | 151,953.20 |
| Target Price Consensus | 39 |




| % Price Change | | % Price Change Relative to S&P 500 | |
|---|---|---|---|
| 4 Week | -0.75 | 4 Week | -1.64 |
| 12 Week | 1.41 | 12 Week | 0.57 |
| YTD | 6.77 | YTD | 0.19 |

| Share Information | | Dividend Information | |
|---|---|---|---|
| Shares Outstanding (millions) | 51.11 | Dividend Yield | 4.06% |
| | | Annual Dividend | $1.55 |
| Market Capitalization (millions) | 1,952.01 | Payout Ratio | 0.69 |
| Short Ratio | 18.69 | Change in Payout Ratio | 0.06 |
| Last Split Date | 05/02/1995 | Last Dividend Payout / Amount | 04/06/2011 / $0.39 |

| EPS Information | | Consensus Recommendations | |
|---|---|---|---|
| Current Quarter EPS Consensus Estimate | -0.09 | Current (1=Strong Buy, 5=Strong Sell) | 2.25 |
| Current Year EPS Consensus Estimate | 2.05 | 30 Days Ago | 2.25 |
| Estimated Long-Term EPS Growth Rate | 5.30 | 60 Days Ago | 2.25 |
| Next EPS Report Date | 08/10/2011 | 90 Days Ago | 2.50 |

## Fundamental Ratios

| P/E | | EPS Growth | | Sales Growth | |
|---|---|---|---|---|---|
| Current FY Estimate: | 18.59 | vs. Previous Year | -6.71% | vs. Previous Year | -3.73% |
| Trailing 12 Months: | 17.44 | vs. Previous Quarter | 50.00% | vs. Previous Quarter: | 27.81% |
| PEG Ratio | 3.54 | | | | |

| Price Ratios | ROE | ROA |
|---|---|---|

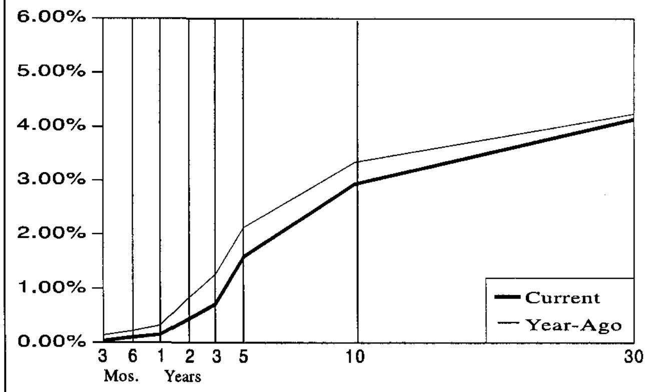
| | | | | | |
|---|---|---|---|---|---|
| Price/Book | 1.54 | 03/31/11 | 9.35 | 03/31/11 | 3.01 |
| Price/Cash Flow | 9.10 | 12/31/10 | 9.82 | 12/31/10 | 3.17 |
| Price / Sales | 0.71 | 09/30/10 | 9.86 | 09/30/10 | 3.22 |
| **Current Ratio** | | **Quick Ratio** | | **Operating Margin** | |
| 03/31/11 | 1.51 | 03/31/11 | 1.37 | 03/31/11 | 4.11 |
| 12/31/10 | 1.30 | 12/31/10 | 1.00 | 12/31/10 | 4.19 |
| 09/30/10 | 1.32 | 09/30/10 | 0.83 | 09/30/10 | 4.25 |
| **Net Margin** | | **Pre-Tax Margin** | | **Book Value** | |
| 03/31/11 | 7.91 | 03/31/11 | 7.91 | 03/31/11 | 24.73 |
| 12/31/10 | 7.74 | 12/31/10 | 7.74 | 12/31/10 | 23.53 |
| 09/30/10 | 6.82 | 09/30/10 | 6.82 | 09/30/10 | 22.68 |
| **Inventory Turnover** | | **Debt-to-Equity** | | **Debt to Capital** | |
| 03/31/11 | 11.28 | 03/31/11 | 0.49 | 03/31/11 | 32.24 |
| 12/31/10 | 11.69 | 12/31/10 | 0.53 | 12/31/10 | 34.15 |
| 09/30/10 | 11.71 | 09/30/10 | 0.51 | 09/30/10 | 33.41 |

# ATTACHMENT C

# ATTACHMENT C

# Selected Yields

| | Recent (6/01/11) | 3 Months Ago (3/2/11) | Year Ago (6/02/10) |
|---|---|---|---|
| **TAXABLE** | | | |
| **Market Rates** | | | |
| Discount Rate | 0.75 | 0.75 | 0.75 |
| Federal Funds | 0.00-0.25 | 0.00-0.25 | 0.00-0.25 |
| Prime Rate | 3.25 | 3.25 | 3.25 |
| 30-day CP (A1/P1) | 0.18 | 0.24 | 0.38 |
| 3-month LIBOR | 0.25 | 0.31 | 0.54 |
| **Bank CDs** | | | |
| 6-month | 0.27 | 0.21 | 0.42 |
| 1-year | 0.45 | 0.29 | 0.70 |
| 5-year | 1.70 | 1.76 | 2.08 |
| **U.S. Treasury Securities** | | | |
| 3-month | 0.04 | 0.12 | 0.14 |
| 6-month | 0.10 | 0.15 | 0.22 |
| 1-year | 0.15 | 0.23 | 0.32 |
| 5-year | 1.59 | 2.17 | 2.13 |
| 10-year | 2.94 | 3.47 | 3.34 |
| 10-year (inflation-protected) | 0.68 | 0.90 | 1.31 |
| 30-year | 4.14 | 4.56 | 4.24 |
| 30-year Zero | 4.51 | 4.91 | 4.46 |




| | Recent (6/01/11) | 3 Months Ago (3/2/11) | Year Ago (6/02/10) |
|---|---|---|---|
| **Mortgage-Backed Securities** | | | |
| GNMA 5.5% | 1.89 | 2.75 | 1.73 |
| FHLMC 5.5% (Gold) | 2.44 | 3.33 | 1.26 |
| FNMA 5.5% | 2.40 | 3.24 | 1.21 |
| FNMA ARM | 2.51 | 2.63 | 2.97 |
| **Corporate Bonds** | | | |
| Financial (10-year) A | 4.29 | 4.75 | 4.89 |
| Industrial (25/30-year) A | 5.14 | 5.56 | 5.42 |
| Utility (25/30-year) A | 5.14 | 5.69 | 5.56 |
| Utility (25/30-year) Baa/BBB | 5.69 | 6.08 | 6.03 |
| **Foreign Bonds (10-Year)** | | | |
| Canada | 2.99 | 3.34 | 3.38 |
| Germany | 2.99 | 3.20 | 2.66 |
| Japan | 1.16 | 1.28 | 1.28 |
| United Kingdom | 3.25 | 3.64 | 3.55 |
| **Preferred Stocks** | | | |
| Utility A | 5.58 | 5.77 | 6.00 |
| Financial A | 6.20 | 6.54 | 6.63 |
| Financial Adjustable A | 5.53 | 5.53 | 5.53 |
| **TAX-EXEMPT** | | | |
| **Bond Buyer Indexes** | | | |
| 20-Bond Index (GOs) | 4.52 | 4.95 | 4.28 |
| 25-Bond Index (Revs) | 5.38 | 5.57 | 4.84 |
| **General Obligation Bonds (GOs)** | | | |
| 1-year Aaa | 0.26 | 0.40 | 0.32 |
| 1-year A | 1.09 | 1.22 | 1.19 |
| 5-year Aaa | 1.33 | 1.82 | 1.67 |
| 5-year A | 2.53 | 2.76 | 2.54 |
| 10-year Aaa | 2.73 | 3.20 | 3.02 |
| 10-year A | 4.22 | 4.37 | 4.06 |
| 25/30-year Aaa | 4.41 | 4.72 | 4.41 |
| 25/30-year A | 5.91 | 6.25 | 5.51 |
| **Revenue Bonds (Revs) (25/30-Year)** | | | |
| Education AA | 4.87 | 5.18 | 4.75 |
| Electric AA | 5.19 | 5.30 | 4.77 |
| Housing AA | 5.83 | 6.28 | 5.62 |
| Hospital AA | 5.31 | 5.59 | 5.13 |
| Toll Road Aaa | 5.07 | 5.34 | 4.75 |

# Federal Reserve Data

**BANK RESERVES**
*(Two-Week Period; in Millions, Not Seasonally Adjusted)*

| | Recent Levels | | | Average Levels Over the Last... | | |
|---|---|---|---|---|---|---|
| | **5/18/11** | **5/4/11** | **Change** | **12 Wks.** | **26 Wks.** | **52 Wks.** |
| Excess Reserves | 1502022 | 1433322 | 68700 | 1388703 | 1201785 | 1110422 |
| Borrowed Reserves | 15373 | 16908 | -1535 | 18822 | 29166 | 44696 |
| Net Free/Borrowed Reserves | 1486649 | 1416414 | 70235 | 1369881 | 1172619 | 1065726 |

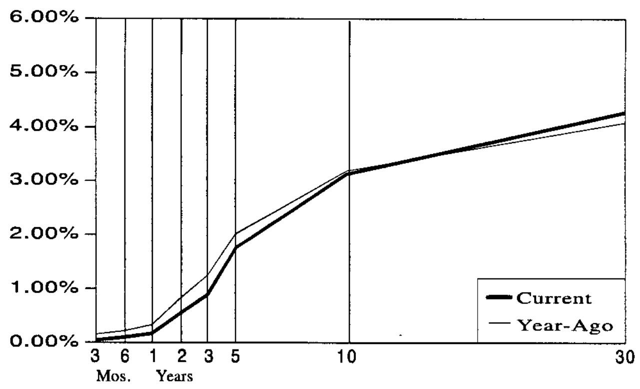
**MONEY SUPPLY**
*(One-Week Period; in Billions, Seasonally Adjusted)*

| | Recent Levels | | | Growth Rates Over the Last... | | |
|---|---|---|---|---|---|---|
| | **5/16/11** | **5/9/11** | **Change** | **3 Mos.** | **6 Mos.** | **12 Mos.** |
| M1 (Currency+demand deposits) | 1922.1 | 1914.7 | 7.4 | 15.7% | 14.1% | 12.9% |
| M2 (M1+savings+small time deposits) | 8994.5 | 8984.1 | 10.4 | 5.1% | 5.0% | 4.9% |

# Selected Yields

| | Recent (5/25/11) | 3 Months Ago (2/23/11) | Year Ago (5/26/10) |
|---|---|---|---|
| **TAXABLE** | | | |
| **Market Rates** | | | |
| Discount Rate | 0.75 | 0.75 | 0.75 |
| Federal Funds | 0.00-0.25 | 0.00-0.25 | 0.00-0.25 |
| Prime Rate | 3.25 | 3.25 | 3.25 |
| 30-day CP (A1/P1) | 0.17 | 0.23 | 0.36 |
| 3-month LIBOR | 0.25 | 0.31 | 0.54 |
| **Bank CDs** | | | |
| 6-month | 0.27 | 0.21 | 0.42 |
| 1-year | 0.45 | 0.29 | 0.70 |
| 5-year | 1.70 | 1.65 | 2.12 |
| **U.S. Treasury Securities** | | | |
| 3-month | 0.05 | 0.12 | 0.16 |
| 6-month | 0.10 | 0.15 | 0.22 |
| 1-year | 0.17 | 0.24 | 0.33 |
| 5-year | 1.76 | 2.17 | 2.02 |
| 10-year | 3.13 | 3.49 | 3.19 |
| 10-year (inflation-protected) | 0.77 | 0.97 | 1.25 |
| 30-year | 4.28 | 4.58 | 4.09 |
| 30-year Zero | 4.63 | 4.94 | 4.30 |

## Treasury Security Yield Curve




| | Recent (5/25/11) | 3 Months Ago (2/23/11) | Year Ago (5/26/10) |
|---|---|---|---|
| **Mortgage-Backed Securities** | | | |
| GNMA 5.5% | 2.05 | 2.78 | 1.51 |
| FHLMC 5.5% (Gold) | 2.58 | 3.36 | 1.05 |
| FNMA 5.5% | 2.53 | 3.27 | 1.07 |
| FNMA ARM | 2.60 | 2.66 | 3.01 |
| **Corporate Bonds** | | | |
| Financial (10-year) A | 4.45 | 4.73 | 4.67 |
| Industrial (25/30-year) A | 5.26 | 5.57 | 5.23 |
| Utility (25/30-year) A | 5.30 | 5.66 | 5.40 |
| Utility (25/30-year) Baa/BBB | 5.81 | 6.07 | 5.82 |
| **Foreign Bonds (10-Year)** | | | |
| Canada | 3.08 | 3.33 | 3.26 |
| Germany | 3.05 | 3.14 | 2.65 |
| Japan | 1.13 | 1.26 | 1.22 |
| United Kingdom | 3.33 | 3.67 | 3.56 |
| **Preferred Stocks** | | | |
| Utility A | 5.34 | 5.79 | 5.96 |
| Financial A | 6.49 | 6.07 | 6.84 |
| Financial Adjustable A | 5.52 | 5.52 | 5.52 |
| **TAX-EXEMPT** | | | |
| **Bond Buyer Indexes** | | | |
| 20-Bond Index (GOs) | 4.55 | 5.10 | 4.27 |
| 25-Bond Index (Revs) | 5.40 | 5.60 | 4.86 |
| **General Obligation Bonds (GOs)** | | | |
| 1-year Aaa | 0.25 | 0.37 | 0.32 |
| 1-year A | 1.07 | 1.21 | 1.16 |
| 5-year Aaa | 1.33 | 1.85 | 1.66 |
| 5-year A | 2.53 | 2.80 | 2.54 |
| 10-year Aaa | 2.84 | 3.36 | 3.00 |
| 10-year A | 4.21 | 4.43 | 3.99 |
| 25/30-year Aaa | 4.40 | 4.80 | 4.36 |
| 25/30-year A | 5.91 | 6.25 | 5.46 |
| **Revenue Bonds (Revs) (25/30-Year)** | | | |
| Education AA | 4.87 | 5.23 | 4.74 |
| Electric AA | 5.19 | 5.37 | 4.72 |
| Housing AA | 5.82 | 6.36 | 5.62 |
| Hospital AA | 5.31 | 5.60 | 5.08 |
| Toll Road Aaa | 5.07 | 5.38 | 4.72 |

# Federal Reserve Data

### BANK RESERVES

*(Two-Week Period; in Millions, Not Seasonally Adjusted)*

| | Recent Levels | | | Average Levels Over the Last... | | |
|---|---|---|---|---|---|---|
| | **5/18/11** | **5/4/11** | **Change** | **12 Wks.** | **26 Wks.** | **52 Wks.** |
| Excess Reserves | 1502023 | 1433323 | 68700 | 1388703 | 1201785 | 1110422 |
| Borrowed Reserves | 15371 | 16908 | -1537 | 18822 | 29166 | 44696 |
| Net Free/Borrowed Reserves | 1486652 | 1416415 | 70237 | 1369881 | 1172619 | 1065726 |

### MONEY SUPPLY

*(One-Week Period; in Billions, Seasonally Adjusted)*

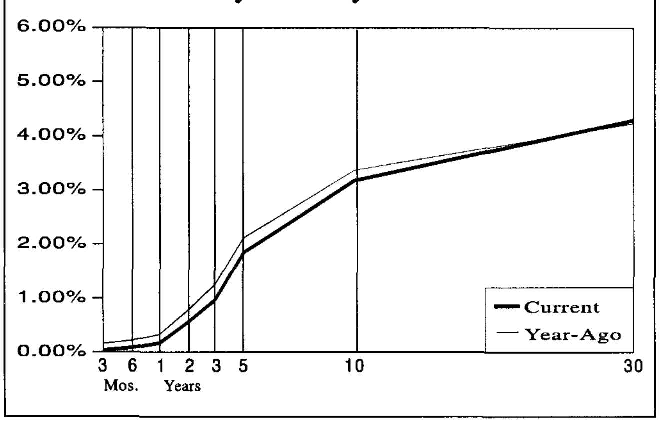
| | Recent Levels | | | Growth Rates Over the Last... | | |
|---|---|---|---|---|---|---|
| | **5/9/11** | **5/2/11** | **Change** | **3 Mos.** | **6 Mos.** | **12 Mos.** |
| M1 (Currency+demand deposits) | 1914.7 | 1937.1 | -22.4 | 12.0% | 7.2% | 12.2% |
| M2 (M1+savings+small time deposits) | 8984.2 | 8992.8 | -8.6 | 5.0% | 5.0% | 5.0% |

# Selected Yields

| | Recent (5/18/11) | 3 Months Ago (2/16/11) | Year Ago (5/19/10) |
|---|---|---|---|
| **TAXABLE** | | | |
| **Market Rates** | | | |
| Discount Rate | 0.75 | 0.75 | 0.75 |
| Federal Funds | 0.00-0.25 | 0.00-0.25 | 0.00-0.25 |
| Prime Rate | 3.25 | 3.25 | 3.25 |
| 30-day CP (A1/P1) | 0.16 | 0.31 | 0.33 |
| 3-month LIBOR | 0.27 | 0.31 | 0.48 |
| **Bank CDs** | | | |
| 6-month | 0.27 | 0.21 | 0.25 |
| 1-year | 0.45 | 0.29 | 0.43 |
| 5-year | 1.71 | 1.65 | 1.99 |
| **U.S. Treasury Securities** | | | |
| 3-month | 0.04 | 0.11 | 0.16 |
| 6-month | 0.08 | 0.15 | 0.22 |
| 1-year | 0.17 | 0.27 | 0.33 |
| 5-year | 1.85 | 2.35 | 2.12 |
| 10-year | 3.18 | 3.62 | 3.37 |
| 10-year (inflation-protected) | 0.78 | 1.25 | 1.29 |
| 30-year | 4.30 | 4.68 | 4.24 |
| 30-year Zero | 4.63 | 5.01 | 4.46 |

| | Recent (5/18/11) | 3 Months Ago (2/16/11) | Year Ago (5/19/10) |
|---|---|---|---|
| **Mortgage-Backed Securities** | | | |
| GNMA 6.5% | 2.05 | 2.96 | 1.70 |
| FHLMC 6.5% (Gold) | 2.60 | 3.51 | 1.14 |
| FNMA 6.5% | 2.53 | 3.45 | 1.19 |
| FNMA ARM | 2.60 | 2.66 | 3.01 |
| **Corporate Bonds** | | | |
| Financial (10-year) A | 4.52 | 4.85 | 4.74 |
| Industrial (25/30-year) A | 5.25 | 5.65 | 5.37 |
| Utility (25/30-year) A | 5.30 | 5.77 | 5.53 |
| Utility (25/30-year) Baa/BBB | 5.79 | 6.15 | 5.93 |
| **Foreign Bonds (10-Year)** | | | |
| Canada | 3.23 | 3.50 | 3.40 |
| Germany | 3.12 | 3.24 | 2.77 |
| Japan | 1.16 | 1.36 | 1.30 |
| United Kingdom | 3.39 | 3.81 | 3.66 |
| **Preferred Stocks** | | | |
| Utility A | 5.71 | 5.79 | 6.01 |
| Financial A | 6.48 | 6.07 | 6.56 |
| Financial Adjustable A | 5.52 | 5.52 | 5.52 |
| **TAX-EXEMPT** | | | |
| **Bond Buyer Indexes** | | | |
| 20-Bond Index (GOs) | 4.61 | 5.29 | 4.32 |
| 25-Bond Index (Revs) | 5.41 | 5.67 | 4.90 |
| **General Obligation Bonds (GOs)** | | | |
| 1-year Aaa | 0.25 | 0.38 | 0.37 |
| 1-year A | 1.10 | 1.16 | 1.20 |
| 5-year Aaa | 1.34 | 1.95 | 1.76 |
| 5-year A | 2.53 | 2.87 | 2.70 |
| 10-year Aaa | 2.84 | 3.52 | 3.12 |
| 10-year A | 4.21 | 4.52 | 4.09 |
| 25/30-year Aaa | 4.43 | 4.94 | 4.39 |
| 25/30-year A | 5.95 | 6.25 | 5.46 |
| **Revenue Bonds (Revs) (25/30-Year)** | | | |
| Education AA | 4.91 | 5.33 | 4.74 |
| Electric AA | 5.19 | 5.48 | 4.74 |
| Housing AA | 5.86 | 6.42 | 5.64 |
| Hospital AA | 5.35 | 5.71 | 5.08 |
| Toll Road Aaa | 5.07 | 5.46 | 4.72 |

**Treasury Security Yield Curve**




# Federal Reserve Data

**BANK RESERVES**
*(Two-Week Period; in Millions, Seasonally Adjusted)*

| | Recent Levels 5/4/11 | 4/20/11 | Change | Average Levels Over the Last... 12 Wks. | 26 Wks. | 52 Wks. |
|---|---|---|---|---|---|---|
| Excess Reserves | 1433322 | 1474432 | -41110 | 1330196 | 1163742 | 1092180 |
| Borrowed Reserves | 16908 | 17930 | -1022 | 19864 | 31461 | 47019 |
| Net Free/Borrowed Reserves | 1416414 | 1456502 | -40088 | 1310332 | 1132281 | 1045161 |

**MONEY SUPPLY**
*(One-Week Period; in Billions, Seasonally Adjusted)*

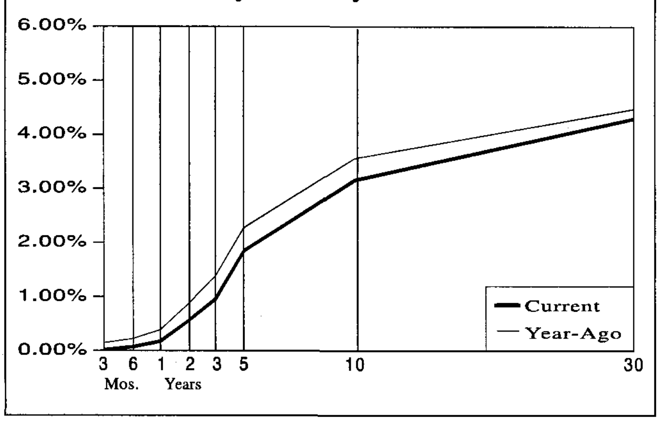
| | Recent Levels 5/2/11 | 4/25/11 | Change | Growth Rates Over the Last... 3 Mos. | 6 Mos. | 12 Mos. |
|---|---|---|---|---|---|---|
| M1 (Currency+demand deposits) | 1937.1 | 1916.9 | 20.2 | 8.9% | 19.9% | 12.3% |
| M2 (M1+savings+small time deposits) | 8992.6 | 8964.5 | 28.1 | 5.7% | 4.9% | 5.1% |

# Selected Yields

| | Recent (5/11/11) | 3 Months Ago (2/09/11) | Year Ago (5/12/10) |
|---|---|---|---|
| **TAXABLE** | | | |
| **Market Rates** | | | |
| Discount Rate | 0.75 | 0.75 | 0.75 |
| Federal Funds | 0.00-0.25 | 0.00-0.25 | 0.00-0.25 |
| Prime Rate | 3.25 | 3.25 | 3.25 |
| 30-day CP (A1/P1) | 0.15 | 0.31 | 0.32 |
| 3-month LIBOR | 0.26 | 0.31 | 0.43 |
| **Bank CDs** | | | |
| 6-month | 0.28 | 0.21 | 0.25 |
| 1-year | 0.46 | 0.29 | 0.43 |
| 5-year | 1.71 | 1.65 | 1.99 |
| **U.S. Treasury Securities** | | | |
| 3-month | 0.02 | 0.13 | 0.15 |
| 6-month | 0.07 | 0.16 | 0.22 |
| 1-year | 0.17 | 0.29 | 0.38 |
| 5-year | 1.85 | 2.33 | 2.28 |
| 10-year | 3.16 | 3.65 | 3.57 |
| 10-year (inflation-protected) | 0.64 | 1.20 | 1.25 |
| 30-year | 4.30 | 4.71 | 4.48 |
| 30-year Zero | 4.66 | 5.02 | 4.75 |

| | Recent (5/11/11) | 3 Months Ago (2/09/11) | Year Ago (5/12/10) |
|---|---|---|---|
| **Mortgage-Backed Securities** | | | |
| GNMA 5.5% | 2.25 | 3.17 | 2.04 |
| FHLMC 5.5% (Gold) | 2.70 | 3.78 | 1.73 |
| FNMA 5.5% | 2.60 | 3.68 | 2.28 |
| FNMA ARM | 2.60 | 2.66 | 3.01 |
| **Corporate Bonds** | | | |
| Financial (10-year) A | 4.51 | 4.94 | 4.87 |
| Industrial (25/30-year) A | 5.26 | 5.67 | 5.55 |
| Utility (25/30-year) A | 5.33 | 5.82 | 5.72 |
| Utility (25/30-year) Baa/BBB | 5.78 | 6.22 | 6.10 |
| **Foreign Bonds (10-Year)** | | | |
| Canada | 3.22 | 3.45 | 3.60 |
| Germany | 3.13 | 3.31 | 2.94 |
| Japan | 1.13 | 1.34 | 1.31 |
| United Kingdom | 3.44 | 3.87 | 3.85 |
| **Preferred Stocks** | | | |
| Utility A | 6.18 | 5.80 | 6.02 |
| Financial A | 6.47 | 6.06 | 6.74 |
| Financial Adjustable A | 5.51 | 5.51 | 5.51 |
| **TAX-EXEMPT** | | | |
| **Bond Buyer Indexes** | | | |
| 20-Bond Index (GOs) | 4.69 | 5.25 | 4.29 |
| 25-Bond Index (Revs) | 5.45 | 5.63 | 4.89 |
| **General Obligation Bonds (GOs)** | | | |
| 1-year Aaa | 0.28 | 0.39 | 0.39 |
| 1-year A | 1.15 | 1.16 | 1.19 |
| 5-year Aaa | 1.48 | 1.96 | 1.82 |
| 5-year A | 2.59 | 2.87 | 2.73 |
| 10-year Aaa | 2.96 | 3.57 | 3.16 |
| 10-year A | 4.24 | 4.54 | 4.13 |
| 25/30-year Aaa | 4.48 | 4.97 | 4.40 |
| 25/30-year A | 6.01 | 6.26 | 5.47 |
| **Revenue Bonds (Revs) (25/30-Year)** | | | |
| Education AA | 4.98 | 5.35 | 4.75 |
| Electric AA | 5.24 | 5.48 | 4.75 |
| Housing AA | 5.91 | 6.44 | 5.65 |
| Hospital AA | 5.45 | 5.71 | 5.09 |
| Toll Road Aaa | 5.17 | 5.48 | 4.73 |

**Treasury Security Yield Curve**




# Federal Reserve Data

**BANK RESERVES**

*(Two-Week Period; in Millions, Not Seasonally Adjusted)*

| | Recent Levels | | | Average Levels Over the Last... | | |
|---|---|---|---|---|---|---|
| | **5/4/11** | **4/20/11** | **Change** | **12 Wks.** | **26 Wks.** | **52 Wks.** |
| Excess Reserves | 1433323 | 1474433 | -41110 | 1330196 | 1163742 | 1092180 |
| Borrowed Reserves | 16908 | 17930 | -1022 | 19864 | 31461 | 47019 |
| Net Free/Borrowed Reserves | 1416415 | 1456503 | -40088 | 1310332 | 1132281 | 1045161 |

**MONEY SUPPLY**

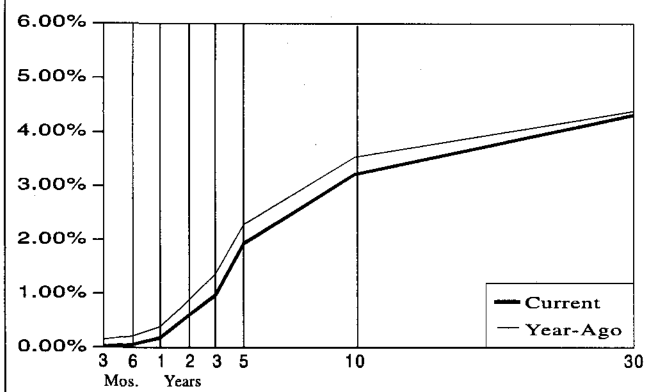
*(One-Week Period; in Billions, Seasonally Adjusted)*

| | Recent Levels | | | Growth Rates Over the Last... | | |
|---|---|---|---|---|---|---|
| | **4/25/11** | **4/18/11** | **Change** | **3 Mos.** | **6 Mos.** | **12 Mos.** |
| M1 (Currency+demand deposits) | 1917.0 | 1888.7 | 28.3 | 12.7% | 14.5% | 13.0% |
| M2 (M1+savings+small time deposits) | 8964.7 | 8940.7 | 24.0 | 6.3% | 4.7% | 4.9% |

# Selected Yields

| | Recent (5/04/11) | 3 Months Ago (2/02/11) | Year Ago (5/05/10) |
|---|---|---|---|
| **TAXABLE** | | | |
| **Market Rates** | | | |
| Discount Rate | 0.75 | 0.75 | 0.75 |
| Federal Funds | 0.00-0.25 | 0.00-0.25 | 0.00-0.25 |
| Prime Rate | 3.25 | 3.25 | 3.25 |
| 30-day CP (A1/P1) | 0.22 | 0.25 | 0.25 |
| 3-month LIBOR | 0.27 | 0.31 | 0.36 |
| **Bank CDs** | | | |
| 6-month | 0.28 | 0.30 | 0.25 |
| 1-year | 0.46 | 0.48 | 0.43 |
| 5-year | 1.71 | 1.59 | 1.99 |
| **U.S. Treasury Securities** | | | |
| 3-month | 0.02 | 0.15 | 0.15 |
| 6-month | 0.06 | 0.17 | 0.21 |
| 1-year | 0.18 | 0.26 | 0.38 |
| 5-year | 1.94 | 2.09 | 2.29 |
| 10-year | 3.22 | 3.48 | 3.54 |
| 10-year (inflation-protected) | 0.66 | 1.02 | 1.27 |
| 30-year | 4.32 | 4.62 | 4.39 |
| 30-year Zero | 4.66 | 4.96 | 4.62 |
| **Mortgage-Backed Securities** | | | |
| GNMA 5.5% | 2.56 | 3.06 | 2.45 |
| FHLMC 5.5% (Gold) | 2.90 | 3.45 | 1.96 |
| FNMA 5.5% | 2.81 | 3.27 | 2.50 |
| FNMA ARM | 2.53 | 2.66 | 3.01 |
| **Corporate Bonds** | | | |
| Financial (10-year) A | 4.48 | 4.86 | 4.80 |
| Industrial (25/30-year) A | 5.26 | 5.63 | 5.42 |
| Utility (25/30-year) A | 5.39 | 5.78 | 5.59 |
| Utility (25/30-year) Baa/BBB | 5.84 | 6.18 | 6.03 |
| **Foreign Bonds (10-Year)** | | | |
| Canada | 3.12 | 3.38 | 3.54 |
| Germany | 3.30 | 3.26 | 2.86 |
| Japan | 1.21 | 1.23 | 1.29 |
| United Kingdom | 3.80 | 3.76 | 3.82 |
| **Preferred Stocks** | | | |
| Utility A | 6.06 | 5.79 | 5.59 |
| Financial A | 6.47 | 6.05 | 6.68 |
| Financial Adjustable A | 5.51 | 5.50 | 5.51 |
| **TAX-EXEMPT** | | | |
| **Bond Buyer Indexes** | | | |
| 20-Bond Index (GOs) | 4.86 | 5.25 | 4.37 |
| 25-Bond Index (Revs) | 5.51 | 5.61 | 4.91 |
| **General Obligation Bonds (GOs)** | | | |
| 1-year Aaa | 0.31 | 0.39 | 0.38 |
| 1-year A | 1.17 | 1.17 | 1.19 |
| 5-year Aaa | 1.57 | 1.90 | 1.80 |
| 5-year A | 2.67 | 2.82 | 2.73 |
| 10-year Aaa | 3.10 | 3.51 | 3.16 |
| 10-year A | 4.35 | 4.50 | 4.12 |
| 25/30-year Aaa | 4.58 | 4.92 | 4.42 |
| 25/30-year A | 6.04 | 6.24 | 5.51 |
| **Revenue Bonds (Revs) (25/30-Year)** | | | |
| Education AA | 5.07 | 5.33 | 4.74 |
| Electric AA | 5.26 | 5.48 | 4.77 |
| Housing AA | 5.95 | 6.41 | 5.65 |
| Hospital AA | 5.55 | 5.69 | 5.13 |
| Toll Road Aaa | 5.24 | 5.46 | 4.73 |

**Treasury Security Yield Curve**




# Federal Reserve Data

**BANK RESERVES**

*(Two-Week Period; in Millions, Not Seasonally Adjusted)*

| | Recent Levels 4/20/11 | 4/6/11 | Change | Average Levels Over the Last... 12 Wks. | 26 Wks. | 52 Wks. |
|---|---|---|---|---|---|---|
| Excess Reserves | 1474433 | 1431443 | 42990 | 1274154 | 1131440 | 1078169 |
| Borrowed Reserves | 17930 | 19196 | -1266 | 21035 | 33743 | 49335 |
| Net Free/Borrowed Reserves | 1456503 | 1412247 | 44256 | 1253120 | 1097698 | 1028833 |

**MONEY SUPPLY**

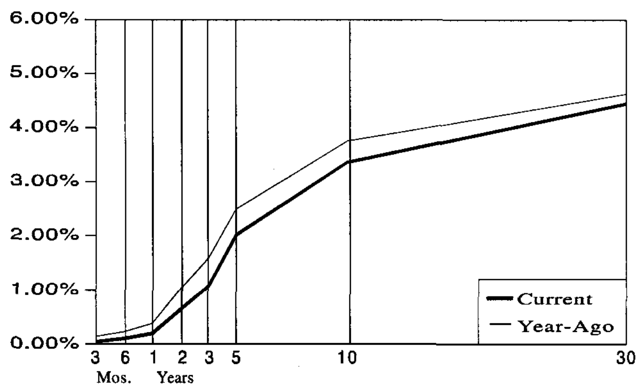
*(One-Week Period; in Billions, Seasonally Adjusted)*

| | Recent Levels 4/18/11 | 4/11/11 | Change | Growth Rates Over the Last... 3 Mos. | 6 Mos. | 12 Mos. |
|---|---|---|---|---|---|---|
| M1 (Currency+demand deposits) | 1888.6 | 1883.8 | 4.8 | 8.2% | 12.3% | 10.9% |
| M2 (M1+savings+small time deposits) | 8940.6 | 8928.2 | 12.4 | 3.6% | 4.5% | 5.1% |

# Selected Yields

| | Recent (4/27/11) | 3 Months Ago (1/26/11) | Year Ago (4/28/10) |
|---|---|---|---|
| **TAXABLE** | | | |
| **Market Rates** | | | |
| Discount Rate | 0.75 | 0.75 | 0.75 |
| Federal Funds | 0.00-0.25 | 0.00-0.25 | 0.00-0.25 |
| Prime Rate | 3.25 | 3.25 | 3.25 |
| 30-day CP (A1/P1) | 0.24 | 0.27 | 0.22 |
| 3-month LIBOR | 0.27 | 0.30 | 0.34 |
| **Bank CDs** | | | |
| 6-month | 0.28 | 0.31 | 0.25 |
| 1-year | 0.46 | 0.49 | 0.43 |
| 5-year | 1.71 | 1.65 | 1.99 |
| **U.S. Treasury Securities** | | | |
| 3-month | 0.05 | 0.15 | 0.15 |
| 6-month | 0.11 | 0.17 | 0.23 |
| 1-year | 0.20 | 0.26 | 0.38 |
| 5-year | 2.02 | 1.99 | 2.50 |
| 10-year | 3.36 | 3.42 | 3.76 |
| 10-year (inflation-protected) | 0.77 | 1.03 | 1.37 |
| 30-year | 4.45 | 4.59 | 4.63 |
| 30-year Zero | 4.79 | 4.93 | 4.89 |
| **Mortgage-Backed Securities** | | | |
| GNMA 5.5% | 2.72 | 2.90 | 2.25 |
| FHLMC 5.5% (Gold) | 2.94 | 3.19 | 1.88 |
| FNMA 5.5% | 2.87 | 3.06 | 2.41 |
| FNMA ARM | 2.62 | 2.72 | 2.76 |
| **Corporate Bonds** | | | |
| Financial (10-year) A | 4.68 | 4.73 | 4.99 |
| Industrial (25/30-year) A | 5.40 | 5.52 | 5.66 |
| Utility (25/30-year) A | 5.53 | 5.64 | 5.77 |
| Utility (25/30-year) Baa/BBB | 5.95 | 6.10 | 6.23 |
| **Foreign Bonds (10-Year)** | | | |
| Canada | 3.27 | 3.31 | 3.67 |
| Germany | 3.29 | 3.19 | 3.04 |
| Japan | 1.22 | 1.24 | 1.29 |
| United Kingdom | 3.57 | 3.69 | 3.94 |
| **Preferred Stocks** | | | |
| Utility A | 5.65 | 5.79 | 6.21 |
| Financial A | 6.46 | 6.52 | 6.64 |
| Financial Adjustable A | 5.50 | 5.50 | 5.50 |
| **TAX-EXEMPT** | | | |
| **Bond Buyer Indexes** | | | |
| 20-Bond Index (GOs) | 4.98 | 5.41 | 4.37 |
| 25-Bond Index (Revs) | 5.54 | 5.66 | 4.93 |
| **General Obligation Bonds (GOs)** | | | |
| 1-year Aaa | 0.27 | 0.41 | 0.38 |
| 1-year A | 1.13 | 1.28 | 1.16 |
| 5-year Aaa | 1.66 | 1.91 | 1.79 |
| 5-year A | 2.75 | 2.96 | 2.77 |
| 10-year Aaa | 3.28 | 3.60 | 3.16 |
| 10-year A | 4.41 | 4.49 | 4.13 |
| 25/30-year Aaa | 4.75 | 5.06 | 4.44 |
| 25/30-year A | 6.07 | 6.27 | 5.51 |
| **Revenue Bonds (Revs) (25/30-Year)** | | | |
| Education AA | 5.15 | 5.46 | 4.79 |
| Electric AA | 5.28 | 5.57 | 4.77 |
| Housing AA | 5.97 | 6.44 | 5.70 |
| Hospital AA | 5.60 | 5.75 | 5.15 |
| Toll Road Aaa | 5.29 | 5.60 | 4.73 |

**Treasury Security Yield Curve**




# Federal Reserve Data

**BANK RESERVES**
*(Two-Week Period; in Millions, Not Seasonally Adjusted)*

| | Recent Levels | | | Average Levels Over the Last... | | |
|---|---|---|---|---|---|---|
| | 4/20/11 | 4/6/11 | Change | 12 Wks. | 26 Wks. | 52 Wks. |
| Excess Reserves | 1474421 | 1431443 | 42978 | 1274152 | 1131439 | 1078168 |
| Borrowed Reserves | 17930 | 19196 | -1266 | 21035 | 33743 | 49335 |
| Net Free/Borrowed Reserves | 1456491 | 1412247 | 44244 | 1253117 | 1097696 | 1028833 |

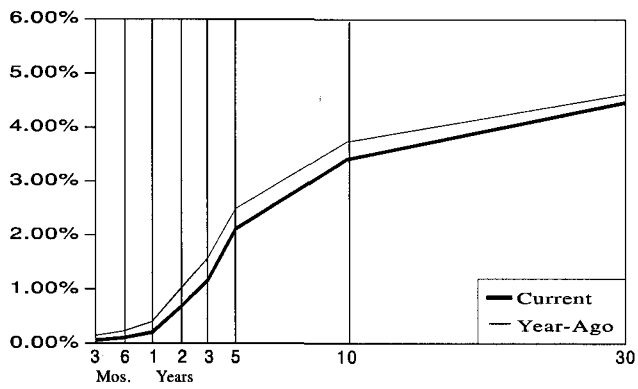
**MONEY SUPPLY**
*(One-Week Period; in Billions, Seasonally Adjusted)*

| | Recent Levels | | | Growth Rates Over the Last... | | |
|---|---|---|---|---|---|---|
| | 4/11/11 | 4/4/11 | Change | 3 Mos. | 6 Mos. | 12 Mos. |
| M1 (Currency+demand deposits) | 1883.7 | 1903.6 | -19.9 | 14.3% | 9.8% | 10.8% |
| M2 (M1+savings+small time deposits) | 8928.1 | 8922.4 | 5.7 | 5.2% | 4.3% | 4.8% |

# Selected Yields

| | Recent (4/20/11) | 3 Months Ago (1/19/11) | Year Ago (4/21/10) |
|---|---|---|---|
| **TAXABLE** | | | |
| **Market Rates** | | | |
| Discount Rate | 0.75 | 0.75 | 0.75 |
| Federal Funds | 0.00-0.25 | 0.00-0.25 | 0.00-0.25 |
| Prime Rate | 3.25 | 3.25 | 3.25 |
| 30-day CP (A1/P1) | 0.17 | 0.27 | 0.22 |
| 3-month LIBOR | 0.27 | 0.30 | 0.31 |
| **Bank CDs** | | | |
| 6-month | 0.29 | 0.30 | 0.25 |
| 1-year | 0.47 | 0.48 | 0.43 |
| 5-year | 1.71 | 1.60 | 1.99 |
| **U.S. Treasury Securities** | | | |
| 3-month | 0.06 | 0.15 | 0.15 |
| 6-month | 0.11 | 0.18 | 0.23 |
| 1-year | 0.21 | 0.25 | 0.40 |
| 5-year | 2.12 | 1.93 | 2.49 |
| 10-year | 3.41 | 3.34 | 3.74 |
| 10-year (inflation-protected) | 0.78 | 0.93 | 1.40 |
| 30-year | 4.47 | 4.53 | 4.62 |
| 30-year Zero | 4.79 | 4.87 | 4.87 |
| **Mortgage-Backed Securities** | | | |
| GNMA 5.5% | 2.85 | 2.38 | 2.24 |
| FHLMC 5.5% (Gold) | 3.07 | 3.03 | 1.86 |
| FNMA 5.5% | 2.99 | 2.89 | 2.42 |
| FNMA ARM | 2.62 | 2.72 | 2.76 |
| **Corporate Bonds** | | | |
| Financial (10-year) A | 4.71 | 4.78 | 5.03 |
| Industrial (25/30-year) A | 5.45 | 5.57 | 5.61 |
| Utility (25/30-year) A | 5.57 | 5.72 | 5.76 |
| Utility (25/30-year) Baa/BBB | 6.03 | 6.15 | 6.19 |
| **Foreign Bonds (10-Year)** | | | |
| Canada | 3.33 | 3.24 | 3.72 |
| Germany | 3.31 | 3.11 | 3.08 |
| Japan | 1.24 | 1.27 | 1.34 |
| United Kingdom | 3.58 | 3.64 | 4.02 |
| **Preferred Stocks** | | | |
| Utility A | 5.59 | 5.79 | 5.92 |
| Financial A | 6.45 | 6.04 | 6.59 |
| Financial Adjustable A | 5.49 | 5.49 | 5.49 |
| **TAX-EXEMPT** | | | |
| **Bond Buyer Indexes** | | | |
| 20-Bond Index (GOs) | 5.06 | 5.39 | 4.43 |
| 25-Bond Index (Revs) | 5.58 | 5.60 | 4.96 |
| **General Obligation Bonds (GOs)** | | | |
| 1-year Aaa | 0.33 | 0.39 | 0.43 |
| 1-year A | 1.18 | 1.32 | 1.16 |
| 5-year Aaa | 1.74 | 1.90 | 1.83 |
| 5-year A | 2.81 | 3.00 | 2.86 |
| 10-year Aaa | 3.37 | 3.58 | 3.22 |
| 10-year A | 4.49 | 4.54 | 4.22 |
| 25/30-year Aaa | 4.80 | 5.18 | 4.44 |
| 25/30-year A | 6.12 | 6.31 | 5.51 |
| **Revenue Bonds (Revs) (25/30-Year)** | | | |
| Education AA | 5.19 | 5.56 | 4.79 |
| Electric AA | 5.32 | 5.57 | 4.77 |
| Housing AA | 6.01 | 6.42 | 5.73 |
| Hospital AA | 5.65 | 5.73 | 5.15 |
| Toll Road Aaa | 5.33 | 5.63 | 4.76 |

## Treasury Security Yield Curve




# Federal Reserve Data

**BANK RESERVES**
*(Two-Week Period; in Millions, Not Seasonally Adjusted)*

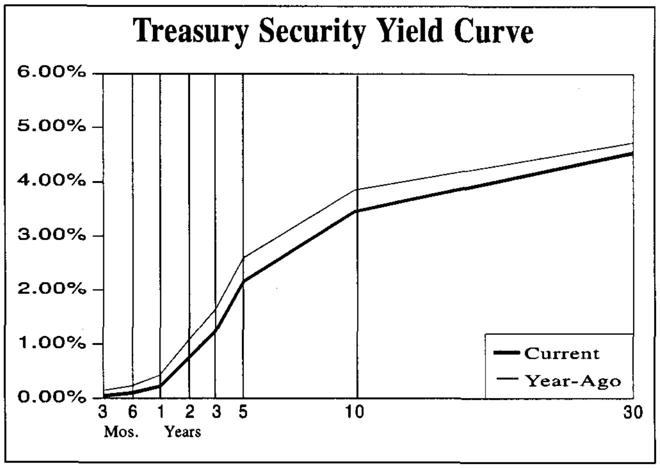
| | Recent Levels | | | Average Levels Over the Last... | | |
|---|---|---|---|---|---|---|
| | **4/6/11** | **3/23/11** | **Change** | **12 Wks.** | **26 Wks.** | **52 Wks.** |
| Excess Reserves | 1431443 | 1366438 | 65005 | 1207727 | 1094946 | 1064070 |
| Borrowed Reserves | 19196 | 19926 | -730 | 24841 | 36026 | 51802 |
| Net Free/Borrowed Reserves | 1412247 | 1346512 | 65735 | 1182886 | 1058920 | 1012268 |

**MONEY SUPPLY**
*(One-Week Period; in Billions, Seasonally Adjusted)*

| | Recent Levels | | | Growth Rates Over the Last... | | |
|---|---|---|---|---|---|---|
| | **4/4/11** | **3/28/11** | **Change** | **3 Mos.** | **6 Mos.** | **12 Mos.** |
| M1 (Currency+demand deposits) | 1904.9 | 1903.8 | 1.1 | 17.1% | 13.8% | 13.2% |
| M2 (M1+savings+small time deposits) | 8923.7 | 8897.5 | 26.2 | 5.4% | 4.4% | 4.7% |

# Selected Yields

| | Recent (4/13/11) | 3 Months Ago (1/12/11) | Year Ago (4/14/10) |
|---|---|---|---|
| **TAXABLE** | | | |
| **Market Rates** | | | |
| Discount Rate | 0.75 | 0.75 | 0.75 |
| Federal Funds | 0.00-0.25 | 0.00-0.25 | 0.00-0.25 |
| Prime Rate | 3.25 | 3.25 | 3.25 |
| 30-day CP (A1/P1) | 0.23 | 0.27 | 0.20 |
| 3-month LIBOR | 0.28 | 0.30 | 0.30 |
| **Bank CDs** | | | |
| 6-month | 0.29 | 0.30 | 0.25 |
| 1-year | 0.47 | 0.48 | 0.43 |
| 5-year | 1.71 | 1.57 | 1.99 |
| **U.S. Treasury Securities** | | | |
| 3-month | 0.05 | 0.14 | 0.15 |
| 6-month | 0.10 | 0.17 | 0.23 |
| 1-year | 0.22 | 0.26 | 0.43 |
| 5-year | 2.17 | 1.98 | 2.60 |
| 10-year | 3.46 | 3.37 | 3.86 |
| 10-year (inflation-protected) | 0.84 | 0.93 | 1.51 |
| 30-year | 4.54 | 4.53 | 4.73 |
| 30-year Zero | 4.88 | 4.86 | 4.99 |




| | Recent (4/13/11) | 3 Months Ago (1/12/11) | Year Ago (4/14/10) |
|---|---|---|---|
| **Mortgage-Backed Securities** | | | |
| GNMA 5.5% | 2.97 | 2.61 | 2.52 |
| FHLMC 5.5% (Gold) | 3.32 | 3.14 | 1.83 |
| FNMA 5.5% | 3.22 | 2.99 | 2.14 |
| FNMA ARM | 2.62 | 2.72 | 2.76 |
| **Corporate Bonds** | | | |
| Financial (10-year) A | 4.72 | 4.80 | 5.22 |
| Industrial (25/30-year) A | 5.52 | 5.58 | 5.76 |
| Utility (25/30-year) A | 5.66 | 5.77 | 5.89 |
| Utility (25/30-year) Baa/BBB | 6.05 | 6.17 | 6.35 |
| **Foreign Bonds (10-Year)** | | | |
| Canada | 3.37 | 3.26 | 3.71 |
| Germany | 3.44 | 3.05 | 3.14 |
| Japan | 1.32 | 1.18 | 1.38 |
| United Kingdom | 3.71 | 3.64 | 4.03 |
| **Preferred Stocks** | | | |
| Utility A | 5.83 | 5.79 | 5.99 |
| Financial A | 6.44 | 6.03 | 6.60 |
| Financial Adjustable A | 5.49 | 5.49 | 5.49 |
| **TAX-EXEMPT** | | | |
| **Bond Buyer Indexes** | | | |
| 20-Bond Index (GOs) | 5.04 | 5.08 | 4.45 |
| 25-Bond Index (Revs) | 5.61 | 5.44 | 4.96 |
| **General Obligation Bonds (GOs)** | | | |
| 1-year Aaa | 0.34 | 0.41 | 0.43 |
| 1-year A | 1.20 | 1.28 | 1.18 |
| 5-year Aaa | 1.83 | 1.79 | 1.87 |
| 5-year A | 2.89 | 2.92 | 2.85 |
| 10-year Aaa | 3.46 | 3.38 | 3.30 |
| 10-year A | 4.62 | 4.38 | 4.27 |
| 25/30-year Aaa | 4.86 | 4.94 | 4.45 |
| 25/30-year A | 6.13 | 5.97 | 5.51 |
| **Revenue Bonds (Revs) (25/30-Year)** | | | |
| Education AA | 5.19 | 5.31 | 4.81 |
| Electric AA | 5.34 | 5.30 | 4.79 |
| Housing AA | 6.16 | 6.13 | 5.75 |
| Hospital AA | 5.65 | 5.43 | 5.15 |
| Toll Road Aaa | 5.33 | 5.35 | 4.78 |

# Federal Reserve Data

**BANK RESERVES**

*(Two-Week Period; in Millions, Not Seasonally Adjusted)*

| | Recent Levels | | | Average Levels Over the Last... | | |
|---|---|---|---|---|---|---|
| | **4/6/11** | **3/23/11** | **Change** | **12 Wks.** | **26 Wks.** | **52 Wks.** |
| Excess Reserves | 1431446 | 1366438 | 65008 | 1207727 | 1094946 | 1064070 |
| Borrowed Reserves | 19196 | 19926 | -730 | 24841 | 36026 | 51802 |
| Net Free/Borrowed Reserves | 1412250 | 1346512 | 65738 | 1182886 | 1058920 | 1012268 |

**MONEY SUPPLY**

*(One-Week Period; in Billions, Seasonally Adjusted)*

| | Recent Levels | | | Growth Rates Over the Last... | | |
|---|---|---|---|---|---|---|
| | **3/28/11** | **3/21/11** | **Change** | **3 Mos.** | **6 Mos.** | **12 Mos.** |
| M1 (Currency+demand deposits) | 1903.6 | 1891.8 | 11.8 | 14.4% | 14.8% | 11.2% |
| M2 (M1+savings+small time deposits) | 8897.3 | 8898.4 | -1.1 | 2.8% | 3.9% | 4.4% |

# ATTACHMENT D

# SOUTHWEST GAS NYSE-SWX

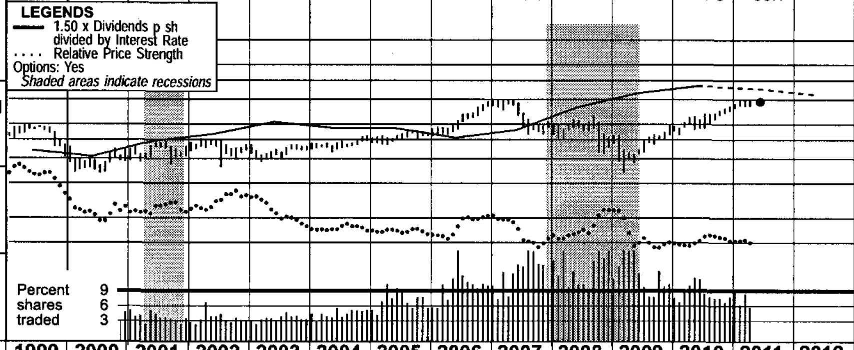
| RECENT PRICE | P/E RATIO | (Trailing / Median) | RELATIVE P/E RATIO | DIV'D YLD | |
|---|---|---|---|---|---|
| 39.06 | 16.6 | (Trailing: 16.8 / Median: 18.0) | 1.01 | 2.7% | VALUE LINE |

**TIMELINESS** 3 Lowered 8/20/10
**SAFETY** 3 Lowered 1/4/91
**TECHNICAL** 3 Raised 5/27/11
**BETA** .75 (1.00 = Market)

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 23.0 | 24.7 | 25.3 | 23.6 | 26.2 | 28.1 | 39.4 | 39.9 | 33.3 | 29.5 | 37.3 | 40.6 | |
| Low: | 16.9 | 18.6 | 18.1 | 19.3 | 21.5 | 23.5 | 26.0 | 26.5 | 21.1 | 17.1 | 26.3 | 36.1 | |

**Target Price Range**
2014 | 2015 | 2016

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




**2014-16 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 55 | (+40%) | *11%* |
| Low | 35 | (-10%) | *1%* |

**Insider Decisions**

| | J | A | S | O | N | D | J | F | M |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 2 |
| Options | 0 | 0 | 4 | 0 | 2 | 3 | 2 | 0 | 7 |
| to Sell | 0 | 0 | 4 | 0 | 3 | 3 | 2 | 0 | 9 |

**Institutional Decisions**

| | 3Q2010 | 4Q2010 | 1Q2011 |
|---|---|---|---|
| to Buy | 57 | 61 | 60 |
| to Sell | 76 | 75 | 80 |
| Hld's(000) | 32794 | 32710 | 33193 |

**% TOT. RETURN 5/11**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr. | 35.7 | 28.8 |
| 3 yr. | 38.5 | 38.8 |
| 5 yr. | 56.3 | 53.2 |

| 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | © VALUE LINE PUB. LLC | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23.03 | 24.09 | 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 | 40.14 | *37.85* | *38.00* | Revenues per sh | *48.00* |
| 2.65 | 3.00 | 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 | 6.45 | *6.55* | *6.90* | "Cash Flow" per sh | *7.80* |
| .10 | .25 | .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 | *2.35* | *2.50* | Earnings per sh A | *3.00* |
| .82 | .82 | .82 | .82 | .82 | .82 | .82 | .82 | .82 | .82 | .82 | .82 | .86 | .90 | .95 | 1.00 | *1.06* | *1.10* | Div'ds Decl'd per sh B■† | *1.25* |
| 6.79 | 8.19 | 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 | 4.72 | *4.85* | *5.00* | Cap'l Spending per sh | *6.00* |
| 14.55 | 14.20 | 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 | 25.59 | *27.95* | *29.15* | Book Value per sh | *34.00* |
| 24.47 | 26.73 | 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 | 45.60 | *46.50* | *48.00* | Common Shs Outst'g C | *50.00* |
| NMF | NMF | 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 | *Bold figures are* | | Avg Ann'l P/E Ratio | *15.0* |
| NMF | NMF | 1.39 | .69 | 1.20 | 1.04 | .97 | 1.09 | 1.09 | .76 | 1.10 | .86 | .92 | 1.22 | .81 | .89 | *Value Line* | | Relative P/E Ratio | *1.00* |
| 5.4% | 4.7% | 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% | *estimates* | | Avg Ann'l Div'd Yield | *2.8%* |

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | | 14-16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1396.7 | 1320.9 | 1231.0 | 1477.1 | 1714.3 | 2024.7 | 2152.1 | 2144.7 | 1893.8 | 1830.4 | *1760* | *1825* | Revenues ($mill) | *2400* |
| 37.2 | 38.6 | 38.5 | 58.9 | 48.1 | 80.5 | 83.2 | 61.0 | 87.5 | 104.0 | *110* | *120* | Net Profit ($mill) | *150* |
| 34.5% | 32.8% | 30.5% | 34.8% | 29.7% | 37.3% | 36.5% | 40.1% | 34.0% | 34.7% | *37.0%* | *35.0%* | Income Tax Rate | *35.0%* |
| 2.7% | 2.9% | 3.1% | 4.0% | 2.8% | 4.0% | 3.9% | 2.8% | 4.6% | 5.7% | *6.3%* | *6.6%* | Net Profit Margin | *6.3%* |
| 56.2% | 62.5% | 66.0% | 64.2% | 63.8% | 60.6% | 58.1% | 55.3% | 53.5% | 49.1% | *47.0%* | *46.0%* | Long-Term Debt Ratio | *45.0%* |
| 39.6% | 34.1% | 34.0% | 35.8% | 36.2% | 39.4% | 41.9% | 44.7% | 46.5% | 50.9% | *53.0%* | *54.0%* | Common Equity Ratio | *55.0%* |
| 1417.6 | 1748.3 | 1851.6 | 1968.6 | 2076.0 | 2287.8 | 2349.7 | 2323.3 | 2371.4 | 2292.0 | *2450* | *2600* | Total Capital ($mill) | *3100* |
| 1825.6 | 1979.5 | 2175.7 | 2336.0 | 2489.1 | 2668.1 | 2845.3 | 2983.3 | 3034.5 | 3072.4 | *3150* | *3250* | Net Plant ($mill) | *3600* |
| 5.1% | 4.3% | 4.2% | 5.0% | 4.3% | 5.5% | 5.5% | 4.5% | 5.4% | 6.2% | *6.0%* | *6.0%* | Return on Total Cap'l | *6.5%* |
| 6.0% | 5.9% | 6.1% | 8.3% | 6.4% | 8.9% | 8.5% | 5.9% | 7.9% | 8.9% | *8.5%* | *8.5%* | Return on Shr. Equity | *9.0%* |
| 6.6% | 6.5% | 6.1% | 8.3% | 6.4% | 8.9% | 8.5% | 5.9% | 7.9% | 8.9% | *8.5%* | *8.5%* | Return on Com Equity | *9.0%* |
| 1.9% | 1.9% | 1.7% | 4.3% | 2.2% | 5.2% | 4.8% | 2.1% | 4.1% | 5.0% | *4.5%* | *5.0%* | Retained to Com Eq | *5.0%* |
| 71% | 70% | 72% | 49% | 65% | 42% | 44% | 63% | 48% | 44% | *45%* | *44%* | All Div'ds to Net Prof | *42%* |

**CAPITAL STRUCTURE as of 3/31/11**
**Total Debt** $1122.7 mill. **Due in 5 Yrs** $275.0 mill.
**LT Debt** $1122.7 mill. **LT Interest** $72.0 mill.
(Total interest coverage: 3.2x) (48% of Cap'l)
**Leases, Uncapitalized** Annual rentals $5.0 mill.
**Pension Assets-12/10** $505.6 mill.
**Oblig.** $708.9 mill.
**Pfd Stock** None

**Common Stock** 45,848,692 shs.
as of 4/29/11

**MARKET CAP: $1.8 billion (Mid Cap)**

| CURRENT POSITION ($MILL.) | 2009 | 2010 | 3/31/11 |
|---|---|---|---|
| Cash Assets | 65.3 | 116.1 | 108.4 |
| Other | 352.3 | 329.8 | 281.9 |
| Current Assets | 417.6 | 445.9 | 390.3 |
| Accts Payable | 158.9 | 165.5 | 114.5 |
| Debt Due | 1.3 | 75.1 | -- |
| Other | 314.0 | 356.4 | 363.2 |
| Current Liab. | 474.2 | 597.0 | 477.7 |
| Fix. Chg. Cov. | 251% | 299% | 314% |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '08-'10 to '14-'16 |
|---|---|---|---|
| Revenues | 5.0% | 4.0% | *1.5%* |
| "Cash Flow" | 3.5% | 3.0% | *4.0%* |
| Earnings | 3.5% | 6.0% | *8.0%* |
| Dividends | 1.0% | 2.0% | *4.5%* |
| Book Value | 4.5% | 5.0% | *5.5%* |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2008 | 813.6 | 447.3 | 374.4 | 509.4 | 2144.7 |
| 2009 | 689.9 | 387.6 | 317.5 | 498.8 | 1893.8 |
| 2010 | 668.8 | 385.8 | 307.7 | 468.1 | 1830.4 |
| 2011 | 628.4 | *365* | *300* | *466.6* | *1760* |
| 2012 | *650* | *375* | *310* | *490* | *1825* |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2008 | 1.14 | d.06 | d.38 | .71 | 1.39 |
| 2009 | 1.12 | d.01 | d.18 | 1.01 | 1.94 |
| 2010 | 1.42 | d.02 | d.11 | .98 | 2.27 |
| 2011 | 1.48 | *Nil* | *d.12* | *.99* | *2.35* |
| 2012 | *1.50* | *Nil* | *d.10* | *1.10* | *2.50* |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2007 | .205 | .215 | .215 | .215 | .85 |
| 2008 | .215 | .225 | .225 | .225 | .89 |
| 2009 | .225 | .238 | .238 | .238 | .94 |
| 2010 | .238 | .250 | .250 | .250 | .99 |
| 2011 | .250 | .265 | | | |

**BUSINESS:** Southwest Gas Corporation is a regulated gas distributor serving approximately 1.8 million customers in sections of Arizona, Nevada, and California. Comprised of two business segments: natural gas operations and construction services. 2010 margin mix: residential and small commercial, 86%; large commercial and industrial, 4%; transportation, 10%. Total throughput: 2.2 billion therms. Sold PriMerit Bank, 7/96. Has 4,802 employees. Off. & Dir. own 1.7% of common stock; BlackRock Inc., 8.6%; T. Rowe Price Associates, Inc., 7.2%; GAMCO Investors, Inc., 7.0% (3/11 Proxy). Chairman: James J. Kropid. CEO: Jeffrey W. Shaw. Inc.: CA. Address: 5241 Spring Mountain Road, Las Vegas, Nevada 89193. Telephone: 702-876-7237. Internet: www.swgas.com.

**Shares of Southwest Gas have traded in a holding pattern over the past three months,** following a healthy rebound over the past couple of years. The company posted lower revenues but higher share earnings for the March period.

**Mixed performance will likely continue in the coming quarters.** The natural gas utility operations will likely continue to experience softness in demand, though this should be partly offset by rate relief in California and modest customer growth. Elsewhere, the construction services subsidiary ought to further benefit from an increase in maintenance and replacement work. Overall, lower revenues will likely be offset by a decline in the cost of gas sold, and we expect a moderate share-net improvement for full-year 2011. Earnings should continue to advance in 2012, assuming utility demand picks up.

**Efforts to procure rate relief ought to further benefit performance.** Southwest has filed a general rate case in Arizona, requesting an increase in revenues of $73.2 million (roughly 9.3%). The company is also seeking a decoupled rate structure and several programs promoting energy efficiency. A decision on this matter is expected by early 2012. Southwest's focus on rate relief and improved rate design is important, as the company depends on such approved revenue increases to help it cope with rising operating costs and to provide compensation for investments in infrastructure.

**Investors should be aware of several caveats.** Southwest Gas will likely incur greater operating expenses as it continues to expand going forward. Moreover, warmer-than-normal temperatures during the winter months can result in lower profitability. Insufficient, or lagging, rate relief can also hurt performance.

**These shares remain neutrally ranked for Timeliness.** Looking further out, we anticipate solid improvement in revenues and share earnings at the company out to 2014-2016. This appears to be partly reflected in the present quotation, and the shares currently trade within our Target Price Range. Moreover, Southwest's dividend yield is below average for its industry group. Investors can probably find more-attractive opportunities elsewhere.

*Michael Napoli, CFA* *June 10, 2011*

(A) Based on avg. shares outstand. thru. '96, then diluted. Excl. nonrec. gains (losses): '97, 16¢; '02, (10¢); '05, (11¢); '06, 7¢. Excl. loss from disc. ops.: '95, 75¢. Totals may not sum due to rounding. Next egs. report due early August. (B) Dividends historically paid early March, June, September, 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 | 65 |
| Earnings Predictability | 75 |

**SOUTHWEST GAS CORPORATION**

**DOCKET NO. G-01551A-10-0458**

**TABLE OF CONTENTS TO SCHEDULES WAR**

## WEIGHTED AVERAGE COST OF CAPITAL

| LINE NO. | DESCRIPTION | (A) DOLLAR AMOUNT | (B) RATIO | (C) COST RATE | (D) WEIGHTED COST RATE |
|---|---|---|---|---|---|
| 1 | Long-Term Debt | $ 607,500,000 | 49.85% | 7.35% | 3.66% |
| 2 | Common Equity | $ 611,263,103 | 50.15% | 9.00% | 4.51% |
| 3 | Total Capitalization | $ 1,218,763,103 | 100.00% | | |
| 4 | **WEIGHTED AVERAGE COST OF CAPITAL** | | | | **8.18%** |

REFERENCES:
COLUMN (A): TESTIMONY, WAR
COLUMN (B): TESTIMONY WAR
COLUMN (C): TESTIMONY WAR
COLUMN (D): COLUMN (B) x COLUMN (C), LINE 4; LINE 1 + LINE 2

SOUTHWEST GAS CORPORATION
TEST YEAR ENDED JUNE 30, 2010
COST OF CAPITAL SUMMARY



## COST OF COMMON EQUITY ESTIMATE

| LINE NO. | | | |
|---|---|---|---|
| 1 | **DCF METHODOLOGY** | | |
| 2 | DCF - SINGLE-STAGE CONSTANT GROWTH MODEL ESTIMATE | 9.22% | SCHEDULE WAR-2, COLUMN (C), LINE 13 |
| 3 | **CAPM METHODOLOGY** | | |
| 4 | CAPM - GEOMETRIC MEAN ESTIMATE | 4.87% | SCHEDULE WAR-7 PAGE 1, COLUMN (B), LINE |
| 5 | CAPM - ARITHMETIC MEAN ESTIMATE | 6.11% | SCHEDULE WAR-7 PAGE 2, COLUMN (B), LINE |
| 6 | **AVERAGE OF CAPM ESTIMATES** | **5.49%** | ( SUM OF LINES 6 THRU 9 ) ÷ 4 |
| 7 | **AVERAGE OF DCF AND CAPM ESTIMATES** | **7.35%** | ( SUM OF LINES 2 AND 6 ) ÷ 2 |
| 8 | **FINAL COST OF COMMON EQUITY ESTIMATE** | **9.00%** | TESTIMONY WAR |

**SOUTHWEST GAS CORPORATION**
**TEST YEAR ENDED JUNE 30, 2010**
**DCF COST OF EQUITY CAPITAL**

**DOCKET NO. G-01551A-10-0458**
**SCHEDULE WAR - 2**

| LINE NO. | STOCK SYMBOL | COMPANY | (A) DIVIDEND YIELD | + | (B) GROWTH RATE (g) | = | (C) DCF COST OF EQUITY CAPITAL |
|---|---|---|---|---|---|---|---|
| 1 | AGL | AGL RESOURCES, INC. | 4.46% | + | 5.70% | = | 10.16% |
| 2 | ATO | ATMOS ENERGY CORP. | 4.07% | + | 4.13% | = | 8.21% |
| 3 | LG | LACLEDE GROUP, INC. | 4.30% | + | 4.62% | = | 8.92% |
| 4 | NJR | NEW JERSEY RESOURCES CORPORATION | 3.27% | + | 6.61% | = | 9.88% |
| 5 | NWN | NORTHWEST NATURAL GAS CO. | 3.87% | + | 4.08% | = | 7.95% |
| 6 | PNY | PIEDMONT NATURAL GAS COMPANY | 3.76% | + | 3.76% | = | 7.51% |
| 7 | SJI | SOUTH JERSEY INDUSTIES, INC. | 2.63% | + | 10.69% | = | 13.32% |
| 8 | WGL | WGL HOLDINGS, INC. | 4.05% | + | 3.74% | = | 7.79% |
| 9 | **AVERAGE** | | | | | | **9.22%** |

REFERENCES:
COLUMN (A): SCHEDULE WAR - 3, COLUMN C
COLUMN (B): SCHEDULE WAR - 4, PAGE 1, COLUMN C
COLUMN (C): COLUMN (A) + COLUMN (B)

**SOUTHWEST GAS CORPORATION**
**TEST YEAR ENDED JUNE 30, 2010**
**DIVIDEND YIELD CALCULATION**

**DOCKET NO. G-01551A-10-0458**
**SCHEDULE WAR - 3**

| LINE NO. | STOCK SYMBOL | COMPANY | (A) ESTIMATED DIVIDEND (PER SHARE) | / | (B) AVERAGE STOCK PRICE (PER SHARE) | = | (C) DIVIDEND YIELD |
|---|---|---|---|---|---|---|---|
| 1 | AGL | AGL RESOURCES, INC. | $1.80 | / | $40.32 | = | 4.46% |
| 2 | ATO | ATMOS ENERGY CORP. | $1.36 | / | $33.38 | = | 4.07% |
| 3 | LG | LACLEDE GROUP, INC. | $1.62 | / | $37.65 | = | 4.30% |
| 4 | NJR | NEW JERSEY RESOURCES CORPORATION | $1.44 | / | $43.98 | = | 3.27% |
| 5 | NWN | NORTHWEST NATURAL GAS CO. | $1.74 | / | $44.97 | = | 3.87% |
| 6 | PNY | PIEDMONT NATURAL GAS COMPANY | $1.16 | / | $30.87 | = | 3.76% |
| 7 | SJI | SOUTH JERSEY INDUSTIES, INC. | $1.46 | / | $55.50 | = | 2.63% |
| 8 | WGL | WGL HOLDINGS, INC. | $1.56 | / | $38.55 | = | 4.05% |
| 9 | **AVERAGE** | | | | | | **3.80%** |

REFERENCES:
COLUMN (A): ESTIMATED 12 MONTH DIVIDEND REPORTED IN VALUE LINE INVESTMENT SURVEY - RATINGS & REPORTS DATED 06/10/2011
COLUMN (B): EIGHT WEEK AVERAGE OF ADJUSTED CLOSING PRICES FROM 04/11/2011 TO 06/03/2011 STOCK QUOTES OBTAINED THROUGH YAHOO! FINANCE WEB SITE - HISTORICAL QUOTES (http://finance.yahoo.com).
COLUMN (C): COLUMN (A) DIVIDED BY COLUMN (B)

NOTE:
CLOSING STOCK PRICES ARE ADJUSTED FOR DIVIDENDS AND STOCK SPLITS.

**SOUTHWEST GAS CORPORATION**
**TEST YEAR ENDED JUNE 30, 2010**
**DIVIDEND GROWTH RATE CALCULATION**



| LINE NO. | STOCK SYMBOL | COMPANY | (A) INTERNAL GROWTH ( br ) | + | (B) EXTERNAL GROWTH (sv) | = | (C) DIVIDEND GROWTH (g) |
|---|---|---|---|---|---|---|---|
| 1 | AGL | AGL RESOURCES, INC. | 5.50% | + | 0.20% | = | 5.70% |
| 2 | ATO | ATMOS ENERGY CORP. | 3.75% | + | 0.38% | = | 4.13% |
| 3 | LG | LACLEDE GROUP, INC. | 4.00% | + | 0.62% | = | 4.62% |
| 4 | NJR | NEW JERSEY RESOURCES CORPORATION | 6.60% | + | 0.01% | = | 6.61% |
| 5 | NWN | NORTHWEST NATURAL GAS CO. | 4.00% | + | 0.08% | = | 4.08% |
| 6 | PNY | PIEDMONT NATURAL GAS COMPANY | 3.75% | + | 0.01% | = | 3.76% |
| 7 | SJI | SOUTH JERSEY INDUSTIES, INC. | 7.80% | + | 2.89% | = | 10.69% |
| 8 | WGL | WGL HOLDINGS, INC. | 3.50% | + | 0.24% | = | 3.74% |
| 9 | **NATURAL GAS LDC AVERAGE** | | | | | | **5.42%** |

REFERENCES:
COLUMN (A): TESTIMONY, WAR
COLUMN (B): SCHEDULE WAR - 4, PAGE 2, COLUMN C
COLUMN (C): COLUMN (A) + COLUMN (B)

**SOUTHWEST GAS CORPORATION**
**TEST YEAR ENDED JUNE 30, 2010**
**DIVIDEND GROWTH RATE CALCULATION**



| LINE NO. | STOCK SYMBOL | COMPANY | (A) SHARE GROWTH | | (B) { [ ( ( M ÷ B ) + 1 ) / 2 ] - 1 } | | (C) EXTERNAL GROWTH ( sv ) |
|---|---|---|---|---|---|---|---|
| 1 | AGL | AGL RESOURCES, INC. | 0.65% | x | { [ ( ( 1.62 ) + 1 ) / 2 ] - 1 } | = | 0.20% |
| 2 | ATO | ATMOS ENERGY CORP. | 2.75% | x | { [ ( ( 1.28 ) + 1 ) / 2 ] - 1 } | = | 0.38% |
| 3 | LG | LACLEDE GROUP, INC. | 2.75% | x | { [ ( ( 1.45 ) + 1 ) / 2 ] - 1 } | = | 0.62% |
| 4 | NJR | NEW JERSEY RESOURCES CORPORATION | 0.01% | x | { [ ( ( 2.35 ) + 1 ) / 2 ] - 1 } | = | 0.01% |
| 5 | NWN | NORTHWEST NATURAL GAS CO. | 0.25% | x | { [ ( ( 1.66 ) + 1 ) / 2 ] - 1 } | = | 0.08% |
| 6 | PNY | PIEDMONT NATURAL GAS COMPANY | 0.01% | x | { [ ( ( 2.26 ) + 1 ) / 2 ] - 1 } | = | 0.01% |
| 7 | SJI | SOUTH JERSEY INDUSTIES, INC. | 3.50% | x | { [ ( ( 2.65 ) + 1 ) / 2 ] - 1 } | = | 2.89% |
| 8 | WGL | WGL HOLDINGS, INC. | 0.75% | x | { [ ( ( 1.64 ) + 1 ) / 2 ] - 1 } | = | 0.24% |
| 9 | **AVERAGE** | | | | | | **0.55%** |

REFERENCES:
COLUMN (A): TESTIMONY, WAR
COLUMN (B): VALUE LINE INVESTMENT SURVEY
- RATINGS & REPORTS DATED 06/10/2011
COLUMN (C): COLUMN (A) x COLUMN (B)

| LINE NO. | STOCK SYMBOL | NATURAL GAS LDC NAME | OPERATING PERIOD | (A) RETENTION RATIO (b) | x | (B) RETURN ON BOOK EQUITY (r) | = | (C) DIVIDEND GROWTH (g) | (D) BOOK VALUE ($/SHARE) | (E) SHARES OUTST. (MILLIONS) | (F) SHARE GROWTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | AGL | AGL RESOURCES, INC. | 2006 | 0.4559 | | 13.20% | | 6.02% | 20.71 | 77.70 | |
| 2 | | | 2007 | 0.3971 | | 12.70% | | 5.04% | 21.74 | 76.40 | |
| 3 | | | 2008 | 0.3801 | | 12.60% | | 4.79% | 21.48 | 76.90 | |
| 4 | | | 2009 | 0.4028 | | 12.50% | | 5.03% | 22.95 | 77.54 | |
| 5 | | | 2010 | 0.4133 | | 12.90% | | 5.33% | 23.24 | 78.00 | |
| 6 | | | GROWTH 2006 - 2010 | | | | | 5.24% | 5.50% | | 0.10% |
| 7 | | | 2011 | 0.4286 | | 12.50% | | 5.36% | | 78.50 | 0.64% |
| 8 | | | 2012 | 0.4424 | | 12.50% | | 5.53% | | 79.00 | 0.64% |
| 9 | | | 2014-16 | 0.4773 | | 12.00% | | 5.73% | 6.00% | 80.50 | 0.63% |
| 10 | | | | | | | | | | | |
| 11 | ATO | ATMOS ENERGY CORP. | 2006 | 0.3700 | | 9.80% | | 3.63% | 20.16 | 81.74 | |
| 12 | | | 2007 | 0.3402 | | 8.70% | | 2.96% | 22.01 | 89.33 | |
| 13 | | | 2008 | 0.3500 | | 8.80% | | 3.08% | 22.60 | 90.81 | |
| 14 | | | 2009 | 0.3299 | | 8.30% | | 2.74% | 23.52 | 92.55 | |
| 15 | | | 2010 | 0.3796 | | 9.20% | | 3.49% | 24.16 | 90.16 | |
| 16 | | | GROWTH 2006 - 2010 | | | | | 3.18% | 5.00% | | 2.48% |
| 17 | | | 2011 | 0.4087 | | 9.00% | | 3.68% | | 91.00 | 0.93% |
| 18 | | | 2012 | 0.4250 | | 8.50% | | 3.61% | | 92.00 | 1.02% |
| 19 | | | 2014-16 | 0.4630 | | 9.00% | | 4.17% | 4.50% | 105.00 | 3.09% |
| 20 | | | | | | | | | | | |
| 21 | LG | LACLEDE GROUP, INC. | 2006 | 0.4093 | | 12.50% | | 5.12% | 18.85 | 21.36 | |
| 22 | | | 2007 | 0.3723 | | 11.60% | | 4.32% | 19.79 | 21.65 | |
| 23 | | | 2008 | 0.4356 | | 11.80% | | 5.14% | 22.12 | 21.99 | |
| 24 | | | 2009 | 0.4760 | | 12.40% | | 5.90% | 23.32 | 22.17 | |
| 25 | | | 2010 | 0.3539 | | 10.10% | | 3.57% | 24.02 | 22.29 | |
| 26 | | | GROWTH 2006 - 2010 | | | | | 4.81% | 7.00% | | 1.07% |
| 27 | | | 2011 | 0.3429 | | 9.50% | | 3.26% | | 22.50 | 0.94% |
| 28 | | | 2012 | 0.3529 | | 9.50% | | 3.35% | | 23.00 | 1.58% |
| 29 | | | 2014-16 | 0.4098 | | 10.00% | | 4.10% | 5.00% | 26.00 | 3.13% |
| 30 | | | | | | | | | | | |
| 31 | NJR | NEW JERSEY RESOURCES CORPORATION | 2006 | 0.4866 | | 12.60% | | 6.13% | 15.00 | 41.44 | |
| 32 | | | 2007 | 0.3484 | | 10.10% | | 3.52% | 15.50 | 41.61 | |
| 33 | | | 2008 | 0.5889 | | 15.70% | | 9.25% | 17.28 | 42.06 | |
| 34 | | | 2009 | 0.4833 | | 14.60% | | 7.06% | 16.59 | 41.59 | |
| 35 | | | 2010 | 0.4472 | | 14.10% | | 6.30% | 17.53 | 41.36 | |
| 36 | | | GROWTH 2006 - 2010 | | | | | 6.45% | 10.00% | | -0.05% |
| 37 | | | 2011 | 0.4566 | | 14.50% | | 6.62% | | 41.00 | 0.00% |
| 38 | | | 2012 | 0.4807 | | 15.00% | | 7.21% | | 40.00 | 0.00% |
| 39 | | | 2014-16 | 0.5000 | | 13.50% | | 6.75% | 6.00% | 40.00 | 0.00% |

REFERENCES:
COLUMNS (A) & (B): VALUE LINE INVESTMENT SURVEY
- RATINGS & REPORTS DATED 06/10/2011
COLUMN (C): COLUMN (A) x COLUMN (B)
COLUMN (C): LINES 6, 16, 26 & 36, SIMPLE AVERAGE GROWTH, 2006 - 2010
COLUMN (D): VALUE LINE INVESTMENT SURVEY
COLUMN (D): LINES 6, 16, 26 & 36, COMPOUND GROWTH RATE
COLUMN (E): VALUE LINE INVESTMENT SURVEY
COLUMN (F): COMPOUND GROWTH RATES OF DATES SHOWN

SOUTHWEST GAS CORPORATION
TEST YEAR ENDED JUNE 30, 2010
DIVIDEND GROWTH COMPONENTS



| LINE NO. | STOCK SYMBOL | NATURAL GAS LDC NAME | OPERATING PERIOD | (A) RETENTION RATIO (b) | x | (B) RETURN ON BOOK EQUITY (r) | = | (C) DIVIDEND GROWTH (g) | (D) BOOK VALUE ($/SHARE) | (E) SHARES OUTST. (MILLIONS) | (F) SHARE GROWTH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | NWN | NORTHWEST NATURAL GAS CO. | 2006 | 0.4085 | | 10.90% | | 4.45% | 22.01 | 27.24 | |
| 2 | | | 2007 | 0.4783 | | 12.50% | | 5.98% | 22.52 | 26.41 | |
| 3 | | | 2008 | 0.4086 | | 10.90% | | 4.45% | 23.71 | 26.50 | |
| 4 | | | 2009 | 0.4346 | | 11.40% | | 4.95% | 24.88 | 26.53 | |
| 5 | | | 2010 | 0.3846 | | 10.50% | | 4.04% | 25.95 | 26.67 | |
| 6 | | | GROWTH 2006 - 2010 | | | | | 4.78% | 4.00% | | -0.53% |
| 7 | | | 2011 | 0.2596 | | 9.00% | | 2.34% | | 26.75 | 0.30% |
| 8 | | | 2012 | 0.3643 | | 9.50% | | 3.46% | | 26.80 | 0.24% |
| 9 | | | 2014-16 | 0.4412 | | 10.00% | | 4.41% | 6.50% | 26.95 | 0.21% |
| 10 | | | | | | | | | | | |
| 11 | PNY | PIEDMONT NATURAL GAS COMPANY | 2006 | 0.2578 | | 11.00% | | 2.84% | 11.83 | 74.61 | |
| 12 | | | 2007 | 0.2929 | | 11.90% | | 3.49% | 11.99 | 73.23 | |
| 13 | | | 2008 | 0.3087 | | 12.40% | | 3.83% | 12.11 | 73.26 | |
| 14 | | | 2009 | 0.3593 | | 13.20% | | 4.74% | 12.67 | 73.27 | |
| 15 | | | 2010 | 0.2839 | | 11.60% | | 3.29% | 13.35 | 72.28 | |
| 16 | | | GROWTH 2006 - 2010 | | | | | 3.64% | 3.50% | | -0.79% |
| 17 | | | 2011 | 0.2813 | | 12.00% | | 3.38% | | 71.50 | -1.08% |
| 18 | | | 2012 | 0.3000 | | 12.00% | | 3.60% | | 71.00 | -0.89% |
| 19 | | | 2014-16 | 0.3105 | | 12.50% | | 3.88% | 3.00% | 68.00 | -1.21% |
| 20 | | | | | | | | | | | |
| 21 | SJI | SOUTH JERSEY INDUSTIES, INC. | 2006 | 0.6260 | | 16.30% | | 10.20% | 15.11 | 29.33 | |
| 22 | | | 2007 | 0.5167 | | 12.80% | | 6.61% | 16.25 | 29.61 | |
| 23 | | | 2008 | 0.5110 | | 13.10% | | 6.69% | 17.33 | 29.73 | |
| 24 | | | 2009 | 0.4874 | | 13.10% | | 6.38% | 18.24 | 29.80 | |
| 25 | | | 2010 | 0.4963 | | 14.20% | | 7.05% | 19.08 | 29.87 | |
| 26 | | | GROWTH 2006 - 2010 | | | | | 7.39% | 8.00% | | 0.46% |
| 27 | | | 2011 | 0.5148 | | 14.50% | | 7.46% | | 31.00 | 3.78% |
| 28 | | | 2012 | 0.5224 | | 15.00% | | 7.84% | | 32.00 | 3.50% |
| 29 | | | 2014-16 | 0.5122 | | 15.50% | | 7.94% | 6.50% | 34.00 | 2.62% |
| 30 | | | | | | | | | | | |
| 31 | WGL | WGL HOLDINGS, INC. | 2006 | 0.3041 | | 10.30% | | 3.13% | 18.86 | 48.89 | |
| 32 | | | 2007 | 0.3445 | | 10.30% | | 3.55% | 19.83 | 49.45 | |
| 33 | | | 2008 | 0.4221 | | 11.60% | | 4.90% | 20.99 | 49.92 | |
| 34 | | | 2009 | 0.4190 | | 11.60% | | 4.86% | 21.89 | 50.14 | |
| 35 | | | 2010 | 0.3392 | | 9.90% | | 3.36% | 22.82 | 50.54 | |
| 36 | | | GROWTH 2006 - 2010 | | | | | 7.39% | 8.00% | | 0.83% |
| 37 | | | 2011 | 0.2619 | | 9.00% | | 2.36% | | 51.00 | 0.91% |
| 38 | | | 2012 | 0.3234 | | 9.50% | | 3.07% | | 51.00 | 0.45% |
| 39 | | | 2014-16 | 0.3547 | | 10.00% | | 3.55% | 3.50% | 52.00 | 0.57% |

REFERENCES:
COLUMNS (A) & (B): VALUE LINE INVESTMENT SURVEY
- RATINGS & REPORTS DATED 06/10/2011
COLUMN (C): COLUMN (A) x COLUMN (B)
COLUMN (C): LINES 6, 16, 26 & 36, SIMPLE AVERAGE GROWTH, 2006 - 2010

COLUMN (D): VALUE LINE INVESTMENT SURVEY
COLUMN (D): LINES 6, 16, 26 & 36, COMPOUND GROWTH RATE
COLUMN (E): VALUE LINE INVESTMENT SURVEY
COLUMN (F): COMPOUND GROWTH RATES OF DATES SHOWN

**SOUTHWEST GAS CORPORATION**
**TEST YEAR ENDED JUNE 30, 2010**
**GROWTH RATE COMPARISON**

**DOCKET NO. G-01551A-10-0458**
**SCHEDULE WAR - 6**

**NATURAL GAS LDC SAMPLE:**

| | | (A) | (B) | (C) | | | (D) | | | (E) | (F) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ZACKS | VALUE LINE PROJECTED | | | VALUE LINE HISTORIC | | | VALUE LINE & | 5 - YEAR COMPOUND HISTORY | | |
| LINE NO. | STOCK SYMBOL | ( br ) + ( sv ) | EPS | EPS | DPS | BVPS | EPS | DPS | BVPS | ZACKS AVGS. | EPS | DPS | BVPS |
| 1 | AGL | 5.70% | 4.00% | 5.00% | 30.00% | 6.00% | 4.50% | 7.50% | 5.50% | 8.93% | 2.48% | 4.43% | 2.92% |
| 2 | ATO | 4.13% | 4.50% | 5.00% | 2.00% | 4.50% | 4.00% | 1.50% | 5.00% | 3.79% | 1.94% | 1.55% | 4.63% |
| 3 | LG | 4.62% | 3.00% | 2.50% | 2.50% | 5.00% | 7.50% | 2.50% | 7.00% | 4.29% | 0.63% | 2.91% | 6.25% |
| 4 | NJR | 6.61% | 4.00% | 4.00% | 4.50% | 6.00% | 8.50% | 7.50% | 10.00% | 6.36% | 7.10% | 9.10% | 3.97% |
| 5 | NWN | 4.08% | 4.60% | 4.50% | 3.50% | 6.50% | 9.50% | 3.50% | 4.00% | 5.16% | 3.82% | 4.85% | 4.20% |
| 6 | PNY | 3.76% | 4.80% | 3.00% | 3.50% | 3.00% | 5.00% | 4.50% | 3.50% | 3.90% | 4.90% | 3.97% | 3.07% |
| 7 | SJI | 10.69% | - | 9.00% | 8.50% | 6.50% | 9.50% | 8.50% | 8.00% | 8.33% | 2.35% | 10.27% | 6.01% |
| 8 | WGL | 3.74% | 5.30% | 1.50% | 2.50% | 3.50% | 2.50% | 2.50% | 5.00% | 3.26% | 4.01% | 2.67% | 4.88% |
| 9 | | | | 4.31% | 7.13% | 5.13% | 6.38% | 4.75% | 6.00% | | 3.40% | 4.97% | 4.49% |
| 10 | AVERAGES | 5.42% | 4.31% | | 5.52% | | | 5.71% | | 5.50% | | 4.29% | |

REFERENCES:
COLUMN (A): SCHEDULE WAR - 4, PAGE 1, COLUMN C
COLUMN (B): ZACKS INVESTMENT RESEARCH (www.zacks.com)
COLUMN (C): VALUE LINE INVESTMENT SURVEY - RATINGS & REPORTS DATED 06/10/2011
COLUMN (D): VALUE LINE INVESTMENT SURVEY - RATINGS & REPORTS DATED 06/10/2011
COLUMN (E): SIMPLE AVERAGE OF COLUMNS (B) THRU (D) LINES 1 THRU 9
COLUMN (F): 5-YEAR ANNUAL GROWTH RATE CALCULATED WITH DATA COMPILED FROM VALUE LINE INVESTMENT SURVEY - RATINGS & REPORTS DATED 06/10/2011

BASED ON A GEOMETRIC MEAN:

| LINE NO. | STOCK SYMBOL | k | = | $r_f$ | + [ | (A) ß | x ( | $r_m$ | - | $r_f$ | ) ] | = | (B) EXPECTED RETURN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | AGL | k | = | 1.91% | + [ | 0.75 | x ( | 9.90% | - | 5.40% | ) ] | = | 5.29% |
| 2 | ATO | k | = | 1.91% | + [ | 0.70 | x ( | 9.90% | - | 5.40% | ) ] | = | 5.06% |
| 3 | LG | k | = | 1.91% | + [ | 0.60 | x ( | 9.90% | - | 5.40% | ) ] | = | 4.61% |
| 4 | NJR | k | = | 1.91% | + [ | 0.65 | x ( | 9.90% | - | 5.40% | ) ] | = | 4.84% |
| 5 | NWN | k | = | 1.91% | + [ | 0.60 | x ( | 9.90% | - | 5.40% | ) ] | = | 4.61% |
| 6 | PNY | k | = | 1.91% | + [ | 0.65 | x ( | 9.90% | - | 5.40% | ) ] | = | 4.84% |
| 7 | SJI | k | = | 1.91% | + [ | 0.65 | x ( | 9.90% | - | 5.40% | ) ] | = | 4.84% |
| 8 | WGL | k | = | 1.91% | + [ | 0.65 | x ( | 9.90% | - | 5.40% | ) ] | = | 4.84% |
| 9 | **NATURAL GAS LDC AVERAGE** | | | | | 0.66 | | | | | | | 4.87% |

REFERENCES:
COLUMN (A): SHARPE LITNER CAPITAL ASSET PRICING MODEL ("CAPM") FORMULA

$$k = r_f + [\,ß\,(r_m - r_f)\,]$$

WHERE:
$k$ = THE EXPECTED RETURN ON A GIVEN SECURITY
$r_f$ = RATE OF RETURN ON A RISK FREE ASSET PROXY (a)
ß = THE BETA COEFFICIENT OF A GIVEN SECURITY
$r_m$ = PROXY FOR THE MARKET RATE OF RETURN (b)

COLUMN (B): EXPECTED RATE OF RETURN USING THE CAPM FORMULA

NOTES

(a) AN 8-WEEK AVERAGE OF THE YIELD ON A 5-YEAR U.S. TREASURY INSTRUMENT THAT APPEARED IN VALUE LINE INVESTMENT SURVEY'S "SELECTION & OPINIONS" PUBLICATION FROM 04/22/2011 THROUGH 06/10/2011 WAS USED AS A RISK FREE RATE OF RETURN.

(b) THE RISK PREMIUM (RM - RF) USED THE GEOMETRIC MEAN FOR S&P 500 TOTAL RETURNS OVER THE 1926 - 2010 PERIOD MINUS TOTAL RETURNS ON INTERMEDIATE TREASURIES DURING THE SAME PERI THE DATA WAS OBTAINED FROM MORNINGSTAR'S STOCKS, BONDS, BILLS AND INFLATION: 2011 YEARBOOK.

BASED ON AN ARITHMETIC MEAN:

| LINE NO. | STOCK SYMBOL | k | = | $r_f$ | + [ | (A) ß | x ( | $r_m$ | - | $r_f$ | ) ] | = | (B) EXPECTED RETURN |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | AGL | k | = | 1.91% | + [ | 0.75 | x ( | 11.90% | - | 5.50% | ) ] | = | 6.71% |
| 2 | ATO | k | = | 1.91% | + [ | 0.70 | x ( | 11.90% | - | 5.50% | ) ] | = | 6.39% |
| 3 | LG | k | = | 1.91% | + [ | 0.60 | x ( | 11.90% | - | 5.50% | ) ] | = | 5.75% |
| 4 | NJR | k | = | 1.91% | + [ | 0.65 | x ( | 11.90% | - | 5.50% | ) ] | = | 6.07% |
| 5 | NWN | k | = | 1.91% | + [ | 0.60 | x ( | 11.90% | - | 5.50% | ) ] | = | 5.75% |
| 6 | PNY | k | = | 1.91% | + [ | 0.65 | x ( | 11.90% | - | 5.50% | ) ] | = | 6.07% |
| 7 | SJI | k | = | 1.91% | + [ | 0.65 | x ( | 11.90% | - | 5.50% | ) ] | = | 6.07% |
| 8 | WGL | k | = | 1.91% | + [ | 0.65 | x ( | 11.90% | - | 5.50% | ) ] | = | 6.07% |
| 9 | **NATURAL GAS LDC AVERAGE** | | | | | 0.66 | | | | | | | 6.11% |

REFERENCES:
COLUMN (A): SHARPE LITNER CAPITAL ASSET PRICING MODEL ("CAPM") FORMULA

$k = r_f + [ ß (r_m - r_f) ]$

WHERE: k = THE EXPECTED RETURN ON A GIVEN SECURITY
$r_f$ = RATE OF RETURN ON A RISK FREE ASSET PROXY (a)
ß = THE BETA COEFFICIENT OF A GIVEN SECURITY
$r_m$ = PROXY FOR THE MARKET RATE OF RETURN (b)

COLUMN (B): EXPECTED RATE OF RETURN USING THE CAPM FORMULA

NOTES

(a) AN 8-WEEK AVERAGE OF THE YIELD ON A 5-YEAR U.S. TREASURY INSTRUMENT THAT APPEARED IN VALUE LINE INVESTMENT SURVEY'S "SELECTION & OPINIONS" PUBLICATION FROM 04/22/2011 THROUGH 06/10/2011 WAS USED AS A RISK FREE RATE OF RETURN.

(b) THE RISK PREMIUM (RM - RF) USED THE ARITHMETIC MEAN FOR S&P 500 TOTAL RETURNS OVER THE 1926 - 2010 PERIOD MINUS TOTAL RETURNS ON INTERMEDIATE TREASURIES DURING THE SAM THE DATA WAS OBTAINED FROM MORNINGSTAR'S STOCKS, BONDS, BILLS AND INFLATION: 2011 YEARBOO

SOUTHWEST GAS CORPORATION
TEST YEAR ENDED JUNE 30, 2010
ECONOMIC INDICATORS - 1990 TO PRESENT

DOCKET NO. G-01551A-10-0458
SCHEDULE WAR - 8

| LINE NO. | YEAR | (A) CHANGE IN CPI | (B) CHANGE IN GDP (1996 $) | (C) PRIME RATE | (D) FED. DISC. RATE | (E) FED. FUNDS RATE | (F) 91-DAY T-BILLS | (G) 30-YR T-BONDS | (H) A-RATED UTIL. BOND YIELD | (I) Baa-RATED UTIL. BOND YIELD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1990 | 5.39% | 1.90% | 10.01% | 6.98% | 8.10% | 7.50% | 7.49% | 9.86% | 10.06% |
| 2 | 1991 | 4.25% | -0.20% | 8.46% | 5.45% | 5.69% | 5.38% | 5.38% | 9.36% | 9.55% |
| 3 | 1992 | 3.03% | 3.30% | 6.25% | 3.25% | 3.52% | 3.43% | 3.43% | 8.69% | 8.86% |
| 4 | 1993 | 2.96% | 2.70% | 6.00% | 3.00% | 3.02% | 3.00% | 3.00% | 7.59% | 7.91% |
| 5 | 1994 | 2.61% | 4.00% | 7.14% | 3.60% | 4.21% | 4.25% | 4.25% | 8.31% | 8.63% |
| 6 | 1995 | 2.81% | 2.50% | 8.83% | 5.21% | 5.83% | 5.49% | 5.49% | 7.89% | 8.29% |
| 7 | 1996 | 2.93% | 3.70% | 8.27% | 5.02% | 5.30% | 5.01% | 5.01% | 7.75% | 8.17% |
| 8 | 1997 | 2.34% | 4.50% | 8.44% | 5.00% | 5.46% | 5.06% | 5.06% | 7.60% | 8.12% |
| 9 | 1998 | 1.55% | 4.20% | 8.35% | 4.92% | 5.35% | 4.78% | 4.78% | 7.04% | 7.27% |
| 10 | 1999 | 2.19% | 4.50% | 7.99% | 4.62% | 4.97% | 4.64% | 4.64% | 7.62% | 7.88% |
| 11 | 2000 | 3.38% | 3.70% | 9.23% | 5.73% | 6.24% | 5.82% | 5.82% | 8.24% | 8.36% |
| 12 | 2001 | 2.83% | 0.80% | 6.92% | 3.41% | 3.88% | 3.40% | 5.95% | 7.59% | 8.02% |
| 13 | 2002 | 1.59% | 1.60% | 4.67% | 1.17% | 1.67% | 1.61% | 5.38% | 7.41% | 7.98% |
| 14 | 2003 | 2.27% | 2.50% | 4.12% | 2.03% | 1.13% | 1.01% | 4.92% | 6.18% | 6.64% |
| 15 | 2004 | 2.68% | 3.60% | 4.34% | 2.34% | 1.35% | 1.37% | 5.03% | 5.77% | 6.20% |
| 16 | 2005 | 3.39% | 2.90% | 6.16% | 4.19% | 3.22% | 3.15% | 4.57% | 5.38% | 5.78% |
| 17 | 2006 | 3.24% | 2.80% | 7.97% | 5.96% | 4.97% | 4.73% | 4.91% | 5.94% | 6.30% |
| 18 | 2007 | 2.85% | 2.90% | 8.05% | 5.86% | 5.02% | 4.36% | 4.84% | 6.07% | 6.24% |
| 19 | 2008 | 3.84% | -6.80% | 5.09% | 2.39% | 1.92% | 1.37% | 4.28% | 6.34% | 6.64% |
| 20 | 2009 | -0.36% | 5.00% | 3.25% | 0.50% | 0.00% - 0.25% | 0.15% | 4.08% | 5.84% | 6.87% |
| 21 | 2010 | 1.64% | 2.80% | 3.25% | 0.72% | 0.00% - 0.25% | 0.13% | 4.25% | 5.50% | 5.98% |
| 22 | CURRENT | 3.20% | 1.80% | 3.25% | 0.75% | 0.00% - 0.25% | 0.04% | 4.51% | 5.14% | 5.69% |

REFERENCES:
COLUMN (A): 1990 - CURRENT, U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS WEB SITE
COLUMN (B): 1990 - CURRENT, U.S. DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS WEB SITE
COLUMN (C) THROUGH (G): 1990 - 2003, FEDERAL RESERVE BANK OF ST. LOUIS WEB SITE
COLUMN (C) THROUGH (D): CURRENT, THE VALUE LINE INVESTMENT SURVEY, DATED 06/10/2011
COLUMN (F) THROUGH (I): CURRENT, THE VALUE LINE INVESTMENT SURVEY, DATED 06/10/2011
COLUMN (H) THROUGH (I): 1990 - 2000, MOODY'S PUBLIC UTILITY REPORTS
COLUMN (H) THROUGH (I): 2001, MERGENT 2002 PUBLIC UTILITY MANUAL
COLUMN (H) THROUGH (I): 2003 MERGENT NEWS REPORTS

SOUTHWEST GAS CORPORATION
TEST YEAR ENDED JUNE 30, 2010
CAPITAL STRUCTURES OF SAMPLE COMPANIES

DOCKET NO. G-01551A-10-0458
SCHEDULE WAR - 9

## AVERAGE CAPITAL STRUCTURES OF SAMPLE NATURAL GAS COMPANIES

| LINE NO. | | AGL | PCT. | ATO | PCT. | LG | PCT. | NJR | PCT. | NWN | PCT. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | DEBT | $ 1,673.0 | 47.7% | $ 1,809.6 | 45.4% | $ 364.3 | 47.0% | $ 428.9 | 37.2% | $ 591.7 | 46.1% |
| 4 | | | | | | | | | | | |
| 5 | PREFERRED STOCK | 0.0 | 0.0% | 0.0 | 0.0% | 0.0 | 0.0% | 0.0 | 0.0% | 0.0 | 0.0% |
| 6 | | | | | | | | | | | |
| 7 | COMMON EQUITY | 1,836.0 | 52.3% | 2,178.3 | 54.6% | 411.3 | 53.0% | 725.5 | 62.8% | 693.1 | 53.9% |
| 8 | | | | | | | | | | | |
| 9 | TOTALS | $ 3,509.0 | 100% | $ 3,987.9 | 100% | $ 775.6 | 100% | $ 1,154.4 | 100% | $ 1,284.8 | 100% |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |

| LINE NO. | | PNY | PCT. | SJI | PCT. | WGL | PCT. | NATURAL GAS LDC AVERAGE | PCT. |
|---|---|---|---|---|---|---|---|---|---|
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | | | | |
| 15 | DEBT | $ 671.9 | 41.0% | $ 340.0 | 37.4% | $ 592.9 | 33.4% | $ 809.0 | 43.1% |
| 16 | | | | | | | | | |
| 17 | PREFERRED STOCK | 0.0 | 0.0% | 0.0 | 0.0% | 28.2 | 1.6% | $ 3.5 | 0.2% |
| 18 | | | | | | | | | |
| 19 | COMMON EQUITY | 964.9 | 59.0% | 570.1 | 62.6% | 1,153.4 | 65.0% | 1,066.6 | 56.8% |
| 20 | | | | | | | | | |
| 21 | TOTALS | $ 1,636.9 | 100% | $ 910.1 | 100% | $1,774.4 | 100% | $ 1,879.1 | 100% |

REFERENCE:
MOST RECENT SEC 10-K FILINGS OR ANNUAL REPORTS