Exhibit No.:	
Issue:	Common Equity Cost Rate
Witness:	Hanley
Exhibit:	Direct Testimony
Sponsoring Party:	Associated Natural Gas
Case No.:	GR-97-272

ASSOCIATED NATURAL GAS
A DIVISION OF ARKANSAS WESTERN GAS COMPANY

CASE NO. GR-97-272

DIRECT TESTIMONY

OF

FRANK J. HANLEY, PRESIDENT
AUS CONSULTANTS - UTILITY SERVICES

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I. INTRODUCTION

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

A. My name is Frank J. Hanley and I am President of AUS Consultants - Utility Services. My business address is 155 Gaither Drive, P.O. Box 1050, Moorestown, New Jersey 08057.

Q. Please summarize your educational background and professional experience.

A. I have testified as an expert witness on rate of return and related financial issues before 30 state public utility commissions and the Federal Energy Regulatory Commission. I have also testified before local and county regulatory bodies, an arbitration panel, a U.S. Bankruptcy Court, the U.S. Tax Court and a state district court. I have appeared on behalf of investor-owned companies, municipalities, and state public utility commissions. The details of these appearances, as well as my educational background, are shown in Appendix A supplementing this testimony.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide evidence on behalf of Associated Natural Gas Company (ANG or the Company), a division of Arkansas Western Gas Company (AWG) in the form of a study of the common equity cost rate which ANG should be afforded an opportunity to earn on the common equity portion of its Missouri jurisdictional rate base.

Q. What is your recommended common equity cost rate?

A. It is 11.70% applicable to ANG's proposed 45.25% ratemaking common equity (which is a 52.73% common equity ratio based solely on investor-provided capital). My associate, Pauline M. Ahern provides testimony that these ratios are reasonable; and that either set is suitable to use to establish an overall cost of capital.

Q. Have you prepared schedules which support your recommended common equity cost rate?

A. Yes, I have. They have been marked for identification as SCHEDULES FJH-1 through FJH-16.

II. SUMMARY

Q. Please summarize the overall cost of capital and fair rate of return resulting from ANG's proposed ratemaking capital structure, embedded cost rates, customer deposits cost rates, and your recommended common equity cost rate of 11.70%.

A. The results of the study are as follows:

	Capital Structure	Cost Rate	Weighted Cost Rate
Long-Term Debt			
Intercompany Notes	40.08%		
Accumulated Deferred Investment Tax Credits	0.50		
Total Long-Term Debt	40.58	7.97%	3.23%
Customer Deposits			
Arkansas	2.14	5.50	0.12
Missouri	0.48	5.50	0.03
Total Customer Deposits	2.62		0.15
Total Long-Term Debt and Customer Deposits	43.20		3.38
Common Equity			
Common Stock and Retained Earnings	44.69		
Accumulated Deferred Investment Tax Credits	0.56		
Total Common Equity	45.25	11.70	5.30
Accumulated Deferred Income Taxes	11.48	0.00	0.00
Other Interest Bearing Liabilities	0.07	8.00	0.01
	100.00		8.69%

The overall cost of capital of 8.69% is based upon ANG's proposed capital structure including cost-free capital and customer deposits for the test year ended July 31, 1996 (Adjusted) and related ratios. The capital structure consists of 40.08% long-term debt, 2.62% customer deposits, 45.25% common equity, 11.48% accumulated deferred income taxes, and 0.07% other interest bearing liabilities. The weighted overall cost of capital shown above is based upon the capital structure ratios shown on SCHEDULE FJH-1, page 1. The long-term debt cost rate of 7.97%, customer deposits cost rates of 5.50% for both Arkansas and Missouri as well as the 8.00% cost rate of other interest bearing liabilities were provided by ANG.

For information purposes, on page 2 of SCHEDULE FJH-1, I have shown the overall cost of capital of 9.94% based upon total investor-provided capital. It consists of 47.27% long-term debt and 52.73% common equity.

The common equity cost rate of 11.70% is my recommendation, the basis of which is summarized on SCHEDULE FJH-1, page 3. As explained in more detail below, my recommendation reflects current capital market conditions and results from the application of three well-tested market-based cost of common equity models, the Discounted Cash Flow (DCF) approach, the Risk Premium (RP) Model, and the Capital Asset Pricing Model (CAPM).

Q. Please summarize your testimony.

A. ANG is a division of AWG and AWG is a wholly-owned subsidiary of Southwestern Energy Company (Southwestern). When a company such as AWG has common stock which is not traded, it is common to observe the market-based common equity cost rates of similar risk companies (proxy group or groups) for insight into a recommended common equity cost rate for use in a cost of capital determination. For reasons discussed infra at pp. 12-13, Southwestern is not a suitable proxy for determining the common equity risk rate of a local gas distribution company (LDC), specifically ANG. Therefore, it is appropriate to look to proxy groups of similar risk LDCs whose common stocks are actively traded for insight into an appropriate common equity cost rate applicable to ANG. The use of other firms of comparable risk as proxies is consistent with the principles of fair rate of return established in the Hope[1] and Bluefield[2] cases and adds reliability to the exercise of informed expert judgment in arriving at a recommendation of common equity cost rate. Consequently, I have evaluated the market data of two proxy groups of LDCs relatively comparable in risk to ANG, except for the fact that these companies, on average, are much larger than ANG. As will be discussed infra, all else equal except for size, smaller companies are more business risky.

In formulating my recommended common equity cost rate of 11.70% applicable to ANG, I reviewed the results of the application of three different cost of common equity models, namely, the DCF, the RP, and the CAPM for two proxy groups of LDCs. I applied these three cost of common equity models as principal tools in formulating my recommendation of common equity cost rate because no single model is so inherently precise that it can be relied upon solely, to the exclusion of other theoretically sound models. All of the models are based on the Efficient Market Hypothesis (EMH) and therefore have application problems associated with them. None should be relied upon exclusively to estimate investors' required rate of return on common equity investment.

Although the DCF model is widely used by regulatory commissions, the majority of commissions have not seen fit to rely exclusively on any single model in reaching a determination of common equity cost rate (see SCHEDULE FJH-6, page 2). In addition, the prudence of using more than one cost of common equity model is affirmed by the financial literature.

The DCF model is no panacea because, for a regulated utility, its application

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

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

usually results in an overstatement or understatement of investors' required rate of return when the market value of its common stock is significantly less or greater than its book value, respectively. Investors expect to achieve their required rate of return based on dividends received and appreciation in market price. My testimony shows that market prices are influenced greatly by factors other than earnings per share (EPS) and dividends per share (DPS). Thus, the necessary use of accounting proxies for growth in the DCF model, such as EPS, DPS, or their derivative, internal growth, reflects only a portion of the full growth (price appreciation) expected by investors. I demonstrate hypothetically on SCHEDULE FJH-8 how the application of a market-based DCF cost rate to a substantially lower book value deprives a utility of a reasonable opportunity to experience the rate of growth expected by investors. This occurs because the growth estimate used in the application of the DCF model is based on EPS or some derivative thereof; and such proxies for growth do not reflect the full rate of growth anticipated by investors. This is true because market prices reflect other growth factors not accounted for in the standard regulatory version of the DCF model such as an increase in the market value per share due to expected increases in price/earnings multiples and less obvious factors included in the long-range goals of investors. For these reasons, sole reliance on the DCF model should be avoided. State commissions in Indiana, Iowa and Hawaii have explicitly recognized the tendency of the DCF model to understate the common equity cost rate.

In my study, I apply three academically-accepted and widely-used cost of common equity models as principal tools in reaching my recommendation because each provides useful data. None is theoretically superior to the others or so precise as to justify sole reliance on it.

The results derived from each of the three models are as follows:

	CAPM		RP	DCF Growth	
	Traditional	Empirical		Single-Stage	Two-Stage
The Proxy Group of Seven LDCs	10.6%	11.3%	11.8%	10.3%	10.2%
The Proxy Group of Twenty Value Line LDCs	10.9%	11.6%	11.9%	10.4%	9.8%

After an adjustment to the proxy groups' cost rate results to reflect ANG's greater relative investment risk which will be discussed Infra, I conclude that a common equity cost rate of 11.70% is reasoanble. I base my recommendation on the market-based cost rates of both proxy groups, particularly the RP and CAPM results. For the reasons explained Infra, ANG has greater investment risk than either of the two groups of proxy companies which must be reflected. My recommendation also takes account of the fact that the DCF model understates investors' required return rate when market value is above book value (as is the case for both proxy groups of LDCs). In addition to the DCF model's likely understatement of common equity cost rate, it is always important to avoid sole reliance on a single cost of common equity model, a point made clear by the financial literature. As a result, I avoid sole reliance on a single cost of equity model. I determine a common equity cost rate of 11.30% based on the proxy groups; however, this cost rate understates the cost rate to ANG because of ANG's greater investment risk vis-a-vis the proxy groups. After an adjustment of 0.4% to reflect ANG's greater investment risk (vis-a-vis the proxy groups), my recommended common equity cost rate is 11.70% which is summarized on SCHEDULE FJH-1, page 3.

An interest coverage test and my comparable earnings analyses confirm that an

11.70% common equity cost rate applicable to ANG is reasonable.

III. GENERAL PRINCIPLES

Q. What general principles have you considered in arriving at your recommended common equity cost rate of 11.70%?

A. In unregulated industries, competition in the marketplace is the principal determinant in establishing the price of a product or service. In the case of regulated public utilities, regulation must act as a substitute for the competition of the marketplace. However, it is clear that considerable competition exists in the natural gas industry and indeed is encouraged by national policy prescribed in FERC Orders 436 through 636. Nonetheless, the LDCs remain price regulated.

As long as the natural gas industry remains price regulated, the cost of common equity capital must be determined by analysis of marketplace indicators in order to assure that the regulated utility can fulfill its obligations to the public and provide adequate service at all times. Fulfillment of its service obligation requires a level of earnings sufficient to maintain the integrity of presently invested capital and permit the attraction of needed new capital at a reasonable cost in competition with other comparable-risk seekers of capital. These standards for a fair rate of return have been established by the U.S. Supreme Court in the Hope and Bluefield cases cited supra. Consequently, in my determination of a fair rate of return, I have made every effort to evaluate data gathered from the marketplace for LDCs reasonably similar in risk to ANG and then adjust for investment risk differences, i.e., the combination of both business and financial risk.

IV. BUSINESS RISK

Q. Please define business risk and explain why it is important to the determination of a fair rate of return.

A. Business risk is a collective term encompassing all of the diversifiable risks of an enterprise other than financial risk (with financial risk defined as the introduction of debt into the capital structure). A few examples of business risk are the extent and efficacy of competition, weather and its impact on revenues and earnings, customer mix, quality of management, and the regulatory environment.

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

Q. Please discuss the business risk of gas companies in general.

A. The deregulation of the gas industry has resulted in a significant increase in business risk to LDCs such as ANG. S&P[3] explains how deregulation has shifted risks to LDCs:

> *Order 636* means that gas distributors will have to change the way they operate, and this presents increased risk for utilities... Distributors will incur costs previously assumed by pipeline companies, including expenses associated with additional storage capability, storage inventory property taxes, and additional employee-related expenses for managing larger gas supplies.

Moody's Investors Service (Moody's) also noted the shift of risk from the pipelines to

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[3] Standard & Poor's Industry Surveys, "Utilities - Gas: Basic Analysis", May 26, 1994, p. U79.

LDCs when it stated[4]:

> FERC Order 636 will cause a **shift of risk** from pipelines to local gas distribution companies. (Bold in original)

In response to the changing risk profile of the natural gas industry, S&P[5] revised its financial benchmarks for the industry in December 1993. Although S&P did not stiffen the financial benchmark ratios for LDCs, it recognized "a moderate increase in the gas supply risks they face. In addition, some ratio guidelines were relaxed slightly for pipeline companies."[6]

It is clear from the above that LDCs face greater uncertainty and risk which is perceived by investors. FERC's Order 636 and the continuing restructuring in the energy industry mean greater competition and increased risks. Because investors are aware of the increased risks associated with increased competition and restructuring, increased returns commensurate with those risks are demanded.

Q. Have you examined ANG's level of business risk?

A. Yes. ANG faces many of the same risks as other LDCs in today's increasingly competitive environment. These include the threat of by-pass; increasing uncertainty associated with the unbundling of services behind the city-gate; increased competition from, among others, gas marketers, interstate pipelines and electric utilities through

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[4] "FERC Order 636 will pressure ratings of gas distribution companies," Moody's Special Comment, August 1993, pp. 1 and 6.

[5] Standard & Poor's CreditWeek, December 6, 1993, p. 39.

[6] Id., at p. 39.

Integrated resource plans, electric industry restructuring and potential repeal of the Public Utility Holding Company Act; industry mergers, and acquisitions such as Houston Industries' acquisition of NorAm Energy Corporation and NGC Energy Resources Limited Partnership's acquisition of Ozark Gas Transmission System; and regulatory risk including e.g., the Missouri PSC's disallowances of alleged excessive premium on gas purchases from SEECO, an affiliated company (which disallowances are being litigated in Missouri's Court of Appeals), and regulatory lag especially in a time of increasing competition. Such risks are exacerbated for ANG because of its small size relative to other LDCS. For example, as can be gleaned from the table below, the average company in the proxy group of seven LDCs is two and one-half (2-1/2) times larger, while the average of twenty Value Line LDCs is more than five (5) times larger than AWG*.

	<u>Total Capitalization at Year-end 1995</u> ($ million)
Arkansas Western Gas Company*	$140.715
The Proxy Group of Seven LDCs	$359.970
The Proxy Group of Twenty Value Line LDCs	$759.410

* AWG's consolidated total capital is employed because, as testified by Pauline M. Ahern, all of ANG's external capital is raised by AWG. If measured against ANG on a stand-alone basis, the proxy groups would be approximately 20-40 times larger than ANG.

All else equal, small size means greater risk, as will be discussed <u>infra</u>.

Q. How can the Missouri Public Service Commission recognize the business risks confronting ANG, including its small size?

A. The Commission can recognize them by granting ANG a rate of return on common equity commensurate with those risks. I believe that a return rate of 11.70% on a ratemaking 45.25% common equity ratio is needed (which relates to a 52.73% common equity ratio based upon total investor-provided capital), with a reasonable opportunity to actually earn it.

V. FINANCIAL RISK

Q. Please define financial risk and explain why it is important to the determination of a fair rate of return?

A. Financial risk is the additional diversifiable risk created by the introduction of debt into the capital structure. Utilities formerly were considered to have much less business risk vis-a-vis unregulated enterprises, and, as a result, a larger percentage of debt capital was acceptable to investors. Increasing deregulation and competition mean increasing business risk for LDCs which in turn means that investors require higher common equity ratios to offset this increased business risk, consistent with fundamental financial precepts. All else equal, greater financial risk means greater investment risk for which investors require added compensation, i.e., a higher rate of return.

Q. How can one measure the combined, diversifiable business and financial risks, i.e., investment risk?

A. Similar bond ratings reflect similar combined business and financial risks. Although the specific business or financial risks may differ between companies, the same bond rating indicates that the combined risks are similar, although not identical, as the bond rating process reflects acknowledgement of all diversifiable business and financial risks. For example, S&P expressly states that the bond rating process encompasses a qualitative analysis of business and financial risks (see pages 1 through 13 of SCHEDULE FJH-2). In December 1993, S&P revised its gas utility and pipeline financial benchmarks creating a risk-adjusted matrix-approach (see pages 14 through 16 of SCHEDULE FJH-2), categorizing each gas utility's business position as being either "above average," "average" or "below average." Since neither AWG nor ANG has long-term debt which is rated, neither has been assigned a business position. In revising its gas utility benchmarks, S&P[7] stated:

> S&P is revising its financial benchmark ratios for U.S. investor-owned natural gas distributors and pipelines. With this modification, S&P is publishing a risk-adjusted or matrix approach to the financial benchmarks, which incorporates a more detailed comparison of financial performance and a company's business risk profile. Existing ratings have always reflected this analysis, but this methodology makes this linkage more explicit.

In July 1994 S&P released a matrix of business positions for gas pipeline companies and LDCs as shown in SCHEDULE FJH-2, pages 17 through 20. It is clear that S&P's analysis is credit-oriented; i.e., it goes toward evaluating the safety of an investment in a long-term debt instrument of an enterprise which is reflected in its bond rating.

In my opinion, there is no perfect single proxy such as bond rating, common stock ranking, etc., by which one can compare/differentiate common equity risk between companies. However, the bond rating provides a most useful means to compare/differentiate common equity risk between companies because it is the result of a thorough and comprehensive analysis of all diversifiable business and financial risks,

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[7] Id., at p. 39.

i.e., investment risk.

VI. ARKANSAS WESTERN GAS COMPANY

Q. Have you reviewed financial data for AWG?

A. Yes. I reviewed financial data for AWG because ANG is a division of AWG and therefore, it does not maintain an independent capital structure. AWG is a wholly-owned subsidiary of Southwestern, an exempt holding company under the Public Utility Holding Company Act of 1935. Southwestern is a diversified natural gas company conducting its principal activities through four wholly-owned subsidiaries. Southwestern operates primarily in exploration and production of natural gas through its subsidiaries SEECO, Inc. and Southwestern Energy Production Company, natural gas distribution through AWG and natural gas transmission and marketing through Southwestern Energy Services.

Although Southwestern derived 78% of 1995 operating revenues from gas distribution operations, it derived only 36% of its 1995 operating income from those operations. Conversely, Southwestern derived 22% of 1995 operating revenues and 66% of 1995 operating income from exploration and production operations. Moreover, Southwestern's Standard Industrial Classification (S.I.C.) Code is 4923, Natural Gas Transmission and Distribution and Southwestern is included in Value Line's Natural Gas (Integrated) Industry. It is clear, then, that Southwestern is overwhelmingly perceived as an integrated natural gas utility by the financial community. As such, its market data are not applicable to the determination of ANG's cost of common equity, i.e., an LDC.

Arkansas Western consists of two operating divisions. The AWG Division distributed natural gas to approximately 101,000 customers in 1995 in northwest

Arkansas, while the ANG Division distributed natural gas to approximately 67,000 customers in 1995, primarily in northeast Arkansas and southeast Missouri. Until June 1, 1988 when it was acquired and merged into AWG, ANG was a wholly-owned subsidiary of Arkansas Power and Light Company.

I have shown AWG's capitalization and financial statistics for the years 1991-1995, inclusive on SCHEDULE FJH-3. Page 1 contains capitalization and financial statistics, while page 2 contains notes relevant to page 1. It should be noted that AWG's average achieved return rate on book common equity (ROE) was only 6.6% during the five years ended 1995, ranging between 5.5% and 7.7% during the period.

VII. PROXY GROUPS

Q. You previously mentioned that you observe the market data for two proxy groups of LDCs in order to gain insight into a market-based common equity cost rate for ANG. Please explain how the proxy group of seven LDCs was selected.

A. The selection criteria for the proxy group of seven LDCs are: 1) an S.I.C. Code of 4924 (Natural Gas Distribution) by S&P's Compustat Services, Inc.; 2) common stock which is actively traded; 3) 90% or more of 1995 operating revenues derived from gas operations; 4) less than $500 million in total capital at year-end 1995; 5) long-term debt rated BBB- or better by S&P or Baa3 or better by Moody's; 6) inclusion in Value Line Investment Survey and I/B/E/S Custom Report; 7) no common stock dividend cuts or omissions during the five calendar years ending 1995 and up to the time of preparation of this testimony; and 8) inclusion in S&P's Compustat Services, Inc. Utility Compustat II electronic database. Seven companies met all of the above criteria and their financial profile is summarized in SCHEDULE FJH-4.

Q. Please describe SCHEDULE FJH-4.

A. SCHEDULE FJH-4 contains comparative capitalization and financial statistics for the proxy group of seven LDCs for the years 1991 through 1995. The schedule consists of three pages. Page 1 contains a summary of the comparative data for the years 1991-1995. Page 2 contains notes relevant to page 1, as well as the selection criteria of the individual companies in the proxy group. Page 3 contains the identities of the companies as well as each company's most recent Moody's and S&P bond ratings and average bond ratings for the group.

During the five-year period ending 1995, the achieved average ROE was 11.4% in contrast to Arkansas Western's 6.6% (SCHEDULE FJH-3, page 1), while the average market/book ratio was 166.4%. The five-year average dividend payout ratio was 86.8%. Average coverage of total interest charges, excluding all allowance for funds used during construction (AFUDC) from income available to pay such charges, before income taxes for the five years ending 1995 was 3.0 times in contrast to AWG's 2.4 times (SCHEDULE FJH-3, page 1).

Q. Please explain how the proxy group of twenty Value Line LDCs was selected.

A. The basis of selection for the proxy group of twenty Value Line LDCs was to include those gas distribution companies which are included in Value Line Investment Survey - Natural Gas (Distribution) Industry and have not cut or omitted their common stock dividends during the five calendar years ending 1995 and up to the time of preparation of this testimony. Twenty-one companies met these criteria. Although UGI Corporation also met these criteria, it was excluded from the proxy group because it derived less than 50% of its 1995 operating revenues from gas operations. The average financial profile of the remaining twenty LDCs is summarized in SCHEDULE FJH-5.

Q. Please describe SCHEDULE FJH-5.

A. SCHEDULE FJH-5 contains average comparative capitalization and financial statistics for the proxy group of twenty Value Line LDCs for the years 1991 through 1995. The schedule consists of three pages. Page 1 contains a summary of the comparative data for the years 1991-1995. Page 2 contains notes relevant to page 1, as well as the selection criteria of the individual companies in the proxy group. Page 3 contains the identities of the companies as well as each company's most recent Moody's and S&P bond ratings and the average bond ratings for the group.

During the five-year period ending 1995, the achieved average ROE and market/book ratio averaged 11.5% and 167.5%, respectively. The five-year average dividend payout ratio was 87.3%. Average coverage of total interest charges, excluding all allowance for funds used during construction (AFUDC) from income available to pay such charges, before income taxes for the five years ending 1995 was 3.1 times in contrast to AWG's 2.4 times (SCHEDULE FJH-3, page 1).

VIII. COMMON EQUITY COST RATE MODELS

A. Discounted Cash Flow Model (DCF)

1. Theoretical Basis

Q. What is the theoretical basis of the DCF model?

A. DCF theory is based upon finding the present value of an expected future stream of net cash flows during the investment holding period discounted at the cost of capital or the capitalization rate. The theory suggests that an investor buys a stock for an expected total return rate which is expected to be derived from cash flows in the form of dividends and appreciation in market price (the expected growth rate). Thus, the dividend yield on market price plus a growth rate equals the capitalization rate. The capitalization rate is the total return rate expected by investors.

Q. Please comment on the applicability of the DCF model in establishing a cost of common equity for the Company.

A. Although there are several versions of the DCF model, including non-constant growth models, finite horizon models, quarterly compounding models, etc., in my analysis I utilize a constant growth, single-stage as well as a two-stage growth version. The two-stage growth version utilizes two different growth rates to estimate expected dividends per share (DPS) over the next, approximately, twenty (20) years. A short-term, i.e., five-year, growth rate is used to estimate dividends for the next five years based on analysts' forecasts. However, since the market price of common stock reflects a much longer investment horizon than five years, it is reasonable to look to other indicators of longer-term growth rates. Thus, for years six to twenty, a growth rate in DPS is estimated based on forecasted growth for the U.S. economy and the natural gas industry. A single growth rate over the entire period, i.e., twenty years, is then calculated and used in the standard regulatory version of the DCF model which is specified as follows:

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

Where:

D_1 = Dividends per share for the next twelve months
P_o = Current market price per share
g = Constant dividend growth rate proxy
k = Discount rate.

I have chosen this version of the DCF model because it is the most widely used version in regulatory proceedings. However, few regulatory agencies rely exclusively on the DCF model, or indeed any single model. The 1995 NARUC survey, summarized on SCHEDULE FJH-6, page 2, shows that most regulatory commissions rely on more than one cost of common equity model in deriving appropriate allowed rates of return on common equity capital.

The extent to which the DCF is relied upon, if at all, should depend upon the extent to which the cost rate results differ from those derived from the use of other cost of common equity models because the model has a tendency to mis-specify investors' required return rate when the market value of common stock differs significantly from its book value. Market values and book values of common stocks are seldom, if ever, at unity. The market-based DCF model will result in a total annual dollar return on book common equity equal to the total annual dollar return expected by investors when market and book values are equal, a rare and very unlikely situation. An indication of that in recent years is that the market values of LDCs' common stocks have been well in excess of their book values as shown on page 1 of SCHEDULES FJH-4 and FJH-5, ranging between 153.0% and 189.6% and 151.8% and 188.3%, for each proxy group, respectively, during the five years ending 1995.

In view of the foregoing, DCF-calculated cost rates should be used with caution and sole reliance on them should be avoided. The DCF model has a tendency to understate the common equity cost rate required by investors when the market/book ratio is greater than 100% and the market-based DCF cost rate is applied to the book value of common equity. Because of this fact, the DCF cost rate(s) should receive no more than equal weight with the cost rate resulting from the application of other cost of common equity models.

Understatement of investors' required return rate by use of the DCF model for LDCs is currently exacerbated because their market prices reflect long-range growth potential not fully reflected in analysts' five-year forecasts of future growth. Consequently, current market prices reflect investors' long-range growth expectations. However, the normal application of the DCF model is a single-stage growth model based on analysts' five-year forecasts of some combination of historical growth rates and analysts' five-year forecasts. This indicates the need to better match market prices and the longer-term growth expectations embedded therein with the longer-term, empirically-determined, investor-influencing measures of growth.

In view of the foregoing, exclusive reliance on DCF must be avoided, and consideration should be given to the results of three models, i.e., the DCF, RP and CAPM calculated cost rates. Also, less than equal weight should be given (on an implicit basis) to the results of the DCF model, for both proxy groups as there is also significant disparity of the DCF results with the RP and CAPM results shown on SCHEDULE FJH-1, page 3.

Q. Is there support in the academic literature for the need to rely upon more than one cost of common equity model in arriving at a recommended common equity cost rate?

A. Yes. For example, Phillips[8] states:

> Since regulation establishes a level of authorized earnings which, in turn, implicitly influences dividends per share, estimation of the growth rate from such data is an inherently circular process. For these reasons, the DCF model "suggests a degree of precision which is in fact not present" and leaves "wide room for controversy and argument about the level of k".

Also, Morin[9] states:

> Sole reliance on the DCF model ignores the capital market evidence and financial theory formalized in the CAPM and other risk premium methods. The DCF model is one of many tools to be employed in conjunction with other methods to estimate the cost of equity. It is not a superior methodology that supplants other financial theory and market evidence. The broad usage of the DCF methodology in regulatory proceedings does not make it superior to other methods. (emphasis added) (pp. 231-232)

> Each methodology requires the exercise of considerable judgment on the reasonableness of the assumptions underlying the methodology and on the reasonableness of the proxies used to validate a theory. The failure of the traditional infinite growth DCF model to account for changes in relative market valuation, discussed above, is a vivid example of the potential shortcomings of the DCF model when applied to a given company. It follows that more than one methodology should be employed in arriving at a judgment on the cost of equity and that these methodologies should be applied across a series of comparable risk companies. ...Financial literature supports the use of multiple methods.

Professor Eugene Brigham, a widely respected scholar and finance academician

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[8] Charles F. Phillips, Jr., The Regulation of Public Utilities-Theory and Practice, 1993, Public Utility Reports, Inc., Arlington, VA, p. 396.

[9] Roger A. Morin, Regulatory Finance-Utilities' Cost of Capital, 1994, Public Utilities Reports, Inc., Arlington, VA, pp. 231-232, 239-240.

asserted:

> In practical work, it is often best to use all three methods -CAPM, bond yield plus risk premium, and DCF - and then apply judgement when the methods produce different results. People experienced in estimating capital costs recognize that both careful analysis and very fine judgements are required. It would be nice to pretend that these judgements are unnecessary and to specify an easy, precise way of determining the exact cost of equity capital. Unfortunately, this is not possible.

Another prominent finance scholar, Professor Stewart Myers, in his best-selling corporate finance textbook stated:

> The constant growth formula and the capital asset pricing model are two different ways of getting a handle on the same problem.

In an earlier article, Professor Myers explained the point more fully:

> Use more than one model when you can. Because estimating the opportunity cost of capital is difficult, only a fool throws away useful information. That means you should not use any one model or measure mechanically and exclusively. Beta is helpful as one tool in a kit, to be used in parallel with DCF models or other techniques for interpreting capital market data. (emphasis added) (pp. 239-240)

2. Applicability of a Market-Based Common Equity Cost Rate to a Book Value Rate Base

Q. Is it reasonable to expect the market values of utilities' common stocks to continue to sell well above their book values?

A. Yes. I believe that the common stocks of utilities will continue to sell substantially above their book values, because many investors, especially individuals who traditionally committed less capital to the equity markets, will likely continue to commit a greater percentage of their available capital to common stocks in view of lower interest rate alternative investment opportunities. The recent past and current capital market environment is in stark contrast to the late 1970's and early 1980's when very high (by historical standards) yields on secured debt instruments in public utilities were available. Moreover, allowed ROEs have a limited effect on utilities' market/book ratios as market prices of common stocks are influenced by a number of other factors beyond the direct influence of the regulatory process.

For example, Phillips[10] states:

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

In addition, Bonbright[11] states:

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

In view of the foregoing, there is often a resulting mismatch in the application of the DCF model as market prices reflect long range expectations of growth in market prices (consistent with the presumed infinite investment horizon of the standard DCF model), while the short range forecasts of growth do not reflect the full measure of growth (market price appreciation) expected in per share value.

Q. Please describe the information shown on SCHEDULE FJH-7.

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[10] Id., at p. 395.

[11] James C. Bonbright, Principles of Public Utility Rates, 1988, Public Utilities Reports, Inc., Arlington, VA, p. 334.

A. SCHEDULE FJH-7 consists of six pages. Page 1 contains the stock price index levels, EPS and DPS of the S&P 500 Composite Index and the S&P Utilities Index on a quarterly basis from the third quarter of 1986 through the third quarter of 1996.

As can be derived from page 1 and shown in Table 2 below, the S&P 500 experienced 197.1% growth in market price, yet experienced only 143.0% growth in EPS and 78.1% growth in DPS. Also shown is that the S&P Utilities Index experienced a 73.1% increase in market price, yet experienced only 41.0% growth in earnings and 36.1% growth in DPS.

Table 2

Growth in Market Price and Earnings from the
Third Quarter, 1986 through the Third Quarter, 1996

		3rd Quarter 1986	3rd Quarter 1996% Change
S&P 500 Composite Index			
Market Price	$231.32	$687.31	197.1%
Earnings	14.85	36.09	143.0
Dividends	8.23	14.66	78.1
S&P Utilities Index			
Market Price	$109.09	$188.80	73.1%
Earnings	9.88	13.93	41.0
Dividends	6.95	9.46	36.1

Source of Information: S&P Security Price Index Record
S&P Current Statistics

Pages 2 and 3 of SCHEDULE FJH-7 graphically demonstrate that there is little relationship between the movement in EPS and DPS and market prices. It is important to keep in mind that the growth rate used in the DCF model is a proxy for growth in market price, despite the fact that the accounting proxies for growth employed are usually unreliable predictors of growth in market price. Confirmation that neither earnings nor interest rates account for a substantial change in market prices is found in a study published by Goldman-Sachs & Co.[12] which concluded that during the 1980's, only 35% of the S&P 500's stock price growth was attributable to earnings and interest rates. Pages 4 through 6 of SCHEDULE FJH-7 are a copy of a Wall Street Journal article dated February 23 1996, which describes how market prices are being escalated by the "Big Generation" (people now in their 30's and 40's) who feel compelled to provide for their old age by significant investment in stock funds, etc. Such methodical, compulsive, investment has little, if anything, to do with company/industry specific fundamentals. Such motivation to invest for the long-term contributes significantly to market/book ratios well above unity with no direct relationship to short range forecasts (up to five years) of earnings/dividend growth. In short, application of the DCF model is usually incapable of fully reflecting the growth in market price expected by investors. The resulting mis-specification of required return rate is attributable to (1) factors which are important to investors when they are establishing the required rate of return on their common equity investment but are not directly related to company and/or industry measures of growth and (2) investors' expected rate of growth which cannot be fully captured by use of the normal accounting proxies used in the DCF model for the expected growth in market value.

Q. Please explain why a DCF-derived common equity cost rate mis-specifies investors' expected common equity cost rate when the market/book ratio is greater or less than

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[12] Goldman-Sachs & Co. - Investment Research, May 23, 1991, How Can We Explain the Growth of the S&P 500 in the 1980's?, by Barrie A. Wigmore.

100%.

A. Under the DCF model, the return investors require is related to the price paid for a stock. Thus, market price is the basis upon which they formulate the return required. A regulated utility is limited to earning on its net book value (depreciated original cost) rate base. As discussed supra, market values diverge from book values for many reasons unrelated to ROEs. Thus, when market values are grossly disparate from their book values, a market-based DCF cost rate applied to the book value of common equity will not reflect investors' expected common equity cost rate. It will either overstate the common equity cost rate (without regard to any adjustment for flotation costs which may, at times, be appropriate on an ad hoc basis) when market value is less than book value or understate the cost rate when market value is above book value.

SCHEDULE FJH-8 demonstrates the inadequacy of a market-based DCF cost rate applied to a much lower book value. As shown, there is no realistic opportunity to earn the market-based rate of return on book value. In this example, market value is twice book value and the investor expects a total return rate of 10.60%, based on a growth rate of 4.60% and a realistic dividend yield of 6.0% on market price. In this example, the 10.60% market-based cost rate implies $3.18 of earnings, comprised of $1.80 in dividends and $1.38 in growth. When the 10.6% return rate is applied to a book value which is only one-half the market value, the opportunity for total return is just $1.59 on book value. With an annual dividend of $1.80, there is no opportunity to earn the expected $1.38 in growth. Rather, a negative $0.21, or negative 0.70% results. There is no way to possibly achieve the expected growth of $1.38 (4.60%) absent a huge cut in the annual dividend, an unreasonable expectation which usually portends an extremely adverse financial condition.

In view of the foregoing, I believe it is clear that the DCF model understates investors' required cost of common equity capital when market values exceed their book values. Of course, if the converse situation exists (market values are substantially below their book values), a DCF-determined cost rate likely would be overstated.

Q. Have any commissions explicitly stated that it does not make good sense to rely solely on DCF?

A. Yes. It can be determined from the 1995 NARUC study (SCHEDULE FJH-6) that approximately 75% of the commissions rely on no single cost of common equity model.

Specifically, the Iowa Utilities Board (IUB) has recognized the tendency of the DCF model to understate investors' expected cost of common equity capital when market values are significantly above their book values. In its June 17, 1994 Final Decision and Order in Docket No. RPU-93-9 re: U.S. West Communications, the IUB stated:[13]

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

[13] Public Utilities Reports - 152 PUR4th, Re: U.S. West Communications, Inc., Docket No. RPU-93-9, p. 459.

Similarly, in 1994, the Indiana Utility Regulatory Commission (IURC), for example, recognized the tendency of the DCF model to understate the cost of equity when market value exceeds book value[14]:

> In determining a common equity cost rate, we must again recognize the tendency of the traditional DCF model, . . . to understate the cost of common equity. As the Commission stated in Indiana-Mich. Power Co. (IURC 8/24/90), Cause No. 38728, 116 PUR 4th 1, 17-18, "the unadjusted DCF result is almost always well below what any informed financial analyst would regard as defensible, and therefore, requires an upward adjustment based largely on the expert witness's judgement."
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> [u]nder the traditional DCF model . . . the appropriate earnings level of the utility would not be derived by applying the DCF result to the market price of the Company's stock . . . it would be applied to the utility's net original cost rate base. *If the market price of the stock exceeds its book value, . . . the investor will not achieve the return which the model finds is necessary.* (italics added)

Also, the Hawaii Public Utilities Commission recognized this phenomenon in a decision dated 6/30/92[15] in a case regarding Hawaiian Electric Company, Inc., when it stated:

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

Q. Do the other cost of common equity models contain unrealistic assumptions and have

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[14] Public Utilities Reports - 150PUR4th, Re: Indiana-American Water Company, Inc., Cause No. 39595, pp. 167-168.

[15] Public Utilities Reports - 134 PUR4th, Re: Hawaiian Electric Company, Inc., Docket No. 6998, p. 479.

shortcomings?

A. Yes. That is why I am not recommending that any of the models be exclusively relied upon. I have focused on the shortcomings of the DCF model because some regulatory commissions still place undue reliance on it. Although the DCF model is useful, it is not a superior methodology that supplants financial theory and market evidence based on other valid cost of common equity models. For these reasons, no model, including the DCF, should be used exclusively.

I recommend, in the instant circumstance, that the DCF model cost rates of 10.3% for the seven LDCs and of 10.1% for the twenty Value Line LDCs implicitly receive less than equal weight with both proxy groups' RP and CAPM cost rates of 11.8%/11.9% and 11.0%/11.3%, respectively, as shown on SCHEDULE FJH-1, page 3.

3. Application of the DCF Model

a. Dividend Yield

Q. Please describe the dividend yield you used in your application of the DCF model.

A. The unadjusted dividend yields are based on an average of market prices for a recent spot (November 29, 1996) date as well as an average of the last three, six and twelve months, ending November 30, 1996, respectively, as shown on page 1 of SCHEDULE FJH-10. The average unadjusted yield is 5.6% for the seven LDCs and 5.1% for the twenty Value Line LDCs as shown on Line No. 1 of SCHEDULE FJH-9.

b. Discrete Adjustment of Dividend Yield

Q. Please explain the adjustment for discrete growth shown on SCHEDULE FJH-9, Line No. 2.

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

Since the various utilities in both proxy groups increase their quarterly dividend at various times of the year, a reasonable assumption is to reflect one-half the annual dividend growth rate in the D_1 expression, or $D_{1/2}$. This is a conservative approach so as not to overstate the dividend yield which should be representative of the next twelve-month period. Therefore, the actual average dividend yields on Line No. 1 of SCHEDULE FJH-9 have been adjusted upward to reflect one-half the growth rates shown on Line No. 4. The adjusted dividend yields used in the single-stage form of the model are 5.7% for the seven LDCs and 5.2% for the twenty Value Line LDCs as shown on Line No. 3, SCHEDULE FJH-9.

c. Selection of Growth Rates for Use in the
Single-Stage DCF Model

Q. Please explain the basis of the growth rates of 4.6% for the proxy group of seven LDCs and 5.2% for the proxy group of twenty Value Line LDCs which you use in your application of the single-stage DCF model.

A. It is shown on SCHEDULE FJH-11 that approximately 81% and 74% of the common shares of each proxy group, respectively, are held by individuals as opposed to institutional investors. Individual investors are particularly likely to place great significance on the opinions expressed by financial information services such as Institutional Brokers Estimate System (I/B/E/S), S&P and Value Line, which they can easily obtain either by subscription, in libraries and/or through brokerage firms.

I believe that investors view all historical and projected growth rate information. They are aware of the significant changes which have occurred as a result of the restructuring of the natural gas industry, and they recognize that the future is going to differ significantly from the past. Consequently, I believe that investors, in this instance, based on the growth rates shown on page 1 of SCHEDULE FJH-12, would place far greater emphasis on the forecasted growth rates than upon the historical growth rates. On page 1 of SCHEDULE FJH-12 I have shown both the historical and projected five-year compound growth rates in EPS, DPS and BR + SV (the sum of internal and external growth in per share value) for each company in both proxy groups as well as the averages for the groups. Negative growth rates have been excluded from calculations of the average historical growth rates because it is not logical to assume that investors would expect negative growth under any scenario. I/B/E/S and S&P growth rate estimates are not available for DPS and internal growth. Moreover, the I/B/E/S estimates do not include the Value Line projections.

In addition to evaluating EPS and DPS growth rates, it is reasonable to assume that investors also assess BR + SV. The concept is based on financial theory and well-documented in the academic literature. Its conceptual premise is that future DPS growth is a function of the portion of the overall return to investors which is reinvested into the firm, and the sales of new common stock. Consequently, the growth component as proxied by internal and external growth is defined as follows:

$$g = BR + SV$$

Where:
B = the fraction of earnings retained by the firm, i.e., retention ratio
R = the return on common equity
S = the growth in common shares outstanding
V = the premium/discount of a company's stock price relative to its book value, i.e., one minus the complement of the market/book ratio.

Consistent with the use of five-year historical and five-year projected growth rates in EPS and DPS, I have derived five-year historical and five-year projected BR+SV growth. These growth rates are summarized for all the companies in both proxy groups as shown on page 1 of SCHEDULE FJH-12. Pages 2 through 9 contain the supporting data for the growth rates shown on page 1. Pages 10 through 29 of SCHEDULE FJH-12 contain the most current <u>Value Line Investment Survey</u> for each of the companies in both proxy groups.

As shown on page 1 of SCHEDULE FJH-12, the growth rates for the proxy group of seven LDCs range from 2.6% to 6.0%, with a midpoint of 4.3% and averaging 4.8%. The growth rates for the proxy group of twenty Value Line LDCs range from 3.2% to 6.7%, with a midpoint of 5.0% and averaging 5.3%. Consequently, I conclude that growth rates of 4.6% for the proxy group of seven LDCs and 5.2% for the proxy group of twenty Value Line LDCs are reasonable to use in the single-stage DCF model.

d. Selection of Growth Rates for Use in the Two-Stage Growth DCF Model

Q. Please explain the basis for the two-stage growth DCF model.

A. The two-stage growth DCF model is predicated upon the presumption that after a short-term transition stage, a firm can be expected to reach a state of maturity when its growth and return on common equity would be in line with the growth of the economy or the industry. As Morin[16] indicates, this assumption stems from the view that above or below average growth rates will settle to a steady-state, long-run level consistent with that of the general economy. I agree with that premise as far as establishing other proxies for investor expectations for longer range growth in EPS. However, as demonstrated supra, market prices are affected by much more than growth in EPS or DPS.

As stated previously, the version of the two-stage growth DCF model which I employ utilizes longer-term, i.e., six through twenty years' growth rates in Gross Domestic Product (GDP) and natural gas revenues to estimate growth beyond analysts' five-year forecasts. The resulting twenty year compound growth rate in DPS is thus a composite reflecting the two growth stages. The longer stage (years six through twenty) is more reflective of investors' expectations of long-range market price appreciation than is implicit in shorter-range analysts' forecasts, remaining especially cognizant of the infinite horizon implicit in market prices consistent with DCF theory.

In recent decisions, the FERC has been using a two-stage growth rate as the growth component in the DCF model. A representative list of these decisions includes Ozark Gas Transmission System, 68 FERC ¶ 61,032 (1994), TransColorado Gas Transmission Company, 69 FERC ¶ 61,066 (1994) and Panhandle Eastern Pipe Line Company, Docket No. RP91-229-000 (1995). Theoretically, longer-term measures of growth are more reflective of the long-term growth rates implicit in the market prices paid by investors. The long-term growth projections used in my two-stage growth model are

[16] Id., at p. 156.

similar to those employed by FERC.

Q. Please explain the stage one growth rate.

A. The stage one growth rate is the I/B/E/S five-year projected growth in EPS. Pages 5 through 7 and 11 through 13 of SCHEDULE FJH-13 show the I/B/E/S five-year projected growth in EPS for each company in the proxy groups. The use of the five-year I/B/E/S forecast growth in EPS is reasonable as EPS drives market price. The use of analysts' forecasts in EPS in the first stage is consistent with the use of longer range forecasts of growth in the second stage.

Q. Please explain the second stage growth rates.

A. For the estimation of the second stage growth rate, I utilized projections of growth in GDP and natural gas revenues as a proxy for longer-range investor growth expectations. These longer-term forecasts were prepared by The WEFA Group.

The forecast for GDP is provided on pages 5 through 7 of SCHEDULE FJH-13. It shows that GDP is anticipated to grow in the range of 4.8% to 5.0% annually for the period 2002 to 2016. GDP is the most widely used measure of the nation's production. It is the market value of goods and services produced by labor and property supplied by residents within the country. Thus, it is an acceptable measure of the expected growth of the general economy and is appropriate for the estimation of investors' expectation of growth in the second stage.

The measure of natural gas revenues utilized in my analysis was developed on page 14 of SCHEDULE FJH-13 from WEFA's forecasts for natural gas consumption and the average price of gas to end users. This produced an estimate for the growth of natural gas industry revenues in the range of 2.9% to 4.6% between 2002 and 2016.

Q. Please describe the WEFA Group, the source of the longer-term forecasts which you used.

A. The long-term forecasts used in this analysis were provided by The WEFA Group. The WEFA Group was founded in 1963 at the University of Pennsylvania by Dr. Lawrence R. Klein, winner of the 1980 Nobel Prize in Economics, as Wharton Econometric Forecasting Associates (WEFA). It was the first economic forecasting firm and was started at the request of business leaders who wanted independent forecasts for planning. WEFA built a reputation for quality and accuracy and became the preeminent economic forecasting service throughout the world. In 1987, The WEFA Group was formed as a result of the merger of WEFA and Chase Econometrics, a subsidiary of Chase Manhattan Bank which provided a wide range of economic and financial services.

Q. How were DPS for the years 1996 - 2016 derived?

A. DPS in each year for each company in the proxy group was derived by applying that year's growth rate to the previous year's DPS, as explained in Notes 1 and 2 on pages 2 through 4 and 8 through 10 of SCHEDULE FJH-13. For example, as shown on page 2, AGL Resources, Inc. (AGL) 1997 DPS of $1.137 = AGL's 1996 DPS of $1.084 x AGL's 1997 I/B/E/S projected growth in EPS of 4.9% ($1.137 = ($1.084 x (1 + 4.9%)).

Q. Please explain the basis of the average annual growth rates of 4.9% for the seven LDCs and 5.1% for the twenty Value Line LDCs based upon I/B/E/S five-year projected growth in EPS and The WEFA Group's longer-term growth in GDP.

A. As explained in Note 3 on page 2 of SCHEDULE FJH-13, the proxy groups' average annual growth rates of 4.9% and 5.1%, respectively, were derived by calculating the average annual compound growth rate over the entire period, 1996 - 2016, by relating each company's DPS in the year 2016 to DPS at November 30, 1996. For example, AGL's 4.9% average, annual growth was derived as follows: 4.9% = (($2.817 / $1.080) ^ (1 / 20.083) -1).

Q. Please explain the basis of the average annual growth rates of 4.0% for the seven LDCs and 4.1% for the twenty Value Line LDCs based upon I/B/E/S five-year projected growth in EPS and The WEFA Group's long-term growth in natural gas revenue.

A. As explained in Note 3 on page 10 of SCHEDULE FJH-13, the proxy groups' average annual growth rates of 4.0% and 4.1%, respectively, were derived in the same manner as the average annual growth rates based upon I/B/E/S five-year projected growth in EPS and The WEFA Group's long-term growth in natural gas revenues. For example, AGL's 3.9% average, annual growth was derived as follows: 3.9% = (($2.346 / $1.080) ^ (1 / 20.083) -1).

Q. Please summarize the single-stage DCF model results.

A. As shown on SCHEDULE FJH-9, Line No. 5, the results of the application of the single-stage DCF model are 10.3% for the proxy group of seven LDCs and 10.4% for the proxy group of twenty Value Line LDCs.

Q. Please summarize the two-stage growth DCF model results.

A. As shown on SCHEDULE FJH-13, page 1, Line No. 5, the two-stage growth DCF cost rates using I/B/E/S projected five-year growth in EPS and annual growth in GDP are 10.6% for the seven LDCs and 10.3% for the twenty Value Line LDCs. As shown on Line No. 10 of page 1, the two-stage growth DCF cost rates based on I/B/E/S projected five-year growth in EPS and annual growth in natural gas revenues are 9.7% for the seven LDCs and 9.3% for the twenty Value Line LDCs. The averages of both two-stage growth DCF models are 10.2% and 9.8% for each proxy group, respectively.

B. The Risk Premium Model (RP)

1. Theoretical Basis

Q. Please describe the theoretical basis of the RP model.

A. The RP model is based upon the theory that the cost of common equity capital is greater than the prospective company-specific cost rate for long-term debt capital. In other words, it is the expected cost rate for long-term debt capital plus a premium to compensate common shareholders for the added risk of being unsecured and last-in-line in any claim on the corporation's assets and earnings.

Q. Some analysts state that the RP model is another form of the CAPM. Do you agree?

A. Generally yes, but there is a very significant distinction between the two models. The RP and CAPM both add a "risk premium" to an interest rate. However, the beta approach to the determination of an equity risk premium in the RP model should not be confused with the CAPM. Beta is a measure of systematic, or market, risk, a relatively small percentage of total risk (i.e., the sum of both non-diversifiable systematic and diversifiable unsystematic risk). Unsystematic risk is fully captured in the RP model through the use of the prospective long-term bond yield. This proposition can be verified by reference to pages 1 through 9 of SCHEDULE FJH-2, which confirm that the bond rating process involves an assessment of business and financial risks. In contrast, the use of a risk-free rate of return in the CAPM does not, and by definition can not, reflect a company's specific (i.e., unsystematic) risk. Consequently, a much larger portion of the total common equity cost rate is reflected in the company-specific bond yield (a product of the bond rating) than by the use of the risk-free rate in the CAPM, or indeed by the dividend yield in the DCF model. Moreover, the financial literature recognizes the RP and CAPM as two separate and distinct cost of common equity models.

Q. Have you performed RP analyses of common equity cost rate for both proxy groups?

A. Yes. The results of my application of the RP model are summarized on page 1 of SCHEDULE FJH-14. On Line No. 1 of SCHEDULE FJH-14, page 1, I show an average expected yield on A rated public utility bonds of 7.6%. On Line No. 2, I show the adjustments necessary to be made to the average 7.6% expected A rated utility bond yield so that the expected yields are reflective of the A2 for the seven LDCs and average Moody's bond rating of A1/A2 for the twenty Value Line LDCs (shown on page 3 of SCHEDULE FJH-14). Thus, the yields shown on Line No. 3, page 1 are 7.6% for both proxy groups since any required adjustment(s) are either negligible or nil as explained in Notes 2 and 3 of SCHEDULE FJH-14, page 1. On Line No. 4, I show my conclusions of an equity risk premium applicable to each proxy group while the total risk premium common equity cost rates are shown on Line No. 5.

2. Estimation of Expected Bond Yield

Q. Please describe the derivation of the expected bond yield.

A. Because the cost of common equity is prospective, a prospective yield on similarly-rated long-term debt is appropriate. I relied on a consensus forecast of about 50 economists of the expected yield on A rated public utility bonds for the five calendar quarters ending with the fourth calendar quarter of 1997 as derived from the December 1, 1996 Blue Chip Financial Forecasts (page 2 of SCHEDULE FJH-14). The average expected yield on A rated public utility bonds is 7.6%, as shown on page 1 of SCHEDULE FJH-14. As discussed supra, any adjustments were either not required or so negligible as to be the same as nil. Consequently, the average prospective bond yield applicable to each of the two proxy groups is 7.6%. Pages 6 and 7 of SCHEDULE FJH-14 show the bonds of the companies which comprise each Moody's bond yield average.

3. Estimation of the Equity Risk Premium

Q. Please explain the method utilized to estimate the equity risk premium.

A. I evaluated the results of two different historical equity risk premium studies, as well as Value Line's forecasted total annual return on the market over the prospective yield on high grade corporate bonds, as detailed on pages 8, 9 and 10 of SCHEDULE FJH-14. As shown on Line No. 3, page 8 of SCHEDULE FJH-14, the mean equity risk premiums based on both of the studies are 4.2% and 4.3% applicable to the seven LDCs and the twenty Value Line LDCs, respectively. These estimates are the result of an average of a beta-derived historical equity risk premiums, a forecasted total market equity risk premium as well as the mean historical equity risk premium applicable to public utilities based on holding period returns.

The basis of the beta-derived equity risk premiums applicable to the proxy groups is shown on page 9 of SCHEDULE FJH-14. Beta-determined equity risk premiums should receive substantial weight because betas are derived from the market prices of common stocks over a recent five-year period. Beta is a meaningful measure of prospective risk relative to the market as a whole and it is a logical means to allocate the relative share of the market's total equity risk premium.

The total market equity risk premium utilized was 6.1% and is based upon an average of the long-term historical and forecasted market risk premiums of 6.5% and 5.6%, respectively, as shown on SCHEDULE FJH-14, page 9. To derive the historical market equity risk premium, I used the most recent Ibbotson Associates' data on holding period returns for the S&P 500 Composite Index and Salomon Brothers Long-term High-grade Corporate Bond Index covering the period 1926-1995. The use of holding period returns over a very long period of time is useful in the beta approach. As Ibbotson Associates'[17] 1996 Yearbook states:

> A long view of capital market history, exemplified by the 70-year period (1926-1995) examined here, uncovers the basic relationships between risk and return among the different asset classes, and between nominal and real (inflation-adjusted) returns. The goal of this study of asset returns is to provide a period long enough to include most or all of the major types of events that investors have experienced and may experience in the future. Such events include war and peace, growth and decline, bull and bear markets, inflation and deflation, as well as less dramatic events that affect asset returns.
>
> By studying the past, one can make inferences about the future. While the actual events that occurred in 1926-1995 will not be repeated, the event-types (not specific events) of that period can be expected to recur. *It is sometimes said that one period or another is unusual--such as the crash of 1929-1932 and World War II. This logic is suspicious because all periods are unusual. One of the most unusual events of the century--the stock market crash of 1987--took place during the last decade; the equally remarkable inflation of the 1970s and early 1980s took place just over a decade ago. From the perspective that historical event-types tend to repeat themselves, a 70-year examination of past capital market returns reveals a great deal about what may be expected in the future.* (italics added)
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> *Some analysts calculate the expected equity risk premium over a shorter, more recent time period on the basis that more recent events are more likely to be repeated in the near future;* furthermore, the 1920s, 1930s and 1940s contain too many unusual events. *This view is suspect because all periods contain unusual events.* Some of the most 'unusual' events of this century took place quite recently. These events include the inflation of the late 1970s and early 1980s, the October 1987 stock market crash, the collapse of the high yield bond market, the major contraction and consolidation of the thrift industry, and the collapse of the Soviet Union - all of which happened in the past 10 years. Without an appreciation of the 1920s and 1930s, no one would believe that such events could happen. (italics added)

In addition to the foregoing, the use of long-term data is consistent with the long-

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[17] Ibbotson Associates, Stocks, Bonds, Bills and Inflation - 1996 Yearbook, pp. 27 and 153.

term investment horizon for utilities' common stocks. Consequently, the long-term arithmetic mean total return rates on the market as a whole of 12.5% and on corporate bonds of 6.0% were used, as shown at Line Nos. 1 and 2 of page 9 of SCHEDULE FJH-14. As shown on Line No. 3 of the same sheet, the resultant long-term historical equity risk premium on the market as a whole is 6.5%.

Arithmetic mean return rates were used because they are appropriate for cost of capital purposes. As Ibbotson Associates[18] states:

> The arithmetic mean is the rate of return which, when compounded over multiple periods, gives the mean of the probability distribution of ending wealth values....Stated another way, the arithmetic mean is correct because an investment with uncertain returns will have a higher expected ending wealth value than an investment that earns, with certainty, its compound or geometric rate of return every year....*Therefore, in the investment markets, where returns are described by a probability distribution, the arithmetic mean is the measure that accounts for uncertainty, and is the appropriate one for estimating discount rates and the cost of capital.* (italics added)

Ex-post total returns and equity risk premium spreads differ in size and direction over time. It is precisely for this reason why the arithmetic mean is important. It is the arithmetic mean which provides insight into the variance and standard deviation of returns. It is this prospect for variance, and hence the arithmetic mean, which provides the valuable insight needed by investors to estimate future risk when making a current investment. Absent valuable insight into the potential variance of returns, there can be no meaningful evaluation of prospective risk. All of the cost of common equity models, including the DCF, are premised upon the Efficient Market Hypothesis, that all publicly available information, and hence all relevant risk, is reflected in the market prices paid. If investors relied upon the geometric mean of ex-post spreads, they would have no

[18] Id., at pp. 154-155.

insight into the potential variance of future returns because the geometric mean relates the change over many periods to a constant rate of change, thereby obviating the year-to-year fluctuations, or variance, *critical to risk analysis*.

The basis of the forecasted market equity risk premium can be found on Line Nos. 4 through 6 on page 9 of SCHEDULE FJH-14. It is derived from an average of the most recent 12-month, 6-month, 3-month (using the months of November 1995 through October 1996) and a recent spot (November 29, 1996) median market price appreciation potentials by Value Line as explained in detail in Note 1 on page 4 of SCHEDULE FJH-15. The average expected price appreciation is 50% which translates to 10.67% per annum and, when added to the average (similarly calculated) dividend yield of 2.23%, equates to a forecasted annual total return rate on the market as a whole of 12.90%, rounded to 12.9%. Thus, this methodology is consistent with the use of the 12-month, 6-month, 3-month and spot dividend yields in my applications of the DCF model. To derive the forecasted total market equity risk premium of 5.6% shown on SCHEDULE FJH-14, page 9, Line No. 6, the December 1, 1996 forecast of about 50 economists of the expected yield on Aaa rated corporate bonds for the five calendar quarters ending with the fourth calendar quarter 1997 of 7.3% from Blue Chip Financial Forecasts was deducted from the Value Line total market return of 12.9%. The calculation resulted in an expected market risk premium of 5.6%.

The average of the historical and projected market equity risk premiums of 6.5% and 5.6% is 6.05%, rounded to 6.1%.

On page 11 of SCHEDULE FJH-14, the most current Value Line betas for the companies in both proxy groups are shown. The average betas for the proxy groups are 0.59 and 0.64, respectively. Applying these betas to the average market equity risk premium of 6.1% yields equity risk premiums of 3.6% for the seven LDCs and 3.9% for the twenty Value Line LDCs, as shown on SCHEDULE FJH-14, page 9, Line No. 9.

A mean equity risk premium of 4.7% applicable to companies with A rated public utility bonds was calculated based on holding period returns from a study using public utilities, as shown on Line No. 2, page 8 of SCHEDULE FJH-14 and detailed on page 10.

Averages of the beta-derived equity risk premiums of 3.6% for the seven LDCs and 3.9% for the twenty Value Line LDCs; and 4.7% resulting from the holding period returns of A rated public utilities are 4.2% for the seven LDCs and 4.3% for the twenty Value Line LDCs, as shown on Line No. 3, page 8 of SCHEDULE FJH-14.

Q. What are the RP calculated common equity cost rates?

A. They are 11.8% for the seven LDCs and 11.9% for the twenty Value Line LDCs, as shown on SCHEDULE FJH-14, page 1.

C. The Capital Asset Pricing Model (CAPM)

1. Theoretical Basis

Q. Please explain the theoretical basis of the CAPM.

A. The CAPM defines risk as the covariability of a security's returns with the market's returns. This covariability is measured by beta ("β"), an index measure of an individual security's variability relative to the market. A beta less than 1.0 indicates lower variability while a beta greater than 1.0 indicates greater variability than the market.

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

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

Where: R_s = Return rate on the common stock

R_f = Risk-free rate of return

R_m = Return rate on the market as a whole

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

Numerous tests of the CAPM have confirmed its validity. These tests have measured the extent to which security returns and betas are related as predicted by the CAPM. Morin observes that while the results support the notion that beta is related to security returns, it has been determined that the empirical Security Market Line (SML) described by the CAPM is not as steeply sloped as the predicted SML. Morin[19] states:

> With few exceptions, the empirical studies agree that the implied intercept term exceeds the risk-free rate and the slope term is less than predicted by the CAPM. That is, low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted.

* * *

[19] Id., at p. 321.

> Therefore, the empirical evidence suggests that the expected return on a security is related to its risk by the following approximation:
>
> $$K = R_F + x(R_M - R_F) + (1-x)\beta(R_M - R_F)$$
>
> where x is a fraction to be determined empirically. ...the value of x that best explains the observed relationship is between 0.25 and 0.30. If x = 0.25, the equation becomes:
>
> $$K = R_F + 0.25(R_M - R_F) + 0.75\beta(R_M - R_F)$$[20]

I have applied both the traditional CAPM and the empirical CAPM to the companies in my proxy groups and averaged the results.

2. Risk-Free Rate of Return

Q. Please describe your selection of a risk-free rate of return.

A. My applications of the traditional and empirical CAPM are summarized on SCHEDULE FJH-15, page 1. As shown on Line Nos. 1 and 4, the risk-free rate adopted for both applications is 6.6%. It is based upon the average consensus forecast of the reporting economists in the December 1, 1996 issue of Blue Chip Financial Forecasts as shown in Note 2, page 4, of the expected yields on 30-year U.S. Treasury bonds for the five quarters ending with the fourth calendar quarter 1997.

Q. Why is the prospective yield on 30-year U.S. Treasury Bonds appropriate for use as the risk-free rate?

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[20] 20 Id., at pp. 335-336.

A. My analysis on page 5 of SCHEDULE FJH-15 shows the yields on key indicators of interest rates by month for the most recent five years, November 1991 through October 1996. As shown, the standard deviation of the yield on 90-day T-Bills is the greatest of all the indicators including the Fed's discount rate, a principal monetary device used to control money supply and fight inflation. Utility capital costs are best reflected by the trend on Moody's A rated utility bonds which had a standard deviation over the period of 0.5722, very close to the standard deviation of the yields on 30-year Treasury bonds of 0.6032. These standard deviations contrast markedly with the highly volatile 0.9563 for the discount rate and the 1.0155 for the 90-day T-Bill. Moreover, the data also show that even 5- and 10-year intermediate-term Treasury securities have been more volatile than the yields on 30-year T-Bonds which most closely approximate the change in the long-term cost of capital to public utilities, measured by the yields on A rated utility bonds. Moreover, as Morin[21] states:

> Equity investors generally have an investment horizon far in excess of ninety days. More importantly, the short-term T-bill yields reflect the impact of factors different from those influencing long-term securities, such as common stock. For example, the premium for expected inflation absorbed into 90-day Treasury bills is likely to be far different than the inflationary premium absorbed into long-term securities yields. The yields on long-term Treasury bonds match more closely with common stock returns. *For investors with a long time horizon, a long-term government bond is almost risk-free.* (italics added)

As to the use of the highly volatile Treasury Bill rate, Morin cites Brigham and Gapenski who conclude[22]:

> Treasury bill rates are subject to more random disturbances than are Treasury bond rates. For example, bills are used by the Federal Reserve

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[21] Id., at p. 308.

[22] Id., at p. 308.

> System to control the money supply, and bills are also used by foreign governments, firms, and individuals as a temporary safe-house for money. Thus, if the Fed decides to stimulate the economy, it drives down the bill rate and the same thing happens if trouble erupts somewhere in the world and money flows into the United States seeking a temporary haven.

In summary, the average expected yield on 30-year Treasury Bonds is the appropriate proxy for the risk-free rate in the CAPM because it is less volatile than Treasury Bills, most closely matches the volatility of public utility long-term debt yields, is consistent with the long-term investment horizon implicit in common stocks, and is almost risk-free as noted by Morin, supra.

3. Market Equity Risk Premium

Q. Please explain the estimation of the expected equity risk premium for the market.

A. First, I estimate investors' expected total return rate for the market. Then I estimate the expected risk-free rate which I subtract from the expected total return rate for the market. The result is an expected equity risk premium for the market, some proportion of which must be allocated to the companies in both proxy groups. I make the allocation through the logical use of beta.

As shown on SCHEDULE FJH-15, page 1, Line No. 2, the proportional market equity risk premiums, based on the traditional CAPM, are 4.0% for the proxy group of seven LDCS and 4.3% for the proxy group of twenty Value Line LDCs. Applying the empirical CAPM results in equity risk premiums of 4.7% for the seven LDCs and 5.0% for the twenty Value Line LDCs, as shown on Line No. 5 on page 1 of SCHEDULE FJH-15. The total market equity risk premium utilized was 6.8% and is based upon an average of the long-term historical as well as the projected market risk premiums.

The basis of the projected median market equity risk premium is explained in detail in Note 1 on page 4 of SCHEDULE FJH-15. As previously discussed, it is derived from an average of the most recent 12-month, 6-month, 3-month (using the months of November 1995 through October 1996) and a recent spot (November 29, 1996) 3 - 5 year median total market price appreciation projections from Value Line and the long-term historical average from Ibbotson Associates. The appreciation projections by Value Line and average dividend yield equate to a forecasted annual total return rate on the market of 12.9%. The long-term historical return rate of 12.5% on the market as a whole is from Ibbotson Associates' Stocks, Bonds, Bills and Inflation - 1996 Yearbook. In each instance, the relevant risk-free rate was deducted from the total market return rate. For example, from the Value Line projected total market return of 12.9%, the forecasted average risk-free rate of 6.6% was deducted indicating a forecasted market risk premium of 6.3%. From the Ibbotson Associates' long-term historical total return rate of 12.5%, the long-term historical income return rate on long-term U.S. Government Securities of 5.2% was deducted indicating an historical equity risk premium of 7.3%. Thus, the average of the projected and historical total market risk premiums of 6.3% and 7.3%, respectively, is 6.8%.

Q. What are the results of your applications of the traditional and empirical CAPM to the proxy groups?

A. As shown on SCHEDULE FJH-15, page 1, Line No. 3, the traditional CAPM cost rates are 10.6% for the proxy group of seven LDCs and 10.9% for the proxy group of twenty Value Line LDCs. As shown on Line No. 6 of page 1, the empirical CAPM cost rates are 11.3%

for the seven LDCs and 11.6% for the twenty Value Line LDCs. The traditional and empirical CAPM cost rates are shown by company on pages 2 and 3, respectively, of SCHEDULE FJH-15.

IX. CONCLUSION OF COMMON EQUITY COST RATE

Q. What is your recommended common equity cost rate?

A. It is 11.70% based on the following common equity cost rates, after adjustment for AWG's greater relative investment risk, resulting from application of all three cost of common equity models, DCF, RP and CAPM, for the two proxy groups as shown on SCHEDULE FJH-1, page 3, summarized below.

	CAPM		RP	DCF Growth	
	Traditional	Empirical		Single-Stage	Two-Stage
The Proxy Group of Seven LDCs	10.6%	11.3%	11.8%	10.3%	10.2%
The Proxy Group of Twenty Value Line LDCs	10.9%	11.6%	11.9%	10.4%	9.8%

As shown on page 3 of SCHEDULE FJH-1, the indicated common equity cost rates before investment risk adjustments are 11.2% for the seven LDCs and 11.3% for the twenty Value Line LDCs. For the reasons stated previously, the DCF cost rate results for the two proxy groups should receive less than equal weight with the RP and CAPM results. DCF based common equity cost rates in the range of 9.8% to 10.4% are significantly disparate from RP and CAPM cost rates in the range of 10.6% to 11.9%. Therefore, in arriving at the indicated common equity cost rates, before investment risk adjustments, of 11.2% and 11.3% for the proxy groups of seven LDCs and twenty Value Line LDCs, respectively, I placed greater weight on the RP and CAPM cost rates and less weight on the DCF cost rates.

Q. What are the adjustments for investment risk differences?

A. They are 0.44% and 0.41%, rounded to 0.4% for the proxy groups of the seven LDCs and twenty Value Line LDCs. The adjustments are based on average bond yield spreads between Moody's Baa2 and A1/A2 and A2 as explained in Notes 5 and 6, SCHEDULE FJH-1, page 3.

Q. Why did you base the investment risk adjustment on the yield spread between Baa2 and A1/A2 and A2 rated public utility bonds?

A. AWG, and, hence, ANG, has no long-term debt which is rated. However, in my opinion if it did have rated debt, its bond rating would likely be Baa2/BBB because of its recent poor earnings history, as evidenced by achieved rates of return on average book common equity ranging from 5.5% to 7.7% and averaging 6.6% and a concomitant low average achieved pre-tax interest coverage, excluding all AFUDC, of only 2.4 times for the five years ending 1995 (see page 1 of SCHEDULE FJH-3). Such substandard ROEs and pre-tax interest coverage, coupled with total debt ratios in the range of 44.2% to 52.9% for the five years ending 1995, fit S&P's financial benchmark criteria for a BBB bond rating for an LDC with an average business position. Moreover, as discussed previously, AWG is small and ANG is even smaller which exacerbates ANG's relative business risk. Consequently, in my opinion, if Arkansas Western had rated bonds, the rating would likely be Moody's Baa2 and/or S&P's BBB. Since the proxy groups have bonds which are rated, on average, A1/A2 and A2, respectively, it is appropriate to utilize the spread between these bond ratings and Baa2 as the investment risk adjustment.

In view of the foregoing, after an investment risk adjustment of 0.4%, the indicated range of common equity cost rate based upon the two proxy groups is 11.6% to 11.7%, with a midpoint of 11.65%, rounded to 11.7%.

Q. Why do you recommend an 11.7% common equity cost rate when your cost rate is 11.6% based on the smaller proxy group of seven LDCs?

A. The indicated lower common equity cost rate of 11.6% for the proxy group of seven LDCs is counter-intuitive when contrasted with an 11.7% cost rate based on the much larger average size of the proxy groups of twenty Value Line LDCs and their slightly higher average bond rating A1/A2 versus an average A2 bond rating for the group of seven LDCs. A slightly lower bond rating and small size, consistent with the academic literature and conventional wisdom, points to a higher common equity cost rate. Consequently, an 11.7% cost rate is indicated applicable to AWG and, hence, ANG. Such a rate is also the average of the cost rates for both proxy groups of 11.65%, rounded to 11.7% as shown on SCHEDULE FJH-1, page 3.

X. CHECKS ON THE REASONABLENESS OF THE INDICATED COMMON EQUITY COST RATE

A. Interest Coverage

Q. How does interest coverage affect the cost rate of common equity capital?

A. Interest coverage is defined as the number of times annual interest on debt has been earned. It is the relationship between the income available to pay interest charges and total interest charges. Earnings available for common equity provide the margin by which fixed charges are covered more than once. Investors use coverage as a tool to measure the relative safety of their investment.

Rating agencies such as S&P place greater emphasis on pre-tax interest coverage as it levels financial risk differences between enterprises, reflects the fact that interest is paid before income taxes, and more accurately reflects the availability of cash from operations from which interest charges can be paid. The major bond rating agencies, and hence investors, review interest coverage trends in conjunction with current developments.

Q. What is the implicit opportunity to ANG to earn pre-tax interest coverage based on the requested overall cost of capital of 8.69%?

A. As shown on SCHEDULE FJH-1, page 1, the implicit opportunity for pre-tax coverage of interest expense is 3.5 times. If ANG is to have an opportunity to compete with other LDCs, whose average bond rating is A and business position is "average," it should have an opportunity to earn coverage of 3.75 times consistent with S&P's pre-tax interest coverage benchmark as shown on SCHEDULE FJH-2, page 14. Clearly, an opportunity to earn pre-tax interest coverage of 3.5 times is thus conservative and confirms the reasonableness of an 11.70% common equity cost rate.

B. Comparable Earnings Analysis

Q. Have you performed comparable earnings analyses to use as a check on the reasonableness of your recommended common equity cost rate of 11.70%?

A. Yes. As a check on the reasonableness of my recommended 11.70% common equity return, I performed comparable earnings analyses of proxy groups of domestic non-utility companies similar in total risk to the two proxy groups of LDCs. This analysis is shown on SCHEDULE FJH-16.

Comparable earnings is derived from the "corresponding risk" standard of the landmark cases of the U.S. Supreme Court. Thus, comparable earnings is consistent with the Hope doctrine that the return to the equity owner should be commensurate with returns on investments in other firms having corresponding risks.

This method is based on the opportunity cost principle which maintains that the true cost of an investment is equal to the cost of the best available alternative use of the funds to be invested. The opportunity cost principle is consistent with one of the fundamental principles upon which regulation rests: it is intended to act as a surrogate for competition and to provide a fair rate of return to investors.

The comparable earnings method is designed to measure the returns expected to be earned on the book common equity, in this case net worth, of similar risk enterprises. Thus, it provides a direct measure of return, since it translates into practice the competitive principle upon which regulation rests. In my opinion, the use of the achieved returns of regulated utilities of similar risk would be circular in reasoning and inconsistent with the principle of being equal in risk to non-price regulated firms.

The difficulty in application of the comparable earnings model is to select a proxy group of companies which are similar in risk, but are not price regulated utilities. Consequently, the first step in determining a cost of common equity using the comparable earnings model is to choose an appropriate proxy group(s) of non-price regulated firms. The proxy group(s) should be broad-based in order to obviate any company-specific aberrations. Utilities should be eliminated to avoid circularity since the returns on book common equity of utilities are substantially influenced by regulatory awards.

I have chosen proxy groups of domestic, non-price regulated, firms to reflect both the systematic and unsystematic risks of the two proxy groups of LDCs. The proxy groups of non-utility companies are listed on pages 1 through 4 of SCHEDULE FJH-16. The criteria used in the selection of these proxy groups were that the non-utility companies be domestic and have a rate of return on net worth or partners' capital reported in Value Line Investment Survey. Value Line betas were used as a measure of systematic risk. The residual standard error, or the standard error of the estimate from the regression equation from which each company's beta was derived, was used as a measure of each firm's specific, i.e., unsystematic risk. The residual standard error reflects the extent to which events specific to a company's operations will affect its stock price. Thus, the residual standard error is a measure of diversifiable, unsystematic, company-specific risk. In essence, companies which have similar betas and residual standard deviations, have similar investment risk, i.e., the sum of systematic (market) risk and unsystematic (business and financial) risk, respectively. Those statistics are derived from regression analyses using market prices which, under the Efficient Market Hypothesis, reflect all relevant risks. Thus, their use results in proxy non-price regulated firms similar in risk to the average company in the proxy groups of seven LDCs and twenty Value Line LDCs.

The companies in the proxy non-utility groups were chosen based on ranges of unadjusted beta and residual standard error. The ranges were based upon the average standard deviation of the unadjusted beta and the average residual standard error for each proxy group of LDCs.

The seven LDCs have an average unadjusted beta of 0.35 whose standard deviation is 0.1108 as of September 15, 1996, as shown in Note 4, page 5 of SCHEDULE FJH-16. The average residual standard error from the regression equations which derived the proxy group's average unadjusted beta is 2.4854 as also shown on SCHEDULE FJH-16, page 2 with a standard deviation of 0.1092.[23] A range of unadjusted betas from 0.02 to 0.68 and of residual standard errors from 2.1578 to 2.8130 was used to select the proxy group of domestic non-utility companies comparable to the

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[23] The standard deviation of the residual standard deviation is calculated as follows:

Standard Deviation of the Resid. Std. $= \dfrac{\text{Residual Standard Deviation}}{\sqrt{2N}}$

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

$N = 259$

Thus, $0.1092 = \dfrac{2.4854}{\sqrt{518}} = \dfrac{2.4854}{22.7596}$

seven LDCs, as shown on pages 1 and 2 of SCHEDULE FJH-16. These ranges are based upon the seven LDCs' average unadjusted beta of 0.35 and average residual standard error of 2.4854 plus or minus three standard deviations of beta (0.1108 x 3 = 0.3324) and residual standard errors (0.1092 x 3 = 0.3276).

The twenty Value Line LDCs have an average Value Line unadjusted beta of 0.41, whose standard deviation is 0.1065, as of September 15, 1996, as shown in Note 7, page 5 of SCHEDULE FJH-16. The average residual standard error from the regression equations which derived the proxy group's average unadjusted beta is 2.3869 as shown on SCHEDULE FJH-16, page 4, with a standard deviation of 0.1049 (0.1049 = 2.3869/22.7596). A range of unadjusted betas from 0.09 to 0.73 and of residual standard errors from 2.0722 to 2.7016 was used to select the proxy group of domestic non-utility companies comparable to the twenty Value Line LDCs shown on pages 3 and 4 of SCHEDULE FJH-16. These ranges are based upon the proxy group's average unadjusted beta of 0.24 and residual standard error of 2.3869 plus or minus three standard deviations of beta (0.1065 x 3 = 0.3195) and residual standard error (0.1049 x 3 = 0.3147), respectively.

I believe that this methodology for selecting non-price regulated firms of similar total risk (i.e., non-diversifiable systematic and diversifiable non-systematic risk) is meaningful and effectively obviates the criticisms normally associated with the selection of firms presumed to be comparable in total risk. This is because the selection of non-price regulated companies comparable in total risk is based on regression analyses of market prices which reflect investors' assessment of all risks, diversifiable and non-diversifiable. Thus, my empirical selection process results in companies comparable in both systematic and unsystematic risks.

Once proxy groups of non-price regulated companies are selected, it is then necessary to derive returns on book common equity, net worth, or partners' capital for the companies in the groups. I have measured these returns using the rate of return on net worth reported by Value Line. It is reasonable to measure these returns over both the most recent 3-5 years so that any yearly, company-specific aberrations can be obviated, and forecasted 3-5 years forward. However, these are achieved returns and not investor-expected returns. The opportunity for a fair rate of return which a public utility should be allowed to earn must account for attrition and regulatory lag. Historical ROEs are net of these factors. Therefore, these factors must be taken into account in the determination of the allowed ROE.

Due to the wide variation in the rates of return on net worth or partners' capital for the non-price regulated companies in the proxy groups, the median return is an appropriate indicator of the returns comparable to the two proxy groups of LDCs. The comparable earnings result is 13.9% for both proxy groups based upon an average of the median projected 3-5 year return and the average of the median historical returns. Even on the most conservative basis comparable earnings results are 12.4% (seven LDCs) and 12.3% (twenty Value Line LDCs) which are the average of the median historical returns as shown on pages 2 and 4 of SCHEDULE FJH-16. When consideration is given to the need for a higher opportunity return rate of an achieved rate), my recommended 11.70% common equity cost rate is affirmed as quite reasonable.

Q. Does that conclude your direct testimony?

A. Yes.

APPENDIX A

PROFESSIONAL QUALIFICATIONS

OF

FRANK J. HANLEY, PRESIDENT

AUS CONSULTANTS - UTILITY SERVICES

Professional Qualifications of Frank J. Hanley

EDUCATIONAL BACKGROUND

I am a graduate of Drexel University where I received a Bachelor of Science Degree from the College of Business Administration. The principal courses required for this Degree include accounting, economics, finance and other related courses. I am also Certified by the Society of Utility and Regulatory Financial Analysts, formerly the National Society of Rate of Return Analysts, as a Rate of Return Analyst (CRRA).

PROFESSIONAL EXPERIENCE

In 1959, I was employed by American Water Works Service Company, Inc., which is a wholly-owned subsidiary of American Water Works Company, Inc., the largest investor-owned water works operation in the United States. I was assigned to its Treasury Department in Philadelphia until 1961. During that period of time, I was heavily involved in the development of cash flow projections and negotiations with banks for the establishment of lines of credit for all of the operating and subholding companies in the system, which normally aggregated more than $100 million per year.

In 1961, I was assigned to its Accounting Department where I remained until 1963. During that two-year period, I became intimately familiar with all aspects of a service company accounting system, the nature of the services performed, and the methods of allocating costs. In 1963, I was reassigned to its Treasury Department as a Financial Analyst. My duties consisted of those previously performed, as well as the expanded responsibilities of assisting in the preparation of testimony and exhibits to be presented to various public utility commissions in regard to fair rate of return and other financial matters. I also designed and recommended financing programs for many of American's operating subsidiaries and negotiated sales of long-term debt securities and preferred stock on their behalf either directly with institutional investors or through investment bankers. I was elected Assistant Treasurer of a number of operating subsidiaries in the Fall of

1967, just prior to accepting employment with the Communications and Technical Services Division of the Philco-Ford Corporation located in Fort Washington, Pennsylvania. While in the employ of the Philco-Ford organization, as a Senior Financial Analyst, I had responsibility for the pricing negotiations and analysis of acceptable rates of return to the corporation for all types of contract proposals with various agencies of the U.S. Government and foreign governments.

In the Summer of 1969, I accepted a position with the Financial Division of The Philadelphia National Bank. I was elected Financial Planning Officer of the bank in December 1970. While employed with The Philadelphia National Bank, my responsibilities included preparation of the annual and five-year profit plans. In the compilation of these plans, I had to perform detailed analyses and measure the various levels of profitability for each organizational unit. I also assisted correspondent banks in matters of recapitalization and merger, made recommendations and studies for their use before the various regulatory bodies having jurisdiction over them.

In September 1971, I joined AUS Consultants - Utility Services Group as Vice President. I was elected Senior Vice President in May 1975. I was elected President in September 1989.

EXPERT WITNESS QUALIFICATIONS

I have offered testimony as an expert witness on the subjects of fair rate of return and utility financial matters before the Alaska Public Utilities Commission, the Arizona Corporation Commission, the Arkansas Public Service Commission, the California Public Utilities Commission, the Public Utilities Control Authority of Connecticut, the Delaware Public Service Commission, the Florida Public Service Commission, Hawaii Public Utilities Commission, the Indiana Public Utility Regulatory Commission, the Iowa Utilities Board, the Public Service Commission of Kentucky, the Maryland Public Service Commission, the Massachusetts Department of Public Utilities, the Michigan Public Service Commission, the Missouri Public Service Commission, the Public Service Commission of Nevada, the New Jersey Board of Public Utilities, the New Mexico State Corporation Commission, the Public Service Commission of the State of New York, the North Carolina Utilities Commission, the Ohio Public Utilities Commission, the Oklahoma Corporation

Commission, the Pennsylvania Public Utility Commission, the Rhode Island Public Utilities Commission, the Tennessee Public Service Commission, the Public Service Board of the State of Vermont, the Virginia State Corporation Commission, the Washington Utilities and Transportation Commission, the Public Service Commission of West Virginia, the Wisconsin Public Service Commission, the Federal Power Commission and its successor the Federal Energy Regulatory Commission. I have testified before the New Jersey Division of Tax Appeals and the United States Bankruptcy Court - Middle District of Pennsylvania with regard to the economic valuation of utility property. Also, I have testified before the U.S. Tax Court in Washington D.C. as an expert witness on the value of closely held utility common stock in a contested Federal Estate Tax case.

In addition, I have appeared as a Staff rate of return witness for the Arizona Corporation Commission and the Delaware Public Service Commission in a number of proceedings. I have testified on the fair rate of return for the City of New Orleans, Louisiana, which is the regulatory authority with regard to retail rates over New Orleans Public Service, Inc., in its application of an increase in both electric and gas rates. I have acted as a consultant to the District of Columbia Public Service Commission itself -- not in the capacity of Staff.

I have testified before a number of local and county regulatory bodies in various states on the subject of fair rate of return on behalf of cable television companies as well as before an arbitration panel in Ohio and a State District Court in Texas. I have testified before the Public Works Committee of the Nebraska State Senate in re Legislative Bill 731 which proposed permitting Public Power Districts and Municipalities to enter the Cable Television field.

PROFESSIONAL ASSOCIATIONS, PUBLICATIONS AND GUEST SPEAKER APPEARANCES

I am a Member and Director of the Society of Utility and Regulatory Financial Analysts, formerly known as the National Society of Rate of Return Analysts. I am a Certified Rate of Return Analyst (CRRA), Founding Member. I am also a member of the American Gas Association, an Associate Member of the New England Gas Association, The Pennsylvania Gas Association, and the National Association of Water Companies. I often attend meetings of the Rate of Return Analysts during which considerable information on the subject is exchanged. I have also attended corporate bond rating seminars held by Standard & Poor's Corporation. I continuously review financial publications of institutions such as Standard & Poor's, Moody's Investors' Service, Value Line Investment Survey, and periodicals of various agencies of the U.S. Government.

I co-authored an article with A. Gerald Harris entitled "Does Diversification Increase the Cost of Equity Capital?" which was published in the July 15, 1991 issue of Public Utilities Fortnightly. Also, an article which I co-authored with Pauline M. Ahern entitled "Comparable Earnings: New Life for an Old Precept" was published in the American Gas Association's Financial Quarterly Review, Summer 1994. I also authored an article entitled "Why Performance-Based Incentives Are Essential" which was published in THE CITY GATE, Fall 1995, a magazine published by the Pennsylvania Gas Association.

I have appeared as a guest speaker before an annual convention of the Mid-American Cable Television Association in Kansas City, Missouri and as a guest panelist on the small water companies' operation seminar of the National Association of Water Companies' 77th Annual Convention in Hollywood, Florida. I addressed the Second Annual Seminar on Regulation of Water Utilities sponsored by N.A.R.U.C., at the University of South Florida's St. Petersburg campus. I have spoken on fair rate of return to the Third and Fourth Annual Utilities Conferences, as well as the special conference on the cost of capital in El Paso, Texas sponsored by New Mexico State University. In 1983 I also made a presentation on the Cost of Capital in Atlantic City, New Jersey, at a seminar co-sponsored by Temple University. I have also addressed the Public Utility Law Section of the American Bar Association's Third Institute on Fundamentals of Ratemaking which was held in Washington, D.C. and I addressed a Conference on Cable Television sponsored by The University of Texas School of Law at Austin, Texas. Also, I addressed a meeting of the New England Water Works Association at Boxborough, Massachusetts, on the subject of Enterprise Financing. In addition, I was a speaker and mock witness in three different Utility Workshops for Attorneys sponsored by the Financial Accounting Institute held in Boston and Washington, D.C. I also was on a panel at the 23rd Financial Forum sponsored by the National Society of Rate of Return Analysts. The topic was Rate of Return Determination in the Diversified and/or Partially Deregulated Environment. I addressed the 83rd Annual Meeting of the Pennsylvania Gas Association in Hershey, PA. My topic was the Cost of Capital Implications of Demand Side Management. In June 1993, I lectured on the cost of capital at the American Gas Association's Gas Rate Fundamentals Course. In October 1993, I was a guest speaker at the University of Wisconsin's Center for Public Utilities -- my topic was "Diversification and Corporate Restructuring in the Electric Utility Industry - Trends and Cost of Capital Implications." In October 1994, I was a guest speaker on a panel at the Fourteenth Annual Electric & Natural Gas Conference in Atlanta, Ga., sponsored by the Bonbright Utilities Center of the University of Georgia and the Georgia Public Service Commission. The panel topic was "Responses to Competition and Incentive Rates." In October 1994, I was a guest speaker on a panel at a conference and workshop called "Navigating the Shoals of Cable Rate Regulation" sponsored by EXNET in Washington, D.C. The panel topic was "Rate of Return." Also, in March 1995, I was a guest speaker on a panel at a conference entitled, "Current Issues Challenging the Regulatory Process" sponsored by New Mexico State University - Center for Public Utilities. My panel topic concerned the electric industry and was titled, "Impact of a Competitive Structure on the Financial Markets". In May 1995, I was a guest speaker at the 87th Annual Meeting of the Pennsylvania Gas Association in Hershey, PA. My topic was "The Pennsylvania Economy and Utility Regulation: Impact on Industry, Consumers and Investors." In May 1996, I was on a panel at the 28th Financial Forum of the Society of Utility and Regulatory Financial Analysts. The panel's topic was "Revisiting the Risk Premium Approach" and was held in Richmond, Virginia. Also in May and September 1996 respectively, I participated as an instructor in seminars on the basics of regulation and the ratemaking process in a changing environment. They were sponsored by New Mexico State University's Center for Public Utilities and the National Association of Regulatory

Utility Commissioners (NARUC) and were held in Baltimore, Maryland and Albuquerque, New Mexico, respectively.

Exhibit No.:	
Issue:	Common Equity Cost Rate
Witness:	Hanley
Exhibit:	Direct Schedules
Sponsoring Party:	Associated Natural Gas
Case No.:	GR-97-272

ASSOCIATED NATURAL GAS
A DIVISION OF ARKANSAS WESTERN GAS COMPANY

CASE NO. GR-97-272

DIRECT SCHEDULES

OF

FRANK J. HANLEY, PRESIDENT
AUS CONSULTANTS - UTILITY SERVICES

ASSOCIATED NATURAL GAS COMPANY
A DIVISION OF ARKANSAS WESTERN GAS COMPANY
Table of Contents
to the Financial Supporting Schedules
of Frank J. Hanley

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Summary of Cost of Capital and Fair Rate of Return
Based on Total Capital (Incl. Cost-Free and Other Capital)
for the Test Year Ended July 31, 1996 (Adjusted)

Type of Capital	Ratios (1)	Cost Rate	Weighted Cost Rate	Before-Income Tax Weighted Cost Rate (2)
Long-Term Debt				
Intercompany Notes	40.08 %			
Accumulated Deferred Investment Tax Credits	0.50			
Total Long-Term Debt	40.58	7.97 % (1)	3.23 %	3.23 %
Customer Deposits				
Arkansas	2.14	5.50 (1)	0.12	0.12
Missouri	0.48	5.50 (1)	0.03	0.03
Total Customer Deposits	2.62		0.15	0.15
Total Long-Term Debt and Customer Deposits	43.20		3.38	3.38
Common Equity				
Common Stock and Retained Earnings	44.69			
Accumulated Deferred Investment Tax Credits	0.56			
Total Common Equity	45.25	11.70 (3)	5.30	8.60
Accumulated Deferred Income Taxes	11.48	0.00 (1)	0.00	0.00
Other Interest Bearing Liabilities	0.07	8.00 (1)	0.01	0.01
Total	100.00 %		8.69 %	11.99 %

Before-income tax interest coverage of all interest charges (11.99% / 3.38%) 3.5 x

Notes:

(1) As developed on page 1 of SCHEDULE PMA-1 of Company Witness Pauline M. Ahern.

(2) Based upon a company-provided estimated combined effective federal and state income tax rate of 38.389% based on the final requested rate relief.

(3) Based upon informed judgment from the entire study, the principal results of which are summarized on page 3 of this Schedule

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Summary of Cost of Capital and Fair Rate of Return
Based on Investor-Provided Total Capital (Incl. Customer Deposits)
for the Test Year Ended July 31, 1996 (Adjusted)

Type of Capital	Ratios (1)	Cost Rate	Weighted Cost Rate	Before-Income Tax Weighted Cost Rate (2)
Long-Term Debt - Intercompany Notes	47.27 %	7.97 % (1)	3.77 %	3.77 %
Common Equity	52.73	11.70 (3)	6.17	10.01
Total	100.00 %		9.94 %	13.78 %

Before-income tax interest coverage of all interest charges (13.78% / 3.77%)	3.7 x

Notes:

(1) As developed on page 1 of SCHEDULE PMA-1 of Company Witness Pauline M. Ahern.

(2) Based upon a company-provided estimated combined effective federal and state income tax rate of 38.389% based on the final requested rate relief.

(3) Based upon informed judgment from the entire study, the principal results of which are summarized on page 3 of this Schedule.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Brief Summary of Most Relevant Indicators
of Common Equity Cost Rate

Line No.	Principal Methods	Proxy Group of Seven Gas Distribution Companies	Proxy Group of Twenty Value Line Gas Distribution Companies
	DCF Model		
1.	Single-Stage Growth Model (1)	10.3 %	10.4 %
2.	Two-Stage Growth Model (2)	10.2	9.8
	Average	10.3	10.1
3.	Risk Premium Model (3)	11.8	11.9
4.	Capital Asset Pricing Model		
	Traditional CAPM (4)	10.6	10.9
	Empirical CAPM (4)	11.3	11.6
	Average	11.0	11.3
5.	Common Equity Cost Rate before Investment Risk Adjustment	11.2 %	11.3 %
6.	Investment Risk Adjustment	0.4 (5)	0.4 (6)
7.	Common Equity Cost Rate after Investment Risk Adjustment	11.6 %	11.7 %
8.	Conclusion	11.7% (7)	
	Check on the Reasonableness of the Conclusion of Common Equity Cost Rate		
9.	Comparable Earnings Analysis	13.9 % (8)	13.9 % (9)

See page 4 for notes

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Brief Summary of Most Relevant Indicators
of Common Equity Cost Rate

Notes: (1) From SCHEDULE FJH-9.
(2) From page 1 of SCHEDULE FJH-13.
(3) From page 1 of SCHEDULE FJH-14.
(4) From page 1 of SCHEDULE FJH-15.
(5) The 11.2% indicated common equity cost rate based upon the proxy group of seven LDCs is applicable to the average A1/A2 Moody's bond rating of the group. As explained in Mr. Hanley's direct testimony, Arkansas Western has greater relative risk than the seven LDCs as evidenced by the Company's likely Baa2 Moody's bond rating. Therefore, an indication of the magnitude of the investment risk adjustment is based upon the yield spread between A1/A2 and Baa2 rated public utility bonds. The investment risk adjustment of 0.4% equals the sum of one-sixth the average spread between Aa and A rated public utility bonds of 18 basis points (from page 5 of SCHEDULE FJH-14 plus the spread between A and Baa rated public utility bonds of 41 basis points (from page 5 of SCHEDULE FJH-14). (0.40% = (1 / 6 * 0.18%) + (0.41%) = (0.030% + 0.410%) = 0.440%, rounded to 0.4%).
(6) The 11.3% indicated common equity cost rate based upon the proxy group of twenty Value Line LDCs is applicable to the average A2 Moody's bond rating of the group. As explained in Mr. Hanley's direct testimony, Arkansas Western has greater relative risk than the twenty Value Line LDCs as evidenced by the Company's likely Baa2 Moody's bond rating. Therefore, an indication of the magnitude of the investment risk adjustment is based upon the yield spread between A2 and Baa2 rated public utility bonds. The investment risk adjustment of 0.4% equals the average spread between A and Baa rated public utility bonds of 41 basis points (from page 5 of SCHEDULE FJH-14), rounded to 0.4%.
(7) Based upon the midpoint of the range of indicated common equity cost rate after investment risk adjustment. As discussed in Mr. Hanley's direct testimony, the indicated common equity cost rate results for the proxy group of seven LDCs is counterintuitive vis-a-vis the indicated common equity cost rate results for the twenty Value Line LDCs, which, on average, are significantly larger than the seven LDCs, on average.
(8) From page 2 of SCHEDULE FJH-16.
(9) From page 4 of SCHEDULE FJH-16.

Standard & Poor's CORPORATE RATINGS CRITERIA

STANDARD & POOR'S

CORPORATE RATINGS CRITERIA

Dear Reader,

This volume updates the 1994 edition of *Corporate Finance Criteria.* There are several new chapters, covering our recently introduced Bank Loan Ratings, criteria for "notching" junior obligations, and the role of cyclicality in ratings. Naturally, the ratio medians have been brought up to date.

Standard & Poor's criteria publications represent our endeavor to convey the thought processes and methodologies employed in determining Standard & Poor's ratings. They describe both the quantitative and qualitative aspects of the analysis. We believe that our rating product has the most value if users appreciate all that has gone into producing the letter symbols.

Bear in mind, though, that a rating is, in the end, an opinion. The rating experience is as much an art as it is a science.

Solomon B. Samson
Chairman, Corporate Ratings Criteria Committee

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Utilities

The utilities rating methodology encompasses two basic components: business risk analysis and financial analysis. Evaluation of industry characteristics, the utility's position within that industry, its regulation, and its management provides the context for assessing a firm's financial condition.

Historical analysis is a tool for identifying strengths and weaknesses, and provides a starting point for evaluating financial condition. Business position assessment is the qualitative measure of a utility's fundamental creditworthiness. It focuses on the forces that will shape the utilities' future.

Utilities credit analysis factors

<u>Business risk</u>	<u>Financial risk</u>
• Markets and service area economy	• Earnings protection
• Competitive position	• Capital structure
• Operations	• Cash flow adequacy
• Regulation	• Financial flexibility/capital attraction
• Management	
• Fuel, power, and water supply	
• Asset concentration	

The credit analysis of utilities is quickly evolving, as utilities are treated less as regulated monopolies and more as entities faced with a host of challengers in a competitive environment. Marketplace dynamics are supplanting the power of regulation, making it critically important to reduce costs and/or market new services in order to thwart competitors' inroads.

Markets and service area economy

Assessing service territory begins with the economic and demographic evaluation of the area in which the utility has its franchise. Strength of long-term demand for the product is examined from a macroeconomic perspective. This enables Standard & Poor's to evaluate the affordability of rates and the staying power of demand.

Standard & Poor's tries to discern any secular consumption trends and, more importantly, the reasons for them. Specific items examined include the size and growth rate of the market, strength of the franchise, historical and projected sales growth, income levels and trends in population, employment, and per capita income. A utility with a healthy economy and customer base—as illustrated by diverse employment opportunities, average or above-average wealth and income statistics, and low unemployment—will have a greater capacity to support its operations.

For electric and gas utilities, distribution by customer class is scrutinized to assess the depth and diversity of the utility's customer mix. For example, heavy industrial concentration is viewed cautiously, since a utility may have significant exposure to cyclical volatility. Alternatively, a large residential component yields a stable and more predictable revenue stream. The largest utility customers are identified to determine their importance to the bottom line and assess the risk of their loss and potential adverse effect on the utility's financial position. Credit concerns arise when individual customers represent more than 5% of revenues. The company or industry may play a significant role in the overall economic base of the service area. Moreover, large customers may turn to cogeneration or alternative power supplies to meet their energy needs, potentially leading to reduced cash flow for the utility (even in cases where a large customer pays discounted rates and is not a profitable account for the utility). Customer concentration is less significant for water and telecommunication utilities.

Competitive position

As competitive pressures have intensified in the utilities industry, Standard & Poor's analysis has deepened to include a more thorough review of competitive position.

Electric utility competition

For electric utilities, competitive factors examined include: percentage of firm wholesale revenues that are most vulnerable to competition; industrial load concentration; exposure of key customers to alternative suppliers; commercial concentrations; rates for various customer classes; rate design and flexibility; production costs, both marginal and fixed; the regional capacity situation; and transmission constraints. A regional focus is evident, but high costs and rates relative to national averages are also of significant concern because of the potential for electricity substitutes over time.

Mounting competition in the electric utility industry derives from excess generating capacity, lower barriers to entering the electric generating business, and marginal costs that are below embedded costs. Standard & Poor's has already witnessed declining prices in wholesale markets, as *de facto* retail competition is already being seen in several parts of the country. Standard & Poor's believes that over the coming years more and more customers will want and demand lower prices. Initial concerns focus on the largest industrial loads, but other customer classes will be increasingly vulnerable. Competition will not necessarily be driven by legislation. Other pressures will arise from global competition and improving technologies, whether it be the declining cost of incremental generation or advances in transmission capacity or substitute energy sources like the fuel cell. It is impossible to say precisely when wide-open retail competition will occur; this will be evolutionary. However, significantly greater competition in retail markets is inevitable.

Gas utility competition

Similarly, gas utilities are analyzed with regard to their competitive standing in the three major areas of demand: residential, commercial, and industrial. Although regulated as holders of monopoly power, natural gas utilities have for some time been actively competing for energy market share with fuel oil, electricity, coal, solar, wood, etc. The long-term staying power of market demand for natural gas cannot be taken for granted. In fact, as the electric utility industry restructures and reduces costs, electric power will become more cost competitive and threaten certain gas markets. In addition, independent gas marketers have made greater inroads behind the city gate and are competing for large gas users. Moreover, the recent trend by state regulators to unbundle utility services is creating opportunities for outsiders to market niche products. Distributors still have the upper hand, but those who do not reduce and control costs, and thus rates, could find competition even more difficult.

Natural gas pipelines are judged to carry a somewhat higher business risk than distribution companies because they face competition in every one of their markets. To the extent a pipeline serves utilities versus industrial end users, its stability is greater. Over the next five years, pipeline competition will heat up since many service contracts with customers are expiring. Most distributor or end-use customers are looking to reduce pipeline costs and are working to improve their load factor to do so. Thus, pipelines will likely find it difficult to recontract all capacity in coming years. Being the pipeline of choice is a function of attractive transportation rates, diversity and quality of services provided, and capacity available in each particular market. In all cases though, periodic discounting of rates to retain customers will occur and put pressure on profitability.

Water utility competition

As the last true utility monopoly, water utilities face very little competition and there is currently no challenge to the continuation of franchise areas. The only exceptions have been cases where investor-owned water companies have been subject to condemnation and municipalization because of poor service or political motivations. In that regard, Standard & Poor's pays close attention to costs and rates in relation to neighboring utilities and national averages. (In contrast, the privatization of public water facilities has begun, albeit at a slower pace than anticipated. This is occurring mostly in the form of operating contracts and public/private partnerships, and not in asset transfers. This trend should continue as cities look for ways to balance their tight budgets.) Also, water utilities are not fully immune to the forces of competition; in a few instances wholesale customers can access more than one supplier.

Telephone competition

The Telecommunications Act of 1996 accelerates the continuing challenge to the local exchange companies' (LECs) century-old monopoly in the local loop. Competitive access providers (CAPs), both facilities-based and resellers, are aggressively pursuing customers, generally targeting metropolitan areas, and promising lower rates and better service.

Most long-distance calls are still originated and terminated on the local telephone company network. To complete such a call, the long-distance provider (including AT&T, MCI, Sprint and a host of smaller interexchange carriers or "IXCs") must pay the local telephone company a steep "access" fee to compensate the local phone company for the use of its local network. CAPs, in contrast, build or lease facilities that directly connect customers to their long-distance carrier, bypassing the local telephone company and avoiding access fees, and thereby can offer lower long-distance rates. But the LECs are not standing still; they are combating the loss of business to CAPs by lowering access fees, thereby reducing the economic incentive for a high usage long-distance customer to use a CAP. LECs are attempting to make up for the loss of revenues from lower access fees by increasing basic local service rates (or at least not lowering them), since basic service is far less subject to competition. LECs are improving operating efficiency and marketing high margin, value-added new services. Additionally, in the wake of the Telecommunications Act, LECs will capture at least some of the inter-LATA long-distance market. As a result of these initiatives, LECs continue to rebuild themselves—from the traditional utility monopoly to leaner, more marketing oriented organizations.

While LECs, and indeed all segments of the telecommunications sector, face increasing competition, there are favorable industry factors that tend to offset heightened business risk and auger for overall ratings stability for most LECs. Importantly, telecommunications is a declining-cost business. With increased deployment of fiber optics, the cost of transport has fallen dramatically and digital switching hardware and software have yielded more capable, trouble-free and cost-efficient networks. As a result, the cost of network maintenance has dropped sharply, as illustrated by the ratio of employees per 10,000 access lines, an oft cited measurement of efficiency. Ratios as low as 25 employees per 10,000 lines are being seen, down from the typical 40 or more employees per 10,000 ratio of only a few years ago.

In addition, networks are far more capable. They are increasingly digitally switched and able to accommodate high-speed communications. The infrastructure needed to accommodate switched broadband services will be built into telephone networks over the next few years. These advanced networks will enable telephone companies to look to a greater variety of high-margin, value-added services. In addition to those current services such as call waiting or caller ID, the delivery of hundreds of broadcast and interactive video channels will be possible. While these services offer the potential of new revenue streams, they will simultaneously present a formidable challenge. LECs will be entering the new (to them) arena of multimedia entertainment and will have to develop expertise in marketing and entertainment programming acumen; such skills stand in sharp contrast to LECs' traditional strengths in engineering and customer service.

Operations

Standard & Poor's focuses on the nature of operations from the perspective of cost, reliability, and quality of service. Here, emphasis is placed on those areas that require management attention in terms of time or money and which, if unresolved, may lead to political, regulatory, or competitive problems.

Operations of electric utilities

For electrics, the status of utility plant investment is reviewed with regard to generating plant availability and utilization, and also for compliance with existing and contemplated environmental and other regulatory standards. The record of plant outages, equivalent availability, load factors, heat rates, and capacity factors are examined. Also important is efficiency, as defined by total megawatt hour per employee and customers per employee. Transmission interconnections are evaluated in terms of the number of utilities to which the utility in question has access, the cost structures and available generating capacity of these other utilities, and the price paid for wholesale power.

Because of mounting competition and the substantial escalation in decommissioning estimates, significant weight is given to the operation of nuclear facilities. Nuclear plants are becoming more vulnerable to high production costs that make their rates uneconomic. Significant asset concentration may expose the utility to poor performance, unscheduled outages or premature shutdowns, and large deferrals or regulatory assets that may need to be written off for the utility to remain competitive. Also, nuclear facilities tend to represent significant portions of their operators' generating capability and assets. The loss of a productive nuclear unit from both power supply and rate base can interrupt the revenue stream and create substantial additional costs for repairs and improvements and replacement power. The ability to keep these stations running smoothly and economically directly influences the ability to meet electric demand, the stability of revenues and costs, and, by extension, the ability to maintain adequate creditworthiness. Thus, economic operation, safe operation, and long-term operation are examined in depth. Specifically, emphasis is placed on operation and maintenance costs, busbar costs, fuel costs, refueling outages, forced outages, plant statistics, NRC evaluations, the potential need for repairs, operating licenses, decommissioning estimates and amounts held in external trusts, spent fuel storage capacity, and management's nuclear experience. In essence, favorable nuclear operations offer significant opportunities but, if a nuclear unit runs poorly or not at all, the attendant risks can be great.

Operations of gas utilities

For gas pipeline and distribution companies, the degree of plant utilization, the physical condition of the mains and lines, adequacy of storage to meet seasonal needs, "lost and unaccounted for" gas levels, and per-unit nongas operating and construction costs are important factors. Efficiency statistics such as load factor, operating costs per customer, and operating income per employee are also evaluated in comparison to other utilities and the industry as a whole.

Operations of water utilities

As a group, water utilities are continually upgrading their physical plant to satisfy regulations and to develop additional supply. Over the next decade, water systems will increasingly face the task of maintaining compliance, as drinking water regulations change and infrastructure ages. Given that the Safe Drinking Water Act was authorized in 1974, the first generation of treatment plants built to conform with these rules are almost 20 years old. Additionally, because the focus during this period was on satisfying environmental standards, deferred maintenance of distribution systems has been common, especially in older urban areas. The increasing cost of supplying treated water argues against the high level of unaccounted for water witnessed in the industry. Consequently, Standard & Poor's anticipates capital plans for rebuilding distribution lines and major renewal and replacement efforts aimed at treatment plants.

Operations of telephone companies

For telephone companies, cost-of-service analysis focuses on plant capability and measures of efficiency and quality of service. Plant capability is ascertained by looking at such parameters as percentage of digitally switched lines; fiber optic deployment, in particular in those portions of the plant key to network survival; and the degree of broadband capacity fiber and coaxial deployment and broadband switching capacity. Efficiency measures include operating margins, the ratio of employees per 10,000 access lines, and the extent of network and operations consolidation. Quality of service encompasses examination of quantitative measures, such as trouble reports and repeat service calls, as well as an assessment of qualitative factors, that may include service quality goals mandated by regulators.

Regulation

Regulatory rate-setting actions are reviewed on a case-by-case basis with regard to the potential effect on creditworthiness. Regulators' authorizing high rates of return is of little value unless the returns are earnable. Furthermore, allowing high returns based on noncash items does not benefit bondholders. Also, to be viewed positively, regulatory treatment should allow consistent performance from period to period, given the importance of financial stability as a rating consideration.

The utility group meets frequently with commission and staff members, both at Standard & Poor's offices and at commission headquarters, demonstrating the importance Standard & Poor's places on the regulatory arena for credit quality evaluation. Input from these meetings and from review of rate orders and their impact weigh heavily in Standard & Poor's analysis.

Standard & Poor's does not "rate" regulatory commissions. State commissions typically regulate a number of diverse industries, and regulatory approaches to different types of companies often differ within a single regulatory jurisdiction. This makes it all but impossible to develop inclusive "ratings" for regulators.

Standard & Poor's evaluation of regulation also encompasses the administrative, judicial, and legislative processes involved in state and federal regulation. These can affect rate-setting activities and other aspects of the business, such as competitive entry, environmental and safety rules, facility siting, and securities sales.

As the utility industry faces an increasingly deregulated environment, alternatives to traditional rate-making are becoming more critical to the ability of utilities to effectively compete, maintain earnings power, and sustain creditor protection. Thus, Standard & Poor's focuses on whether regulators, both state and federal, will help or hinder utilities as they are exposed to greater competition. There is much that regulators can do, from allocating costs to more captive customers to allowing pricing flexibility—and sometimes just stepping out of the way.

Under traditional rate-making, rates and earnings are tied to the amount of invested capital and the cost of capital. This can sometimes reward companies more for justifying costs than for containing them. Moreover, most current regulatory policies do not permit utilities to be flexible when responding to competitive pressures of a deregulated market. Lack of flexible tariffs for electric utilities may lure large customers to wheel cheaper power from other sources.

In general, a regulatory jurisdiction is viewed favorably if it permits earning a return based on the ability to sustain rates at competitive levels. In addition to performance-based rewards or penalties, flexible plans could include market-based rates, price caps, index-based prices, and rates premised on the value of customer service. Such rates more closely mirror the competitive environment that utilities are confronting.

Electric industry regulation

The ability to enter into long-term arrangements at negotiated rates without having to seek regulatory approval for each contract is also important in the electric industry. (While contracting at reduced rates constrains financial performance, it lessens the potential adverse impact in the event of retail wheeling. Since revenue losses associated with this strategy are not likely to be recovered from ratepayers, utilities must control costs well enough to remain competitive if they are to sustain current levels of bondholder protection.)

Natural gas industry regulation

In the gas industry, too, several state commission policies weigh heavily in the evaluation of regulatory support. Examples include stabilization mechanisms to adjust revenues for changes in weather or the economy, rate and service unbundling decisions, revenue and cost allocation between sales and transportation customers, flexible industrial rates, and the general supportiveness of construction costs and gas purchases.

Water industry regulation

In all water utility activities, federal and state environmental regulations continue to play a critical role. The legislative timetable to effect the 1986 amendments to the Safe Drinking Water Act of 1974 was quite aggressive. But environmental standards-setting has actually slowed over the past couple of years due largely to increasing sentiment that the stringent, costly standards have not been justified on the basis of public health. A moratorium on the promulgation of significant new environmental rules is anticipated.

Telecommunications industry regulation

Despite the advances in telecommunications deregulation, analysis of regulation of telephone operators will continue to be a key rating determinant for the foreseeable future. The method of regulation may be either classic rate-based rate of return or some form of price cap mechanism. The most important factor is to assess whether the regulatory framework—no matter which type—provides sufficient financial incentive to encourage the rated company to maintain its quality of service and to upgrade its plant to accommodate new services while facing increasing competition from wireless operators and cable television companies.

Where regulators do still set tariffs based on an authorized return, Standard & Poor's strives to explore with regulators their view of the rate-of-return components that can materially impact reported versus regulatory earnings. Specifically these include the allowable base upon which the authorized return can be earned, allowable expenses, and the authorized return. Since regulatory oversight runs the gamut from strict, adversarial relationships with the regulated operating companies to highly supportive postures, Standard & Poor's probes beyond the apparent regulatory environment to ascertain the actual impact of regulation on the rated company.

Management

Evaluating the management of a utility is of paramount importance to the analytical process since management's abilities and decisions affect all areas of a company's operations. While regulation, the economy, and other outside factors can influence results, it is ultimately the quality of management that determines the success of a company.

With emerging competition, utility management will be more closely scrutinized by Standard & Poor's and will become an increasingly critical component of the credit evaluation. Management strategies can be the key determinant in differentiating utilities and in establishing where companies lie on the business position spectrum. It is imperative that managements be adaptable, aggressive, and proactive if their utilities are to be viable in the future; this is especially important for utilities that are currently uncompetitive.

The assessment of management is accomplished through meetings, conversations, and reviews of company plans. It is based on such factors as tenure, industry experience, grasp of industry issues, knowledge of customers and their needs, knowledge of competitors, accounting and financing practices, and commitment to credit quality. Management's ability and willingness to develop workable strategies to address their systems' needs, to deal with the competitive pressures of free market, to execute reasonable and effective long-term plans, and to be proactive in leading their utilities into the future are assessed. Management quality is also indicated by thoughtful balancing of public and private priorities, a record of credibility, and effective communication with the public, regulatory bodies, and the financial community. Boards of directors will receive ever more attention with respect to their role in setting appropriate management incentives.

With competition the watchword, Standard & Poor's also focuses on management's efforts to enhance financial condition. Management can bolster bondholder protection by taking any number of discretionary actions, such as selling common equity, lowering the common dividend payout, and paying down debt. Also important for the electric industry will be creativity in entering into strategic alliances and working partnerships that improve efficiency, such as central dispatching for a number of utilities or locking up at-risk customers through long-term contracts or expanded flexible pricing agreements. Proactive management teams will also seek alternatives to traditional rate-base, rate-of-return rate-making, move to adopt higher depreciation rates for generating facilities, segment customers by individual market preferences, and attempt to create superior service organizations.

In general, management's ability to respond to mounting competition and changes in the utility industry in a swift and appropriate manner will be necessary to maintain credit health.

Fuel, power, and water supply

Assessment of present and prospective fuel and power supply is critical to every electric utility analysis, while gauging the long-term natural gas supply position for gas pipeline and distribution companies and the water resources of a water utility is equally important. There is no similar analytical category for telephone utilities.

Electric utilities

For electric utilities emphasis is placed on generating reserve margins, fuel mix, fuel contract terms, demand-side management techniques, and purchased power arrangements. The adequacy of generating margins is examined nationally, regionally, and for each individual company. However, the reserve margin picture is muddled by the imprecise nature of peak-load growth forecasting, and also supply uncertainty relating to such things as Canadian capacity availability and potential plant shutdowns due to age, new NRC rules, acid rain remedies, fuel shortages, problems associated with nontraditional technologies, and so forth. Even apparently ample reserves may not be what they seem. Moreover, the quality of capacity is just as important as the size of reserves. Companies' reserve requirements differ, depending upon individual operating characteristics.

Fuel diversity provides flexibility in a changing environment. Supply disruptions and price hikes can raise rates and ignite political and regulatory pressures that ultimately lead to erosion in financial performance. Thus, the ability to alter generating sources and take advantage of lower cost fuels is viewed favorably.

Dependence on any single fuel means exposure to that fuel's problems: electric utilities that rely on oil or gas face the potential for shortages and rapid price increases; utilities that own nuclear generating facilities face escalating costs for decommissioning; and coal-fired capacity entails environmental problems stemming from concerns over acid rain and the "greenhouse effect."

Buying power from neighboring utilities, qualifying facility projects, or independent power producers may be the best choice for a utility that faces increasing electricity demand. There has been a growing reliance on purchased power arrangements as an alternative to new plant construction. This can be an important advantage, since the purchasing utility avoids potential construction cost overruns as well as risking substantial capital. Also, utilities can avoid the financial risks typical of a multiyear construction program that are caused by regulatory lag and prudence reviews. Furthermore, purchased power may enhance supply flexibility, fuel resource diversity, and maximize load factors. Utilities that plan to meet demand projections with a portfolio of supply-side options also may be better able to adapt to future growth uncertainties. Notwithstanding the benefits of purchasing, such a strategy has risks associated with it. By entering into a firm long-term purchased power contract that contains a fixed-cost component, utilities can incur substantial market, operating, regulatory, and financial risks. Moreover, regulatory treatment of purchased power removes any upside potential that might help offset the risks. Utilities are not compensated through incentive rate-making; rather, purchased power is recovered dollar-for-dollar as an operating expense.

To analyze the financial impact of purchased power, Standard & Poor's first calculates the net present value of future annual capacity payments (discounted at 10%). This represents a potential debt equivalent—the off-balance-sheet obligation that a utility incurs when it enters into a long-term purchased power contract. However, Standard

& Poor's adds to the utility's balance sheet only a portion of this amount, recognizing that such a contractual arrangement is not entirely the equivalent of debt. What percentage is added is a function of Standard & Poor's qualitative analysis of the specific contract and the extent to which market, operating, and regulatory risks are borne by the utility (the risk factor). For unconditional, take-or-pay contracts, the risk factor range is from 40%-80%, with the average hovering around 60%. A lower risk factor is typically assigned for system purchases from coal-fired utilities and a higher risk factor is usually designated for unit-specific nuclear purchases. The range for take-and-pay performance obligations is between 10%-50%.

Gas utilities

For gas distribution utilities, long-term supply adequacy obviously is critical, but the supply role has become even more important in credit analysis since the Federal Energy Regulatory Commission's Order 636 eliminated the interstate pipeline merchant business. This thrust gas supply responsibilities squarely on local gas distributors. Standard & Poor's has always believed distributor management has the expertise and wherewithal to perform the job well, but the risks are significant since gas costs are such a large percentage of total utility costs. In that regard, it is important for utilities to get preapprovals of supply plans by state regulators or at least keep the staff and commissioners well informed. To minimize risks, a well-run program would diversify gas sources among different producers or marketers, different gas basins in the U.S. and Canada, and different pipeline routes. Also, purchase contracts should be firm, with minimal take-or-pay provisions, and have prices tied to an industry index. A modest percentage of fixed-price gas is not unreasonable. Contracts, whether of gas purchases or pipeline capacity, should be intermediate term. Staggering contract expirations (preferably annually) provides an opportunity to be an active market player. A modest degree of reliance on spot purchases provides flexibility, as does the use of market-based storage. Gas storage and on-property gas resources such as liquefied natural gas or propane air are effective peak-day and peak-season supply management tools.

Since pipeline companies no longer buy and sell natural gas and are just common carriers, connections with varied reserve basins and many wells within those basins are of great importance. Diversity of sources helps offset the risks arising from the natural production declines eventually experienced by all reserve basins and individual wells. Moreover, such diversity can enhance a pipeline's attractiveness as a transporter of natural gas to distributors and end users seeking to buy the most economical gas available for their needs.

Water utilities

Nearly all water systems throughout the U.S. have ample long-term water supplies. Yet to gain comfort, Standard & Poor's assesses the production capability of treatment plants and the ability to pump water from underground aquifers in relation to the usage demands from consumers. Having adequate treated water storage facilities has become important in recent years and has helped many systems meet demands during peak summer periods. Of interest is whether the resources are owned by the utility or purchased from other utilities or local authorities. Owning properties with water rights provides more supply security. This is especially so in states like California where water allocations are being reduced, particularly since recent droughts and environmental issues have created alarm. Since the primary cost for water companies is treatment, it makes little difference whether raw water is owned or bought. In fact, compliance with federal and state water regulations is very high, and the overall cost to deliver treated water to consumers remains relatively affordable.

Asset concentration in the electric utility industry

In the electric industry, Standard & Poor's follows the operations of major generating facilities to assess if they are well managed or troubled. Significant dependence on one generating facility or a large financial investment in a single asset suggests high risk. The size or magnitude of a particular asset relative to total generation, net plant in service, and common equity is evaluated. Where substantial asset concentration exists, the financial profile of a company may experience wide swings depending on the asset's performance. Heavy asset concentration is most prevalent among utilities with costly nuclear units.

Earnings protection

In this category, pretax cash income coverage of all interest charges is the primary ratio. For this calculation, allowance for funds used during construction (AFUDC) is removed from income and interest expense. AFUDC and other such noncash items do not provide any protection for bondholders. To identify total interest expense, the analyst reclassifies certain operating expenses. The interest component of various off-balance-sheet obligations, such as leases and some purchased-power contracts, is included in interest expense. This provides the most direct indication of a utility's ability to service its debt burden.

While considerable emphasis in assessing credit protection is placed on coverage ratios, this measure does not provide the entire earnings protection picture. Also important are a company's earned returns on both equity and capital, measures that highlight a firm's earnings performance. Consideration is given to the interaction of embedded costs, financial leverage, and pretax return on capital.

Capital structure

Analyzing debt leverage goes beyond the balance sheet and covers quasi-debt items and elements of hidden financial leverage. Noncapitalized leases (including sale/lease-back obligations), debt guarantees, receivables financing, and purchased-power contracts are all considered debt equivalents and are reflected as debt in calculating capital structure ratios. By making debt level adjustments, the analyst can compare the degree of leverage used by each utility company.

Furthermore, assets are examined to identify undervalued or overvalued items. Assets of questionable value are discounted to more accurately evaluate asset protection.

Some firms use short-term debt as a permanent piece of their capital structure. Short-term debt also is considered part of permanent capital when it is used as a bridge to permanent financing. Seasonal, self-liquidating debt is excluded from the permanent debt amount, but this situation is rare—with the exception of certain gas utilities. Given the long life of almost all utility assets, short-term debt may expose these companies to interest-rate volatility, remarketing risk, bank line backup risk, and regulatory exposure that cannot be readily offset. The lower cost of shorter-term obligations (assuming a positively sloped yield curve) is a positive factor that partially mitigates the risk of interest-rate variability. As a rule of thumb, a level of short-term debt that exceeds 10% of total capital is cause for concern.

Similarly, if floating-rate debt and preferred stock constitute over one-third of total debt plus preferred stock, this level is viewed as unusually high and may be cause for concern. It might also indicate that management is aggressive in its financial policies.

A layer of preferred stock in the capital structure is usually viewed as equity—since dividends are discretionary and the subordinated claim on assets provides a cushion for providers of debt capital. A preferred component of up to 10% is typically viewed as a permanent wedge in the capital structure of utilities. However, as rate-of-return regulation is phased out, preferred stock may be viewed by utilities—as many industrial firms would—as a temporary option for companies that are not current taxpayers that do not benefit from the tax deductibility of interest. Even now, floating-rate preferred and money market perpetual preferred are problematic; a rise in the rate due to deteriorating credit quality tends to induce a company to take out such preferred stock with debt. Structures that convey tax deductibility to preferred stock have become very popular and do generally afford such financings with equity treatment.

Cash flow adequacy

Cash flow adequacy relates to a company's ability to generate funds internally relative to its needs. It is a basic component of credit analysis because it takes cash to pay expenses, fund capital spending, pay dividends, and make interest and principal payments. Since both common and preferred dividend payments are important to maintain capital market access, Standard & Poor's looks at cash flow measures both before and after dividends are paid.

To determine cash flow adequacy, several quantitative relationships are examined. Emphasis is placed on cash flow relative to debt, debt service requirements, and capital spending. Cash flow adequacy is evaluated with respect to a firm's ability to meet all fixed charges, including capacity payments under purchased-power contracts. Despite the conditional nature of some contracts, the purchaser is obligated to pay a minimum capacity charge. The ratio used is funds from operations plus interest and capacity payments divided by interest plus capacity payments.

Financial flexibility/capital attraction

Financing flexibility incorporates a utility's financing needs, plans, and alternatives, as well as its flexibility to accomplish its financing program under stress without damaging creditworthiness. External funding capability complements internal cash flow. Especially since utilities are so capital intensive, a firm's ability to tap capital markets on an ongoing basis must be considered. Debt capacity reflects all the earlier elements: earnings protection, debt leverage, and cash flow adequacy. Market access at reasonable rates is restricted if a reasonable capital structure is not maintained and the company's financial prospects dim. The analyst also reviews indenture restrictions and the impact of additional debt on covenant tests.

Standard & Poor's assesses a company's capacity and willingness to issue common equity. This is affected by various factors, including the market-to-book ratio, dividend policy, and any regulatory restrictions regarding the composition of the capital structure.

INDUSTRIALS

Funds from operations/total debt (%)

	AAA	AA	A	BBB	BB
Well-above-average business position	80	60	40	25	10
Above-average business position	150	80	50	30	15
Average business position	—	105	60	35	20
Below-average business position	—	—	85	40	25
Well-below-average business position	—	—	—	65	45

Total debt/capitalization (%)

	AAA	AA	A	BBB	BB
Well-above-average business position	30	40	50	60	70
Above-average business position	20	25	40	50	60
Average business position	—	15	30	40	55
Below-average position	—	—	25	35	45
Well-below-average business position	—	—	—	25	35

TELEPHONE OPERATING COMPANIES

	AA	A	BBB
Pretax interest coverage (x)	over 4.5	3.3-5.0	2.3-4.0
Total debt/total capital (%)	under 42	40-52	50-62
Net cash flow/average total debt (%)	over 32	25-33	20-30
Funds from operations interest coverage (x)	over 6.5	5.0-7.0	3.5-5.5

ELECTRIC UTILITIES

	AA	A	BBB	BB
Pretax interest coverage (x)				
Above-average business position	3.50	2.75	1.75	1.25
Average business position	4.00	3.50	2.50	1.75
Below-average business position	—	4.50	3.50	2.50
Total debt/total capital (%)				
Above-average business position	47	52	59	65
Average business position	42	47	54	60
Below-average business position	—	41	48	54
Funds from operations interest coverage (x)				
Above-average business position	4.00	3.25	2.25	1.75
Average business position	4.50	4.00	3.00	2.00
Below-average business position	—	5.00	4.00	2.75
Funds from operations/total debt (%)				
Above-average business position	26	19	14	11
Average business position	32	25	19	13
Below-average business position	—	34	29	20
Net cash flow/capital expenditures (%)				
Above-average business position	90	70	45	30
Average business position	110	85	60	40
Below-average position	—	105	80	60

GAS DISTRIBUTION COMPANIES

Pretax interest coverage (x)	AA	A	BBB	BB
Above-average business positon	3.75	3.00	2.00	1.50
Average business position	4.25	3.75	2.75	2.00
Below-average business position	—	4.25	3.25	2.25
Total debt/total capital (%)				
Above-average business position	46	51	58	64
Average business position	41	46	53	59
Below-average business position	—	42	49	55
Funds from operations interest coverage (x)				
Above-average business position	4.25	3.50	2.50	2.00
Average business position	4.75	4.25	3.25	2.25
Below-average business position	—	4.75	3.75	2.50
Funds from operations/total debt (%)				
Above-average business position	27	20	15	12
Average business position	33	26	20	14
Below-average business position	—	32	27	18
Net cash flow/capital expenditures (%)				
Above-average business position	95	75	50	35
Average business position	115	90	65	45
Below-average business position	—	100	75	55

GAS PIPELINE COMPANIES

Pretax interest coverage (x)	AA	A	BBB	BB
Above-average business position	4.00	3.25	2.25	1.75
Average business position	4.50	4.00	3.00	2.25
Below-average business position	—	4.50	3.50	2.50
Total debt/total capital (%)				
Above-average business position	44	49	56	62
Average business position	39	44	51	57
Below-average business position	—	41	48	54
Funds from operations interest coverage (x)				
Above-average business position	4.50	3.75	2.75	2.25
Average business position	5.00	4.50	3.50	2.50
Below-average business position	—	5.00	4.00	2.75
Funds from operations/total debt (%)				
Above-average business position	32	25	19	16
Average business position	37	30	24	18
Below-average business position	—	34	29	20
Net cash flow/capital expenditures (%)				
Above-average business position	105	80	60	40
Average business position	125	95	70	50
Below-average business position	—	105	80	60

WATER UTILITIES

	AA	A	BBB	BB
Pretax interest coverage (x)				
Above-average business position	2.75	2.25	1.25	0.75
Average business position	3.25	3.00	2.00	1.00
Below-average business position	—	3.75	2.75	1.50
Total debt/total capital (%)				
Above-average business position	52	56	64	70
Average business position	48	52	59	65
Below-average business position	—	48	54	60
Funds from operations interest coverage (x)				
Above-average business position	3.00	2.50	1.50	1.00
Average business position	3.50	3.25	2.25	1.25
Below-average business position	—	4.00	3.00	1.75
Funds from operations/total debt (%)				
Above-average business position	19	15	10	7
Average business position	25	21	15	9
Below-average business position	—	27	20	12
Net cash flow/capital expenditures (%)				
Above-average business position	75	60	35	20
Average business position	95	75	50	30
Below-average business position	—	90	65	40

Formulas for key ratios

$$\text{Pretax interest coverage} = \frac{\text{Pretax income from continuing operations + interest expense}}{\text{Gross interest}}$$

$$\text{Pretax fixed charge coverage including rents} = \frac{\text{Pretax income from continuing operations + interest expense + gross rents}}{\text{Gross interest + gross rents}}$$

$$\text{Pretax funds flow interest coverage} = \frac{\text{Pretax funds flow + interest expense}}{\text{Gross interest}}$$

$$\text{Funds from operations as a \% of total debt} = \frac{\text{Funds from operations}}{\text{Total debt}} \times 100$$

$$\text{Free operating cash flow as a \% of total debt} = \frac{\text{Free operating cash flow}}{\text{Total debt}} \times 100$$

$$\text{Pretax return on permanent capital} = \frac{\text{Pretax income from continuing operations + interest expense}}{\text{Sum of (1) average of beginning of year and end of year current maturities, long-term debt, non-current deferred taxes, and equity and (2) average short-term borrowings during year as disclosed in footnotes}} \times 100$$

$$\text{Operating income as a \% of sales} = \frac{\text{Operating income}}{\text{Sales}} \times 100$$

$$\text{Long-term debt as a \% of capitalization} = \frac{\text{Long-term debt}}{\text{Long-term + equity}} \times 100$$

$$\text{Total debt as a \% of capitalization} = \frac{\text{Total debt}}{\text{Total debt + equity}} \times 100$$

$$\text{Total debt + 8 times rents as a \% of adjusted capitalization} = \frac{\text{Total debt + 8 times gross rentals paid}}{\text{Total debt + 8 times gross rentals paid + equity}} \times 100$$

Glossary

Equity	Shareholders' equity (including preferred stock) plus minority interest.
Free operating cash flow	Funds from operations minus capital expenditures, minus (plus) the increase (decrease) in working capital (excluding changes in cash, marketable securities, and short-term debt).
Funds from operations	Net income from continuing operations plus depreciation, amortization, deferred income taxes and other noncash items.
Gross interest	Gross interest incurred before subtracting (1) capitalized interest, (2) interest income.
Gross rents	Gross operating rents paid before sublease income.
Interest expense	Interest incurred minus capitalized interest, plus amortization of capitalized interest.
Long-term debt	As reported on the balance sheet, including capitalized lease obligations.
Net cash flow	Funds from operations less preferred and common dividends.
Operating income	Sales minus cost of goods manufactured (before depreciation and amortization), selling, general and administrative, and research and development costs.
Pretax funds flow	Pretax income from continuing operations plus depreciation, amortization, and other noncash items.
Total debt	Long-term debt plus current maturities, commercial paper, and other short-term borrowings.

CREDIT COMMENTS

GAS UTILITY AND PIPELINE BENCHMARKS REVISED

"Ratings or rating outlook changes will be implemented gradually throughout the first half of 1994 but are anticipated to be minimal due directly to Order 636."

S&P is revising its financial benchmark ratios for U.S. investor-owned natural gas distributors and pipelines. With this modification, S&P is publishing a risk-adjusted or matrix approach to the financial benchmarks, which incorporates a more detailed comparison of financial performance and a company's business risk profile. Existing ratings have always reflected this analysis, but this methodology makes this linkage more explicit.

At the same time, S&P is recognizing moderate changes in business risk for the entire gas industry due to the implementation of Federal Energy Regulatory Commission Order 636. Only minor changes are being made to the financial guidelines, because the industry, as a whole, is well positioned to deal with the implications of Order 636. In fact, S&P does not see the need to stiffen the targeted financial ratios for gas distributors, despite a moderate increase in the gas supply risks they face. In addition, some ratio guidelines were relaxed slightly for pipeline companies.

While all the companies in S&P's ratings universe appear to be reasonably well prepared for the industry changes, S&P nevertheless believes it is prudent to monitor the operating performance of the gas industry through the 1993-1994 winter to better evaluate individual companies' business risk position. A complete list of business position evaluations will be announced sometime in the spring. Ratings or rating outlook changes will be implemented gradually throughout the first half of 1994 but are anticipated to be minimal due directly to Order 636.

THE MATRIX SYSTEM

The risk-adjusted ratio guidelines depict the role that financial ratios play in S&P's utility rating process, since financial ratios are viewed in the context of a firm's business risk profile: For a given rating category, expected levels of financial ratios vary with the business or operating risk of a company. A utility with a stronger competitive position, more favorable business prospects, and more predictable cash flows can afford to withstand greater financial risk while maintaining the same credit rating. The revised benchmarks make explicit the linkage between financial ratios and levels of utility business risk as S&P sees it.

In establishing these new financial guidelines, the business risk positions of distributors and pipelines were compared to the business risk of water and electric utilities. S&P's analysis continues to indicate that in general the water industry is less risky than the electric industry, because it has a complete natural monopoly and faces no competition. Likewise, electrics are less risky than gas distributors which are less risky than gas pipelines.

KEYS TO BUSINESS POSITION FOR GAS PIPELINES

Exhibit #1

Customer markets
- Industrial & utility customers' business prospects and demand growth
- Market share in individual markets
- Industrial customers as percentage of load and margins
- Length of service contracts to all customers

Competitive position
- Rates comparison versus competing pipelines
- Pipeline capacity into individual markets
- Cost of operations
- Cost of gas if appropriate

Supply position
- Supply basin access and diversity
- Storage capabilities

Regulatory environment
- Supportiveness of FERC
- Demand charges as percentage of total costs

Business risk of unregulated activities
- Marketing
- Gathering
- Storage

The new benchmarks go a step further. S&P believes the risk differential between electric and gas is narrowing. The average and above average positioned electric utility is still less risky than gas distributors but not as much as before despite the added risks cited for gas utilities. However, a below average electric utility has more risk than a below average gas distributor and the same risk as a gas pipeline. This has been reflected in the new benchmarks.

S&P utility financial benchmark ratios

	AA	A	BBB	BB
Funds from operations to total debt (%)				
Water Utility Business				
Position:	AA	A	BBB	BB
Above average	19	15	10	7
Average	25	21	15	9
Below average	-	27	20	12
Electric Utility Business				
Position:	AA	A	BBB	BB
Above average	26	19	14	11
Average	32	25	19	13
Below average	-	34	29	20
Gas Distributor Business				
Position:	AA	A	BBB	BB
Above average	27	20	15	12
Average	33	28	20	14
Below average	-	32	27	18
Gas Pipeline Business				
Position:	AA	A	BBB	BB
Above average	32	25	19	16
Average	37	30	24	18
Below average	-	34	29	20
Funds from operations interest coverage (x)				
Water Utility Business				
Position:	AA	A	BBB	BB
Above average	3.00	2.50	1.50	1.00
Average	3.50	3.25	2.25	1.25
Below average	-	4.00	3.00	1.75
Electric Utility Business				
Position:	AA	A	BBB	BB
Above average	4.00	3.25	2.25	1.75
Average	4.50	4.00	3.00	2.00
Below average	-	5.00	4.00	2.75
Gas Distributor Business				
Position:	AA	A	BBB	BB
Above average	4.25	3.50	2.50	2.00
Average	4.75	4.25	3.25	2.25
Below average	-	4.75	3.75	2.50
Gas Pipeline Business				
Position:	AA	A	BBB	BB
Above average	4.50	3.75	2.75	2.25
Average	5.00	4.50	3.50	2.50
Below average	-	5.00	4.00	2.75
Pretax interest coverage (x)				
Water Utility Business				
Position:	AA	A	BBB	BB
Above average	2.75	2.25	1.25	0.75
Average	3.25	3.00	2.00	1.00
Below average	-	3.75	2.75	1.50
Electric Utility Business				
Position:	AA	A	BBB	BB
Above average	3.50	2.75	1.75	1.25
Average	4.00	3.50	2.50	1.75
Below average	-	4.50	3.50	2.50
Gas Distributor Business				
Position:	AA	A	BBB	BB
Above average	3.75	3.00	2.00	1.50
Average	4.25	3.75	2.75	2.00
Below average	-	4.25	3.25	2.25
Gas Pipeline Business				
Position:	AA	A	BBB	BB
Above average	4.00	3.25	2.25	1.75
Average	4.50	4.00	3.00	2.25
Below average	-	4.50	3.50	2.50
Total Debt to Total Capital (%)				
Water Utility Business				
Position:	AA	A	BBB	BB
Above average	52	56	64	70
Average	48	52	59	65
Below average	-	48	54	60
Electric Utility Business				
Position:	AA	A	BBB	BB
Above average	47	52	59	65
Average	42	47	54	60
Below average	-	41	48	54
Gas Distributor Business				
Position:	AA	A	BBB	BB
Above average	46	51	58	64
Average	41	46	53	59
Below average	-	42	49	55
Gas Pipeline Business				
Position:	AA	A	BBB	BB
Above average	44	49	56	62
Average	39	44	51	57
Below average	-	41	48	54
Net Cash Flow to Capital Spending (%)				
Water Utility Business				
Position:	AA	A	BBB	BB
Above average	75	60	35	20
Average	95	75	50	30
Below average	-	90	65	40
Electric Utility Business				
Position:	AA	A	BBB	BB
Above average	90	70	45	30
Average	110	85	60	40
Below average	-	105	80	60
Gas Distributor Business				
Position:	AA	A	BBB	BB
Above average	95	75	50	35
Average	115	90	65	45
Below average	-	100	75	55
Gas Pipeline Business				
Position:	AA	A	BBB	BB
Above average	105	80	60	40
Average	125	95	70	50
Below average	-	105	80	60

RISK AND ORDER 636

Pipeline credit quality benefits greatly from the elimination of merchant responsibilities as that role is shifted to distributors. Pipelines also benefit from better fixed cost recovery prospects given the straight fixed variable rate design established by Order 636. Yet this is not a riskless industry even with the more stabilized earnings and cash flow streams projected due to the new rate design. The companies must still move gas, fully utilize pipeline capacity, control costs, and just generally be competitive to achieve the anticipated financial results. Furthermore, considering there have been five rate designs in the past 20 years, it is uncertain how long this new rate design will stay in place. Nevertheless, the benchmarks are relaxed on some of the ratios for pipelines because of the positive aspects of Order 636 on these companies.

Distributors have greater overall risks to perform the gas purchasing function. Given the pipeline industry's disastrous take-or-pay history, this should not be hard to comprehend. The greatest concerns are not only the industry's gas purchasing performance but rather the regulators' evaluation of that job. Given the relatively high profile Order 636 has received in the media and Congress, distributors will be under greater political and regulatory scrutiny to efficiently and economically purchase and deliver gas to the ratepayer in coming years.

Nevertheless, the distributors in S&P's ratings universe, which are in essence the top 60 distributors in the country (including electric and gas combination utilities), are believed to be of significant size and possess the management talent to efficiently handle this responsibility. Of course, S&P will monitor every utility's performance, paying particular attention to how each utility

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deals with its respective commissions. If a management has a well thought out supply plan, and effectively communicates and educates its regulatory commission on this plan, then regulatory risk can and will be mitigated.

KEYS TO BUSINESS POSITION FOR GAS DISTRIBUTORS

Exhibit #2

Customer markets

- Market share and local economy
- Customer diversity and growth prospects
- Gas use saturation levels in service territory
- Load factor
- Industrial & power generation customers as percentage of load and margins

Competitive position

- Bypass risk
- Proximity of interstates to industrial & power generation customers
- All-in rates versus alternate fuels in all markets
- All-in rates versus interstate pipelines in industrial & power generation markets
- Cost of operations
- Integrity of pipeline system
- Cost of pipeline access and transmission
- Cost of gas

Supply position

- Diversity
- Mix of spot and long term contracts
- Access to storage

Regulatory environment

- Rate design and cost allocation decisions
- Supportiveness of gas purchasing practices
- Supportiveness of capital spending programs
- Rate stabilization clauses for weather or economy
- Ability to earn allowed returns

THE CRITERIA

An evaluation of business risk *(see exhibits 1 and 2)* is important to best understand a company's ability to generate cash for debt servicing. In this regard, S&P is most concerned with a company's ability to both earn a reasonable return on investment and successfully compete in its markets; i.e, to retain existing customers and attract new ones. While rates to the consumer strongly impact competition, there are several other areas to analyze to determine whether a utility has an above average, average, or below average business position.

First, S&P analyzes a firm's customer base for diversity, growth opportunities, and susceptibility to weather or economic volatility. Next a complete understanding of a company's ability to compete is critical. This includes a rates comparison versus competitors, projections for total cost of service, a study on the need for and impact of discounted rates, and an evaluation of the adequacy and diversity of gas supplies.

Regulation plays a huge role in a company's business position, because all decisions by a commission not only impact earnings but will act to support or not support competitive rates in all markets. Rate case rulings on rate base and capital spending, volume levels, gas costs and strategies, operating expenses, depreciation, rate design, cost allocation and rate recovery of special charges all have great effects on the rates to individual customers and the company's chance to attract new ones.

Lastly, management's operating and competitive strategies may be the most important factor to evaluate. Management must cohesively link marketing, supply, and regulatory strategies so as to best provide a competitive product to the consumer. S&P will monitor the success of these plans, along with financing practices and diversification activities.

NEUTRAL OVERALL CREDIT IMPACT

The investor-owned utility financial benchmark ratios were revised to better elaborate the evaluation of business position versus financial performance. Order 636 has some positive aspects for gas pipelines and some negative aspects for gas distributors, but on the whole S&P believes all rated companies have the ability to do the job correctly and should do the job correctly.

For the most part, the financial guidelines for the average gas utility are unchanged, but some ratios are relaxed for higher rated pipelines. S&P is not anticipating or planning major rating changes or rating outlook revisions due to either the new benchmarks or the implementation of Order 636, but whatever occurs will happen gradually in the first half of 1994.

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COMMENTARY

NATURAL GAS: STABLE YET CHALLENGED

Over the past few years, credit ratings in the natural gas industry have been relatively stable. Since mid-1992, there have been only 15 rating changes, and 75% of the companies rated currently have stable outlooks. There are no major revisions anticipated. Of course, the industry is not without its challenges.

The financial profile of the natural gas industry is still somewhat aggressive for existing credit quality. There is too much debt outstanding. This is despite the progress made by the industry since early 1992 when S&P downgraded several interstate pipeline companies as a result of their very weak financial performance. At that time, all gas distributors were also warned by S&P not to wander from their conservative balance sheets.

Since 1992, many companies refinanced high cost debt and/or paid down debt with proceeds from sales of assets and common equity. Pipeline debt leverage declined six percentage points on average, but is still high (above 60%), when adding off-balance-sheet obligations. Modest balance sheet improvements made by distributors were primarily from 1993 common stock sales by several utilities, which helped this segment of the industry maintain its balanced capital structure.

The major event providing new challenges was the Federal Energy Regulatory Commission's (FERC) Order 636. Not only did Order 636 change the way distributors and pipelines operate, but it also reaffirmed the importance of qualitative analysis in the credit ratings process. The unbundling of rates and services has encouraged the pipelines to grow unregulated activities, while the distributors must deal with the risks inherent in the gas supply role.

S&P has always emphasized qualitative business position as much as financial performance. Now, however, the combination of these analyses is even more important. Consequently, S&P is forging ahead with separate evaluations of the business position for each individual utility or pipeline.

To determine business position, a number of qualitative factors are evaluated such as a company's market for growth potential and exposure to industrial risk, supply for adequacy and diversity, and the regulatory environment for supportiveness of cost recovery and flexible rates. All management strategies that impact these areas are evaluated.

S&P's intent is to understand a company's ability to compete , i.e., to grow, retain, or lose customers, volumes, and/or market share. Seven categories were established ranging from above average to below average to display S&P's evaluations (*see charts 1 & 2*). All companies are listed by rank in their respective category. These evaluations are to be used in combination with the risk-adjusted financial benchmark ratios established in December 1993 (*see page 108*).

NO BELOW-AVERAGE DISTRIBUTORS

Most gas utilities share many of the same qualitative attributes. Yet, what stands out is there are no below average distributors. Normally, a bell shaped curve would be expected in comparisons like this one, but the gas evaluations are conducted in concert with other utilities. There are no distributors with business risks anywhere near those of the below average electric utilities.

Although this may change in the future, the fact remains that gas has a very high and growing market share in the U.S. Bypass of large industrial gas users continues to be a concern and is one of the biggest risks to distributors, but state regulation time and again protects the utility with flexible rate structures or cost reallocation. Nevertheless, ratings expect distributors to always control costs to stay competitive.

Another area of possible concern is the added gas supply responsibilities placed on distributor shoulders by Order 636. However, S&P contends that all distributors in their ratings universe should handle the gas supply role without fail because, in fact, this is not a new role. Pipelines have been unbundling and distributors have been buying their own gas since Order 436 came out in 1985, almost nine years ago. The industry, including regulators, should be well up the learning curve by now.

This past winter was a good test, however, one winter does not constitute a complete test. All utilities are expected to use this experience to modify and improve their gas supply, storage and pipeline capacity positions. But whatever is done, regulator approval is important. All states are not going to give preapprovals of gas supply plans, but ideally utilities should be striving to keep their commissions in the know, so that all parties are never surprised. The state of Michigan is a good example. Every summer ▸

the utilities present a five-year supply plan to the commission for approval, and every spring the utilities report the costs of the prior winter. The Michigan commission can only question any deviances from the plan approved the prior summer. This is a constructive procedure for the utility.

SUBTLE PIPELINE DIFFERENCES

Focusing on the interstates, many pipelines also share similar attributes such as high market share and regulation. However, there are only subtle differences that ultimately differentiate individual pipeline business positions.

For example, high market share, or maybe more importantly, having the large pipeline capacity in a region or to specific customers are barriers to entry for competitors. This is particularly true in the Northeast where there are high-cost and low-cost pipelines but pipe capacity is tight and bypass opportunities limited. In the Midwest, all pipelines are rate competitive with each other, but have short-term contracts with customers and all have excess capacity to sell. Therefore, it is reasonable to assume some competition for customers as those contracts expire.

The pipelines with the best business positions are the Canadian firms, Nova Gas Transmission and TransCanada Pipelines, as they have no competition and enjoy very supportive regulatory environments. The highest ranking U.S. pipelines have strong competitive positions, high market share, and good growth opportunities. The pipelines in the below-average categories have low market share, face substantial competition, and are not low-cost or discount very heavily to just retain load. These companies — NorAm Gas Transmission, K[illegible] Gateway, and Tranwestern Pipeline — h[illegible] been working hard at improving their situations by reducing or shifting costs and thus lowering rates in their most competitive markets. If successful, it is reasonable to expect them to move up in rank.

MORE CHANGE FOR PIPELINES?

Currently, all five FERC commissioners have publicly stated no desire for further rule changes in the gas industry. That is good news since both pipelines and distributors are still digesting all the past changes. However, there has been a lot of chatter that the straight fixed variable rate design is inconsistent with the unbundling of services and market-based sales as per Order 636, that the FERC commissioners dislike it, and that it will not be long lived. In S&P's opinion, all three issues are probably correct. But what is also true, is that the straight fixed variable is just what the pipelines need right now, because it quietly permits the rate recovery of sizable take-or-pay and Order 636 transition costs without impeding the flow of gas.

Over the next few years nearly all take-or-pay and transitions costs will be recovered and pipeline cost structures will include only everyday operating expenses. At that point, S&P is speculating the FERC will forego the rate design structure and forge a new trail with market-based, mileage-based transmission ra[illegible] Pipelines will go toe-to-toe without the regu[illegible]tory shield to hide behind. Competition will be the fiercest ever. Having the large pipe capacity into a particular market will still be very im-

Chart 1
GAS PIPELINE BUSINESS POSITIONS

Above average	Somewhat above average	High average	Average	Low average	Somewhat below average	Below average
Nova Gas Transmission	Northwest Pipeline	El Paso Natural Gas	Natural Gas Pipeline	Wyoming Interstate Gas	Transwestern Pipeline	NorAm Gas Transmission
TransCanada Pipeline	Questar Pipeline	Mississippi River Transmission	KN Energy	Williston Basin	Koch Gateway	
	TransContinental Gas Pipeline	Texas Gas Transmission	Tennessee Gas	Equitable Resources		
	Colorado Interstate Gas	ANR Pipeline	CNG Transmission	Northern Border		
	Northern Natural Gas	Pacific Gas Transmission	Columbia Gas Transmission	Trunkline Gas		
	Great Lakes Gas Transmission	Columbia Gulf Transmission	Southern Natural Gas			
	Mojave Gas Pipeline	Algonquin Gas Transmission	National Fuel Gas			
	Florida Gas Transmission		Texas Eastern Transmission			
			Panhandle Eastern Pipeline			
			Williams Natural			
			Kern River			

portant, but between now and then, all pipelines must be proactive and reduce operating costs. Thus, S&P is keeping a close eye on each pipelines' business position, to be prepared if the situation ever develops.

PIPELINES NEVER STAND PAT

The gas transmission business is mature and offers only moderate incremental growth opportunities for the industry as a whole. In general, pipelines are strong cash generators and if excess cash was used for balance sheet improvement, ratings would trend higher. However, the industry is not expected to head in this direction. Instead pipeline management is placing increased emphasis on less regulated activities within the natural gas arena, including international ventures. Gas gathering, processing, and marketing are viewed to be earnings growth vehicles that will supplement the core pipeline business. Recently, the FERC did pipelines a favor by essentially deregulating gas gathering. Many companies have already filed proposals to spinoff gathering facilities out of the pipeline and into separate standalone entities. S&P anticipates huge dollars to continue to be diverted from pipelines to build the gathering network. So far this year, El Paso Natural Gas, The Williams Companies, and Panhandle Eastern have announced acquisitions or expansions of gathering and processing assets costing in excess of $100 million.

The international opportunities, particularly in South America, are certainly intriguing. S&P believes the larger companies are going to follow Enron's lead around the world. Of course, British Gas, TransCanada, and Nova Corp. are already big players. Analyzing international projects is difficult but S&P mostly tries to focus on three things: the investment outlay, potential additional capital obligations, and the ability to dividend cash back to the U.S.

All this may sound exciting for stock prices, but as far as credit quality goes, S&P envisions substantial cash needs and greater business risk for pipeline companies. In fact, as nonregulated activities grow in proportion to pipeline investment, or put another way, as the risk profile gets riskier, these companies will be challenged to meet even tougher financial targets, which of course makes maintaining current credit ratings harder.

Financially, pipeline performance is still below what would be expected for industry's current ratings of 'BBB'. Furthermore, when considering the industry's substantial off-balance-sheet obligations (primarily operating leases and receivable sales), 1993 performance is even weaker. While some financial improvement was made the past two years, it was not enough for any pipeline to feel comfortable with their credit position.

DISTRIBUTORS: WHAT'S NEXT?

The average gas distributor has an 'A' debt rating and an average business position. These utilities should continue to face many of the same challenges they have today, which are, controlling costs, buying gas prudently, avoiding bypass, and maintaining good relations with regulators. To do that, more publicly filed resource plans are likely, just as in Michigan and other states. Innovative ratemaking will occur and there are already some gems emerging, such as the gas cost incentives in California,

Chart 2.
GAS DISTRIBUTOR BUSINESS POSITIONS

Above average	Somewhat above average	High average	Average	Average	Low average	Somewhat below average	Below average
Northern Illinois Gas	Brooklyn Union Gas	Indiana Gas	Peoples Gas Light & Coke	Michigan Consolidated Gas	Cascade Natural Gas	(None)	(None)
	Wisconsin Gas	New Jersey Natural Gas	Piedmont Natural Gas	Commonwealth Gas	Southwest Gas		
	Southern California Gas	North Shore Gas	Laclede Gas	Southern Connecticut Gas	Atlanta Gas Light		
	Mountain Fuel Supply	Wisconsin Natural Gas	Elizabethtown Gas	Southeastern Michigan Gas	Washington Natural Gas		
	Minnegasco	Entex	Alabama Gas	Connecticut Natural Gas	Providence Gas		
		Lone Star Gas	Bay State Gas	UGI Utilities	Valley Resources		
		Northwest Natural Gas	Consolidated Natural Gas	Colonial Gas	Equitable Resources		
		Washington Gas Light	Columbia Gas System	Boston Gas	Arkansas Louisiana Gas		
		South Jersey Gas	Montana Dakota Utilities	Southern Union	Pennsylvania Gas & Water		
			National Fuel Gas	ONEOK Inc.			
			KN Energy				

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unbundled services in New Jersey and Illinois, and the wide ranging changes planned in Georgia. All are designed to achieve the same goal; get the best rate to the ratepayer while keeping the large customers on system, and be margin neutral.

Financially, distributor performance is close to that expected for existing credit quality. Yet in 1994 and beyond, the industry will be challenged to offset the lower equity returns authorized in 1993. Cost control and prudent rate case management will continue to be very important.

Furthermore, gas utilities have to deal carefully with dividend payout pressures. Distributors, as a whole, have had a very consistent 85% earnings payout for 10 years or more. This level is high and provides little cushion. Utilities will be pressured to just maintain 1993's financial profile if capital expenditures rise in combination with the high earnings payout. Outlays may rise over concerns of pipeline integrity given the Texas Eastern explosion [illegible] the large number of distributor explosi[illegible] around the country in the past two years.

FACING FUTURE CHALLENGES

Ratings stability is still the order of the day but both distributors and pipelines definitely have challenges to stave off in order to maintain credit ratings. Distributors must deal with greater gas supply responsibilities, low authorized equity returns, and high dividend payouts. Pipelines which still have weak financial profiles, must be careful when investing in unregulated activities, and must anticipate further regulatory rule changes down the road.

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S&P utility financial benchmark ratios

Funds from operations to total debt (%)	AA	A	BBB	BB
Water Utility Business position:				
Above average	19	15	10	7
Average	25	21	15	9
Below average	-	27	20	12
Electric Utility Business position:				
Above average	26	19	14	11
Average	32	25	19	13
Below average	-	34	29	20
Gas Distributor Business position:				
Above average	27	20	15	12
Average	33	26	20	14
Below average	-	32	27	18
Gas Pipeline Business position:				
Above average	32	25	19	16
Average	37	30	24	18
Below average	-	34	29	20

Funds from operations interest coverage (x)	AA	A	BBB	BB
Water Utility Business position:				
Above average	3.00	2.50	1.50	1.00
Average	3.50	3.25	2.25	1.25
Below average	-	4.00	3.00	1.75
Electric Utility Business position:				
Above average	4.00	3.25	2.25	1.75
Average	4.50	4.00	3.00	2.00
Below average	-	5.00	4.00	2.75
Gas Distributor Business position:				
Above average	4.25	3.50	2.50	2.00
Average	4.75	4.25	3.25	2.25
Below average	-	4.75	3.75	2.50
Gas Pipeline Business position:				
Above average	4.50	3.75	2.75	2.25
Average	5.00	4.50	3.50	2.50
Below average	-	5.00	4.00	2.75

Pretax interest coverage (x)	AA	A	BBB	BB
Water Utility Business position:				
Above average	2.75	2.25	1.25	0.75
Average	3.25	3.00	2.00	1.00
Below average	-	3.75	2.75	1.50
Electric Utility Business position:				
Above average	3.50	2.75	1.75	1.25
Average	4.00	3.50	2.50	1.75
Below average	-	4.50	3.50	2.50
Gas Distributor Business position:	AA	A	BBB	BB
Above average	3.75	3.00	2.00	1.50
Average	4.25	3.75	2.75	2.00
Below average	-	4.25	3.25	2.25
Gas Pipeline Business position:				
Above average	4.00	3.25	2.25	1.75
Average	4.50	4.00	3.00	2.25
Below average	-	4.50	3.50	2.50

Total debt to total capital (%)	AA	A	BBB	BB
Water Utility Business position:				
Above average	52	56	64	[illegible]
Average	48	52	59	[illegible]
Below average	-	48	54	[illegible]
Electric Utility Business position:				
Above average	47	52	59	65
Average	42	47	54	60
Below average	-	41	48	54
Gas Distributor Business position:				
Above average	46	51	58	64
Average	41	46	53	59
Below average	-	42	49	55
Gas Pipeline Business position:				
Above average	44	49	56	62
Average	39	44	51	57
Below average	-	41	48	54

Net cash flow to capital spending (%)	AA	A	BBB	BB
Water Utility Business position:				
Above average	75	60	35	20
Average	95	75	50	30
Below average	-	90	65	40
Electric Utility Business position:				
Above average	90	70	45	30
Average	110	85	60	40
Below average	-	105	80	60
Gas Distributor Business position:				
Above average	95	75	50	35
Average	115	90	65	45
Below average	-	100	75	55
Gas Pipeline Business position:				
Above average	105	80	60	40
Average	125	95	70	50
Below average	-	105	80	60

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ARKANSAS WESTERN GAS COMPANY
CAPITALIZATION AND FINANCIAL STATISTICS (1)
1991-1995, INCLUSIVE

	1995	1994	1993	1992	1991	
	(THOUSANDS OF DOLLARS)					
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$140,715	$136,699	$149,522	$146,264	$136,370	
SHORT-TERM DEBT	0	0	0	285	329	
TOTAL-CAPITAL EMPLOYED	$140,715	$136,699	$149,522	$146,549	$136,699	
						5 YEAR AVERAGE
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	50.4 %	44.2 %	50.4 %	52.9 %	48.6 %	49.3 %
PREFERRED STOCK	0.0	0.0	0.0	0.0	0.0	0.0
COMMON EQUITY	49.6	55.8	49.6	47.1	51.4	50.7
	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT TERM	50.4 %	44.2 %	50.4 %	53.0 %	48.7 %	49.3 %
PREFERRED STOCK	0.0	0.0	0.0	0.0	0.0	0.0
COMMON EQUITY	49.6	55.8	49.6	47.0	51.3	50.7
	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	5.5 %	5.5 %	7.7 %	7.5 %	7.0 %	6.6 %
COVERAGES-EXCLUDING ALL AFUDC (3)						
BEFORE INCOME TAXES: ALL INTEREST CHARGES	2.3 x	2.0 x	2.5 x	2.8 x	2.3 x	2.4 x
AFTER INCOME TAXES: ALL INTEREST CHARGES	1.8	1.6	1.9	2.1	1.8	1.8
OVERALL COVERAGE: ALL INTEREST + PFD. DIV.	1.8	1.6	1.9	2.1	1.8	1.8
QUALITY OF EARNINGS						
AFUDC/INCOME AVAILABLE FOR COMMON EQUITY	10.3 %	2.2 %	3.2 %	0.3 %	1.0 %	3.4 %
EFFECTIVE INCOME TAX RATE	37.5	37.5	38.6	36.6	36.7	37.4
INTERNALLY GENERATED FUNDS/GROSS CONSTR. (4)	0.8	52.8	63.8	23.1	144.9	57.1
GROSS CASH FLOW/PERMANENT CAPITAL (5)	7.5	7.5	7.2	7.1	7.8	7.4
GROSS CASH FLOW/ AVG. TOT. DEBT (6)	16.2	15.1	14.0	14.3	16.3	15.2
GROSS CASH FLOW INTEREST COVERAGE (7)	3.3 x	2.6 x	2.8 x	3.2 x	2.8 x	2.9 x
COMMON DIVIDEND COVERAGE (8)	1.0	5.1	NMF	1.6	NMF	2.6 (9)

SEE PAGE 2 FOR NOTES.

Arkansas Western Gas Company
Capitalization and Financial Statistics
1991-1995, Inclusive

Notes:

(1) All capitalization and financial statistics are based upon financial statements as originally reported in each year.

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

(3) Coverages - excluding all AFUDC represent the number of times available earnings, excluding all AFUDC, cover fixed charges.

(4) Internally-generated funds/gross construction is the percentage of gross construction expenditures, excluding all AFUDC, provided by internally-generated funds from operations, excluding all AFUDC, and after payment of all cash dividends.

(5) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC), as a percentage of Permanent Capital (long-term debt, current maturities, preferred and preference stock and common equity).

(6) Gross Cash Flow (as defined in Note 5) as a percentage of the average of the beginning and ending total debt.

(7) Gross Cash Flow (as defined in Note 5) plus interest charges divided by interest charges.

(8) Common dividend coverage is the relationship of internally-generated funds from operations, excluding all AFUDC and after payment of preferred stock dividends, to common dividends paid.

(9) Three-year average.

Source of Information: Arkansas Western Gas Company FERC Form 2

PROXY GROUP OF SEVEN GAS DISTRIBUTION COMPANIES
CAPITALIZATION AND FINANCIAL STATISTICS (1)
1991 - 1995, INCLUSIVE

	1995	1994	1993	1992	1991	
AMOUNT OF CAPITAL EMPLOYED			(THOUSANDS OF DOLLARS)			
TOTAL PERMANENT CAPITAL	$332,870	$319,540	$301,310	$269,410	$257,430	
SHORT-TERM DEBT	27,100	26,200	25,030	22,360	16,800	
TOTAL CAPITAL EMPLOYED	$359,970	$345,740	$326,340	$291,770	$274,230	
	=========	=========	=========	=========	=========	
INDICATED AVERAGE CAPITAL COST RATES (2)						
LONG TERM DEBT	8.2%	7.9%	8.1%	8.8%	8.8%	
PREFERRED STOCK	6.3	5.6	5.6	6.6	5.9	
FINANCIAL RATIOS-MARKET BASED						5 YEAR AVERAGE
EARNINGS/PRICE RATIO	6.9%	7.1%	6.7%	6.5%	7.5%	6.9%
MARKET/AVERAGE BOOK RATIO	155.5	165.6	189.6	168.4	153.0	166.4
DIVIDEND YIELD	5.8	5.6	5.0	5.9	6.4	5.7
DIVIDEND PAYOUT RATIO	87.3	86.7	77.1	95.5	87.3	86.8
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	45.6%	46.5%	47.0%	45.6%	46.7%	46.3%
PREFERRED STOCK	0.8	0.8	1.0	2.6	2.9	1.6
COMMON EQUITY	53.6	52.7	52.0	51.8	50.4	52.1
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT TERM	49.9%	50.4%	51.3%	50.0%	50.4%	50.4%
PREFERRED STOCK	0.7	0.8	0.9	2.4	2.8	1.5
COMMON EQUITY	49.4	48.8	47.8	47.6	46.8	48.1
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	10.6%	11.7%	12.6%	10.7%	11.3%	11.4%
COVERAGES-EXCLUDING ALL AFUDC (3)						
BEFORE INCOME TAXES: ALL INTEREST CHARGES	3.0x	3.2x	3.3x	2.7x	2.8x	3.0x
AFTER INCOME TAXES: ALL INTEREST CHARGES	2.3	2.5	2.5	2.2	2.2	2.3
OVERALL COVERAGE: ALL INTEREST + PFD. DIV.	2.3	2.4	2.4	2.1	2.1	2.3
QUALITY OF EARNINGS						
AFUDC/INCOME AVAILABLE FOR COMMON EQUITY	2.7%	1.7%	3.6%	2.4%	2.0%	2.5%
EFFECTIVE INCOME TAX RATE	33.3	34.5	33.9	30.2	33.1	33.0
INTERNALLY GENERATED FUNDS/CONSTRUCTION (4)	69.5	70.6	61.2	57.1	48.6	61.4
GROSS CASH FLOW/PERMANENT CAPITAL (5)	13.6	13.0	12.3	12.1	11.8	12.6
GROSS CASH FLOW/AVERAGE TOTAL DEBT (6)	26.1	24.9	24.0	23.2	23.2	24.3
GROSS CASH FLOW INTEREST COVERAGE (7)	4.2x	4.2x	3.9x	3.6x	3.5x	3.9x
COMMON DIVIDEND COVERAGE (8)	3.0	2.8	2.6	2.5	2.5	2.7

SEE PAGE 2 FOR NOTES.

Proxy Group of Seven Gas Distribution Companies
Capitalization and Financial Statistics
1991-1995, Inclusive

Notes:

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

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

(3) Coverages - excluding all AFUDC represent the number of times available earnings, excluding all AFUDC, cover fixed charges.

(4) Internally-generated funds/gross construction is the percentage of gross construction expenditures, excluding all AFUDC, provided by internally-generated funds from operations, excluding all AFUDC, and after payment of all cash dividends.

(5) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC), as a percentage of Permanent Capital (long-term debt, current maturities, preferred and preference stock and common equity).

(6) Gross Cash Flow (as defined in Note 5) as a percentage of the average of the beginning and ending total debt.

(7) Gross Cash Flow (as defined in Note 5) plus interest charges divided by interest charges.

(8) Common dividend coverage is the relationship of internally-generated funds from operations, excluding all AFUDC and after payment of preferred stock dividends, to common dividends paid.

Selection Criteria:

The basis of selection was to include those gas distribution companies which: 1) are assigned an S.I.C. Code of 4924 (Natural Gas Distribution) by S&P's Compustat Services, Inc.; 2) have common stock which is actively traded; 3) had more than 90% of their 1995 operating revenues derived from gas operations; 4) had less than $500 million in total capital at year-end 1995; 5) have long-term debt which is rated either BBB- or better by Standard and Poor's or which is rated Baa3 or better by Moody's; 6) are included in Value Line Investment Survey and I/B/E/S Custom Report; 7) have not cut or omitted their common stock dividends during the five calendar years ending 1995 and up to the time of the preparation of Mr. Hanley's direct testimony; and 8) are included in S&P's Compustat Services, Inc., Utility Compustat II data base.

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II

Proxy Group of Seven Gas Distribution Companies
Capitalization and Financial Statistics
1991-1995, Inclusive

	Bond Ratings November 1996	
	Moody's	S&P
The names of the companies are:		
Bay State Gas Co.	A2	A
Cascade Natural Gas Co.	Baa1	BBB
Connecticut Energy Corp. (1)	A3	A-
Connecticut Natural Gas Corp.	A3	A-
Energen Corp. (2)	A1	NR
Indiana Energy, Inc. (3)	Aa3	AA-
Laclede Gas Co.	Aa3	AA-
Average (4)	A2	A

Notes: (1) Ratings are those of Southern Connecticut Gas Company.
(2) Ratings are those of Alabama Gas Corporation.
(3) Ratings are those of Indiana Gas Company Inc.
(4) From page 3 of SCHEDULE FJH-14.

Source of Information: Standard & Poor's Bond Guide
Moody's Bond Survey

PROXY GROUP OF TWENTY VALUE LINE GAS DISTRIBUTION COMPANIES
CAPITALIZATION AND FINANCIAL STATISTICS (1)
1991 - 1995, INCLUSIVE

	1995	1994	1993	1992	1991	5 YEAR AVERAGE
AMOUNT OF CAPITAL EMPLOYED			(THOUSANDS OF DOLLARS)			
TOTAL PERMANENT CAPITAL	$708,600	$658,360	$608,530	$565,570	$539,240	
SHORT-TERM DEBT	50,810	61,340	69,370	57,140	48,890	
TOTAL CAPITAL EMPLOYED	$759,410	$719,700	$677,900	$622,710	$588,130	
INDICATED AVERAGE CAPITAL COST RATES (2)						
LONG TERM DEBT	7.7%	7.7%	8.0%	8.5%	8.5%	
PREFERRED STOCK	6.3	5.3	6.3	6.4	6.1	
FINANCIAL RATIOS-MARKET BASED						
EARNINGS/PRICE RATIO	6.9%	7.1%	6.7%	6.8%	7.0%	6.9%
MARKET/AVERAGE BOOK RATIO	164.6	168.1	188.3	164.8	151.8	167.5
DIVIDEND YIELD	5.6	5.6	5.1	5.9	6.5	5.7
DIVIDEND PAYOUT RATIO	86.2	82.8	77.3	91.9	98.2	87.3
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	46.9%	47.4%	47.1%	46.4%	47.4%	47.0%
PREFERRED STOCK	1.6	1.8	1.6	2.3	2.6	2.0
COMMON EQUITY	51.5	50.8	51.3	51.3	50.0	51.0
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT TERM	50.8%	52.0%	52.5%	51.1%	51.9%	51.7%
PREFERRED STOCK	1.5	1.6	1.5	2.2	2.4	1.8
COMMON EQUITY	47.7	46.4	46.0	46.7	45.7	46.5
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	11.4%	12.0%	12.6%	11.1%	10.5%	11.5%
COVERAGES-EXCLUDING ALL AFUDC (3)						
BEFORE INCOME TAXES: ALL INTEREST CHARGES	3.1x	3.3x	3.3x	2.9x	2.7x	3.1x
AFTER INCOME TAXES: ALL INTEREST CHARGES	2.4	2.5	2.5	2.2	2.1	2.3
OVERALL COVERAGE: ALL INTEREST + PFD. DIV.	2.3	2.4	2.4	2.2	2.1	2.3
QUALITY OF EARNINGS						
AFUDC/INCOME AVAILABLE FOR COMMON EQUITY	2.4%	1.9%	2.7%	2.7%	3.7%	2.7%
EFFECTIVE INCOME TAX RATE	34.0	34.2	34.6	32.4	32.2	33.5
INTERNALLY GENERATED FUNDS/CONSTRUCTION (4)	69.6	68.7	62.7	62.3	52.4	63.1
GROSS CASH FLOW/PERMANENT CAPITAL (5)	13.3	13.1	12.9	12.9	12.1	12.9
GROSS CASH FLOW/AVERAGE TOTAL DEBT (6)	24.8	23.9	23.5	23.6	22.6	23.7
GROSS CASH FLOW INTEREST COVERAGE (7)	4.2x	4.3x	4.1x	3.9x	3.6x	4.0x
COMMON DIVIDEND COVERAGE (8)	3.0	2.9	2.8	2.7	2.6	2.8

SEE PAGE 2 FOR NOTES.

Notes:

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

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

(3) Coverages - excluding all AFUDC represent the number of times available earnings, excluding all AFUDC, cover fixed charges.

(4) Internally-generated funds/gross construction is the percentage of gross construction expenditures, excluding all AFUDC, provided by internally-generated funds from operations, excluding all AFUDC, and after payment of all cash dividends.

(5) Gross Cash Flow (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC), as a percentage of Permanent Capital (long-term debt, current maturities, preferred and preference stock and common equity).

(6) Gross Cash Flow (as defined in Note 5) as a percentage of the average of the beginning and ending total debt.

(7) Gross Cash Flow (as defined in Note 5) plus interest charges divided by interest charges.

(8) Common dividend coverage is the relationship of internally-generated funds from operations, excluding all AFUDC and after payment of preferred stock dividends, to common dividends paid.

Selection Criteria:

The basis of selection was to include those gas distribution companies which are included in Value Line Investment Survey - Natural Gas (Distribution) Industry and have not cut or omitted their common stock dividends during the five calendar years ending 1995 and up to the time of the preparation of Mr. Hanley's direct testimony. Although UGI Corporation is included in Value Line Investment Survey - Natural Gas (Distribution) Industry, it was excluded from the proxy group because it had less than 50% of 1995 operating revenues derived from gas operations.

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II

Proxy Group of Twenty Value Line Gas Distribution Companies
Capitalization and Financial Statistics
1991-1995, Inclusive

The names of the companies are:

	Bond Ratings November 1996	
	Moody's	S&P
AGL Resources, Inc.	A3	A-
Atmos Energy Corp.	NR	NR
Bay State Gas Co.	A2	A
Brooklyn Union Gas Co.	A1	A
Cascade Natural Gas Co.	Baa1	BBB
Connecticut Energy Corp. (1)	A3	A-
Connecticut Natural Gas Corp.	A3	A-
Energen Corp. (2)	A1	NR
Indiana Energy, Inc. (3)	Aa3	AA-
Laclede Gas Co.	Aa3	AA-
MCN Corporation (4)	A2	A
New Jersey Resources Corp. (5)	A2	A
NICOR, Inc. (6)	Aa1	AA
Northwest Natural Gas Co.	A2	A
ONEOK Inc.	A3	A-
Peoples Energy Corp. (7)	Aa3	AA-
Piedmont Natural Gas Co.	A2	A
South Jersey Industries, Inc. (8)	Baa1	BBB+
Washington Gas Light Co.	Aa2	AA-
WICOR, Inc. (9)	Aa3	AA-
Average (10)	A1/A2	A

Notes: (1) Ratings are those of Southern Connecticut Gas Company.
(2) Ratings are those of Alabama Gas Corporation.
(3) Ratings are those of Indiana Gas Company Inc.
(4) Ratings are those of Michigan Consolidated Gas Company.
(5) Ratings are those of Elizabethtown Gas Company.
(6) Ratings are those of Northern Illinois Gas Company.
(7) Ratings are a composite of those of North Shore Gas Company and Peoples Gas Light & Coke Company.
(8) Ratings are those of South Jersey Gas Company.
(9) Ratings are those of Wisconsin Gas Company.
(10) From page 3 of SCHEDULE FJH-14.

Source of Information: Standard & Poor's Bond Guide
Moody's Bond Survey

UTILITY REGULATORY POLICY IN THE UNITED STATES AND CANADA

COMPILATION 1994-1995

National Association of
Regulatory Utility Commissioners

SCHEDULE FJH-6
Page 1 of 3

TABLE 291 - AGENCY AUTHORITY OVER RATE OF RETURN - GAS UTILITIES

AGENCY	Agency determines rate of return under its general authority	Capital structure is adjusted to exclude non-utility financing when it is traceable	Method Agency favors in determining rate of return: No ONE method ALL are considered	** Discounted cash flow	** Comparable earnings test	** Earnings/ price ratio	** Midpoint approach	** Capital asset pricing model	** Risk premium	Other	Duration of call protection provision influences judgment in determining rate of return
FERC	X	X	X	X							
ALABAMA PSC 12/	X	X		X							
ALASKA PUC	X	X			X						Possible.
ARIZONA CC	X	X	X 2/	X 7/							
ARKANSAS PSC	X		X	X 11/							
CALIFORNIA PUC	X	X 1/	X 2/	X	X			X	X	X	Possible.
COLORADO PUC	X	X		X 9/	X						
CONNECTICUT DPUC	X	X		X							
DELAWARE PSC	X		X 2/	X	X					X	
D.C. PSC	X	X		X							
FLORIDA PSC	X	X 1/	X 2/								
GEORGIA PSC	X	X	X 2/	X					X	X 8/	
HAWAII PUC	X	X	X 2/		X					X	
IDAHO PUC	X	X		X 9/	X	X					
ILLINOIS CC	X	X	X 2/				X			X	
INDIANA URC	X		X								
IOWA UB	X	X 1/	X	X					X	X 6/	
KANSAS SCC	X	X		X							
KENTUCKY PSC	X	X	X 2/	X	X	X	X			X	
LOUISIANA PSC	X			X							
MAINE PUC	X	10/	X 9/	X							
MARYLAND PSC	X	X		X						X 6/	
MASSACHUSETTS DPU	X	X		X 5/						X 5/	
MICHIGAN PSC	X	X	2/	X	X		X	X	X	X	
MINNESOTA PUC	X	X		X							
MISSISSIPPI PSC	X	X		X	X						
MISSOURI PSC	X	X		X							
MONTANA PSC	X	X		X	X						
NEBRASKA PSC 4/											
NEVADA PSC	X	X		X	X	X					
NEW HAMPSHIRE PUC	X	X		X							Yes
NEW JERSEY BPU 12/	X	X	X					X	X	X	
NEW MEXICO PUC	X	X	X 2/	X						X	
NEW YORK PSC	X	X	X	X 7/						X	
NORTH CAROLINA UC	X	X	X 2/	X	X			X	X	X	
NORTH DAKOTA PSC	X			X							
OHIO PUC	X	X	X	X 7/						X 7/	No decision.
OKLAHOMA CC	X	X		X	X			X	X		
OREGON PUC	X	X 1/		X				X			
PENNSYLVANIA PUC	X	X	X 2/	X	X	X	X			X	Maybe, if soon
RHODE ISLAND PUC	X	X	X	X	X					X 3/	
SOUTH CAROLINA PSC	X	X	X	X				X	X		
SOUTH DAKOTA PUC	X	X		X	X						
TENNESSEE PSC	X	X	X 2/	X	X	X	X	X	X		
TEXAS RC	X	X	X 2/	X					X		
UTAH PSC	X	X		X							
VERMONT PSB 12/	X	X		X	X					X	
VIRGINIA SCC	X	X	X 2/								
WASHINGTON UTC	X	X		X							
WEST VIRGINIA PSC	X	X	X 2/	X	X			X	X	X	
WISCONSIN PSC	X	X	X 2/	X				X		X	
WYOMING PSC	X		X 2/	X	X			X	X	X	
PUERTO RICO PSC 12/	X	X			X					X	
VIRGIN ISLANDS PSC	X	10/	X 2/	X	X			X	X	X	
NATL ENERGY BOARD	X	X	X 2/	X	X					X	
ALBERTA EUB	X	X	X 2/	X	X					X	
ONTARIO EB 12/	X	X	X 2/		X					X	
QUEBEC NGB	X	X	X 2/								

** For definitions of terms, please consult the Glossary of Terms at the back of this book. ICB=Case-by-Case Basis

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FOOTNOTES - TABLE 291
AGENCY AUTHORITY OVER RATE OF RETURN - GAS UTILITIES

1/ Non-utility investment dollars are always excluded from rate base. Where non-utility investment is comparatively small, capital ratios are not adjusted. When non-utility investment is large, we usually remove non-utility investment from equity.

2/ Commission favors no single method, but rather that which produces the most reasonable results.

3/ It may use any method it desires especially in the case of a small company.

4/ No Commission regulation of electric or gas utilities.

5/ DCF is preferred, but Department approves other methods which check DCF result; risk spread analysis preferred by a slight margin. Financial condition of utility also given serious consideration.

6/ DCF is preferred; all methods are considered including econometric modeling approach.

7/ No single method, however, discounted cash flow is frequently used.

8/ Discounted cash flow most often used, but risk premium method used also. Determined case by case.

9/ DCF has been the preferred method, but its results should be checked with other methods.

10/ Never an issue before this agency.

11/ Agency favors DCF, but any method presented is considered.

12/ Commission did not respond to request for update information; this data may not be current.

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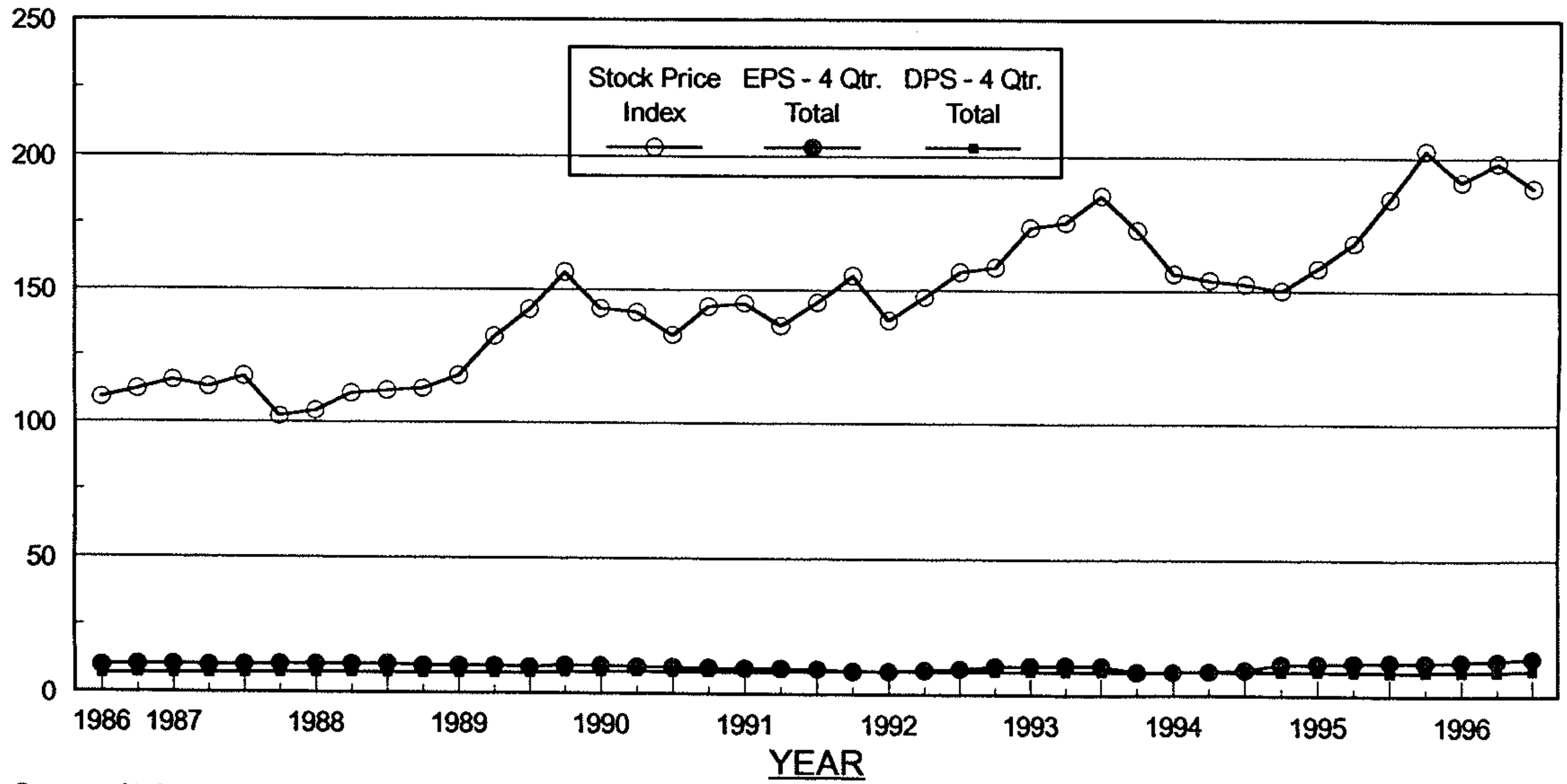
Page 3 of 3

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Stock Price Index Level, Earnings Per Share and Dividends Per Share for the S&P 500 Composite Index and the S&P Utilities Index - Quarterly for the Third Quarter 1986 through the Third Quarter 1996

		S&P 500 Composite Index			S&P Utilities Index		
Year	Quarter	Stock Price Index	EPS - Adjusted to Stock Price Index (4 qtr. total)	DPS - Adjusted to Stock Price Index (4 qtr. total)	Stock Price Index	EPS - Adjusted to Stock Price Index (4 qtr. total)	DPS - Adjusted to Stock Price Index (4 qtr. total)
1986	3rd	231.32	14.85	8.23	109.09	9.88	6.95
	4th	242.17	14.48	8.28	112.29	10.37	7.03
1987	1st	291.70	15.10	8.34	115.63	10.41	7.13
	2nd	304.00	14.42	8.52	113.07	10.12	7.22
	3rd	321.83	15.86	8.66	117.11	10.29	7.31
	4th	247.06	17.50	8.81	102.12	10.62	7.38
1988	1st	258.89	18.59	8.95	104.21	10.59	7.44
	2nd	271.91	21.67	9.23	110.66	10.61	7.49
	3rd	277.72	22.73	9.46	111.86	10.70	7.54
	4th	277.72	23.76	9.73	112.64	10.05	7.62
1989	1st	294.87	24.96	9.98	117.60	10.16	7.48
	2nd	317.98	25.22	10.30	132.27	10.24	7.56
	3rd	349.15	23.69	10.67	142.35	9.72	7.69
	4th	353.40	22.90	11.05	156.34	10.42	7.89
1990	1st	339.94	21.67	11.32	142.72	10.29	8.10
	2nd	358.02	21.26	11.67	141.39	9.86	8.18
	3rd	306.05	21.74	11.84	133.02	9.97	8.16
	4th	330.22	21.34	12.10	143.59	9.65	8.29
1991	1st	375.22	20.87	12.12	144.82	9.50	8.24
	2nd	371.16	19.35	12.15	136.58	9.45	8.41
	3rd	387.86	17.82	12.28	145.18	9.34	8.53
	4th	417.09	15.97	12.20	155.16	8.60	8.51
1992	1st	403.69	16.20	12.32	138.68	8.63	8.64
	2nd	408.14	17.05	12.32	147.33	9.02	8.54
	3rd	417.80	18.04	12.39	156.79	9.50	8.55
	4th	435.71	19.09	12.38	158.46	10.64	8.55
1993	1st	451.67	19.84	12.48	173.45	10.86	8.55
	2nd	450.53	19.33	12.52	175.34	11.02	8.56
	3rd	458.93	20.41	12.52	185.39	10.75	8.61
	4th	466.45	21.88	12.58	172.58	8.62	8.66
1994	1st	445.77	22.71	12.71	156.33	8.70	8.70
	2nd	444.27	25.20	12.84	153.99	8.88	8.87
	3rd	462.69	27.33	12.93	152.50	9.37	8.93
	4th	459.27	30.60	13.18	150.12	11.57	8.86
1995	1st	500.71	32.60	13.18	158.38	11.89	8.90
	2nd	544.75	34.44	13.37	167.86	12.12	8.83
	3rd	584.41	35.18	13.58	184.46	12.56	8.70
	4th	615.93	33.96	13.79	202.58	12.30	8.88
1996	1st	645.50	34.04	14.10	190.84	12.79	8.94
	2nd	670.63	34.91	14.27	198.08	13.03	9.00
	3rd	687.31	36.09	14.66	188.80	13.93	9.46

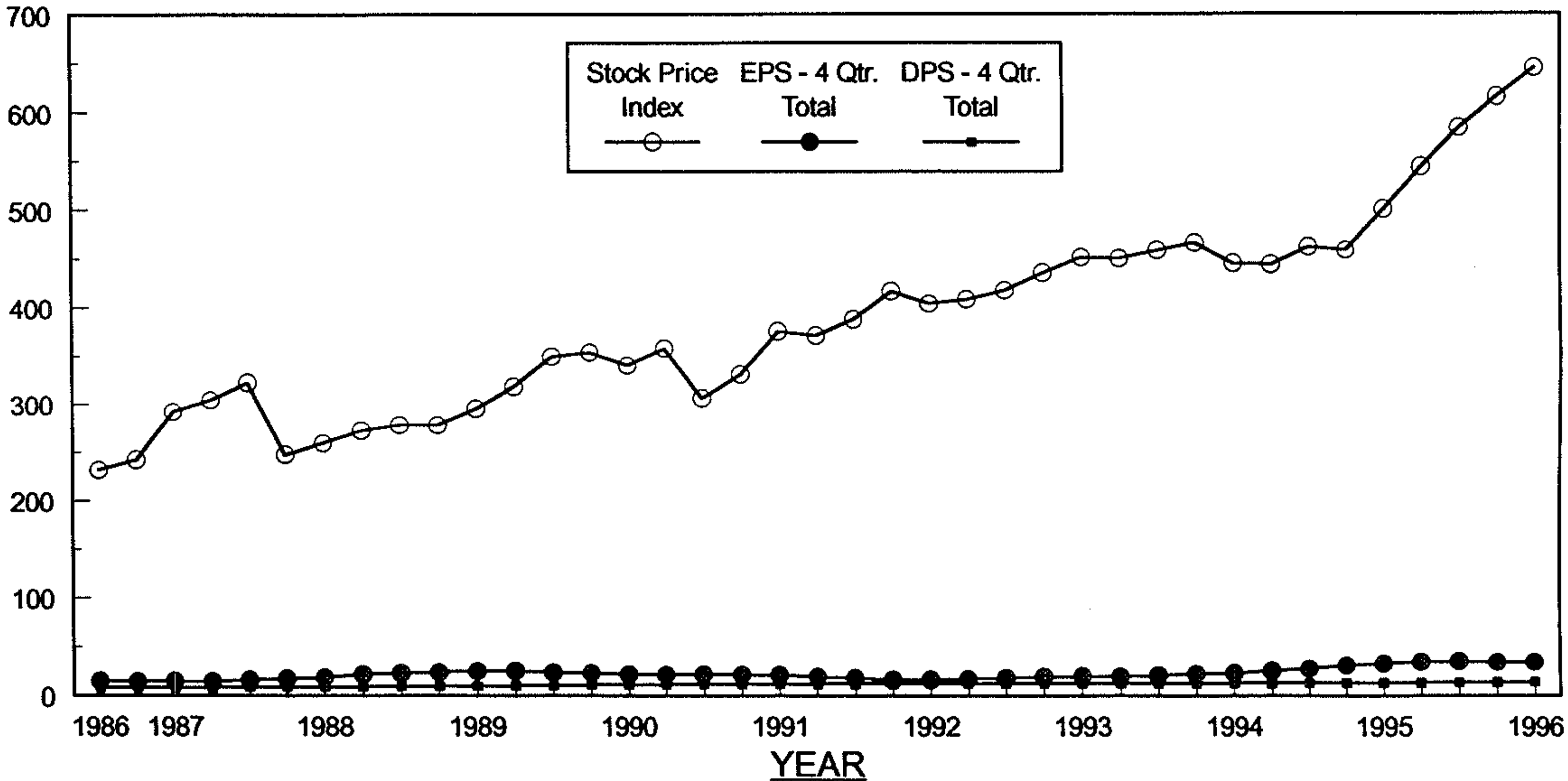
Source of Information: Standard & Poor's Security Price Index Record
Standard & Poor's Current Statistics

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Stock Price Index Level, Earnings Per Share and Dividends Per Share for the S&P Utilities Index - (3rd Qtr. 1986 - 3rd Qtr. 1996)



Source of Information:
Standard & Poor's Security Price Index Record
Standard & Poor's Current Statistics

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Stock Price Index Level, Earnings Per Share and Dividends Per Share
for the S&P 500 Composite Index - (3rd Qtr. 1986 - 3rd Qtr. 1996)



Source of Information:
Standard & Poor's Security Price Index Record
Standard & Poor's Current Statistics

THE WALL STREET JOURNAL.

★★ EASTERN EDITION FRIDAY, FEBRUARY 23, 1996 PRINCETON, NEW JERSEY

Boomers' Boom

Big Surge in Market Is Largely Propelled By the Big Generation

Now in 30s and 40s, They Roil The Scene Again, Fearful Of the Financial Future

Can Stocks Keep Going Up?

How long can this go on?

With the stock market vaulting ever higher in the second-longest bull market on record, investors large and small are nervously asking that question even as they marvel at their big gains.

Pessimists pondering statistical clues worry that the current run has already gone too far too fast. The Dow Jones Industrial Average surged 33.5% last year and 9.6% in just seven weeks this year; after a recent brief sinking spell, it rebounded 57.44 points on Wednesday and another 92.49 yesterday to close at a record 5608.46 (see articles on pages C1 and C2). And the pessimists worry that it might plunge any day now.

But far more experts predict that this bull market still has further to go, partly

By Wall Street Journal staff reporters Dave Kansas, Molly Baker and Patrick McGeehan in New York.

because the money powering it is coming from all over the place.

Some of it, for example, is coming from John Carl, the director of equities at the Teacher Retirement System of Texas. Though Mr. Carl considers the market dangerously high, he is reluctantly following the orders of the system's board to add as much as $1.8 billion to its current $27 billion stock portfolio.

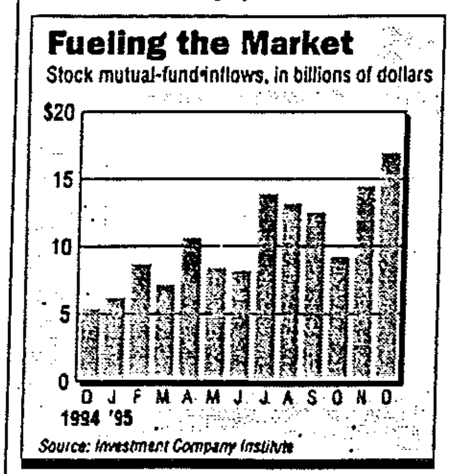
Some money is coming from Caroline Levine, a 57-year-old lawyer. In the past few years, the divorced mother of three has stepped up her investing to 15% of her income — putting in $2,000 to $3,000 a month — from 5%. "Right now, I've got to save for retirement, and the best way to do it is through the stock market," she says.

Still more is coming from Jeff Dobslaw, who drives around in an old clunker because he is putting so much of his income into his 401(k) retirement plan, buying individual stocks through a discount broker, and having money deducted from his bank account each month by two mutual funds. Aging and worried about imminent retirement? Hardly. Mr. Dobslaw is a 26-year-old certified public accountant with Monsanto Co. in Muscatine, Iowa.

"People my age," he explains, "are starting to understand that we'll have to really look after ourselves when we get older."

And it is people his age—and especially people slightly older, the baby boomers—who make it unusually difficult to predict how long stock prices can keep climbing. Although the fascination with stocks is growing at every age level, from teenagers to retirees, the 76 million people constituting the 18-year baby boom that began in 1946 are pouring in most of the new money. They are the same people who, in previous decades, left their financial footprints on other assets.

"We're seeing in the market today what we saw in real estate in the 1970s and early 1980s, when baby boomers' need for houses was driving up the real-estate mar-



ket," says Steven Norwitz, a vice president at T. Rowe Price, a big mutual-fund company. "Baby boomers are now competing for financial assets, and that demand is helping to drive up the stock market."

Despite being laid off a few weeks ago, even Jake Rahiman is helping push stocks higher. The 29-year-old professional recruiter in New York plunged his $30,000 severance pay into stocks. "I figure I'll get a better return on my money in the short term as well as the long term if I put it in the market, especially since the market is doing so well," he says.

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Page 4 of 6

Worried about their financial futures, flooded with advice about how and where to invest, and lured by the ease of investing through mutual funds, people of all ages have abandoned the free-spending ways of the 1980s in favor of frugality – and of the stock market. And with the leading edge of the baby-boom generation hitting the prime age for earnings and savings, a flood of money is likely to be available for investment for at least the next decade.

"We are seeing the most powerful change ever in the composition of household wealth," says David Hale, chief economist at Zurich Kemper Investments in Chicago. He notes that mutual-fund assets in stocks, bonds and money-market accounts total nearly $3 trillion, with stock funds alone holding about 45% of that. "They've never had such a large position in the stock market," he says.

That's only partly true. While the absolute amount of money in stock mutual funds is at an all-time high, according to the Investment Company Institute, the percentage of household wealth held in stocks – currently about 33% – still has room to grow by historical standards. From 1953 to 1965, ICI figures show, the percentage ran between 33% and 40%. But Mr. Hale, like many economists, predicts that it will eventually set a record.

"Interest rates are low, inflation isn't an issue, and the stock market really has no other competition for investor cash," Mr. Hale says.

But don't think, he warns, that because all that money is aimed at the market, stocks will never drop again. "The level of investment raises a lot of questions about what happens when inflation does become an issue and interest rates rise again," he says. "That may still be some ways off, but it's something that these new investors will eventually have to deal with."

Robert Schaefer may not be typical of the leading edge of the boomer generation – he began buying stocks 31 years ago at age 17 – but today he is kicking himself for not putting away more money sooner.

"I should have forced myself to save more," says Mr. Schaefer, who manages a Texaco Inc. petroleum-sales terminal in Delaware City, Del. With the first of two sons about to enter college, he complains about his wife's spending – "clothes, cars, draperies, sofas, you name it." While trying to persuade her that they should be stashing more money in the stock market, he also is moving to diversify the stockholdings he already has. He recently sold 75% of the Texaco stock in his retirement plan, after Texaco had climbed nearly 30% to $82.75 a share in the past four months.

He put a big chunk of the proceeds into a stock-index fund – not even considering abandoning equities. "The stock market outperforms everything else," he says. "You put your money into a bank and what do you get? Peanuts."

Younger boomers, determined not to repeat the mistakes some of their elders made, are moving earlier to shore up their financial future. Mark Mooradian, a 37-year-old engineer for Thermoscan, a San Diego maker of infrared thermometers, discovered at a company-sponsored discussion about retirement planning a few years ago that he wasn't saving nearly enough in his 401(k) plan. "They showed you how much you had to start with in order to retire with a certain amount, and that got my attention," he says. "We weren't nearly at that level."

Now, he and his wife are socking away 10% of their income in mutual funds, some of it earmarked for a down payment on a house and some aimed at financing their children's education. What is left will go for retirement.

Typically Obsessive

The determination with which many boomers approach investing is supported by the proliferation of advice available from financial planners, magazines, books and newspapers and even television. And the boomers are acting with an obsessiveness typical of their generation.

"Everything they've done has been obsessive," from protesting the Vietnam War to indulging in material goods in the 1980s, says William Dodge, chairman of the investment-policy committee at Dean Witter Reynolds. "The object of their obsessive-compulsive behavior today is saving for an uncertain future."

Mr. Dodge says typical baby boomers have lost faith in two institutions on which their parents relied: a corporate employer and the federal safety net. The simultaneous drives by business and government to slash spending and shrink payrolls have sparked rampant insecurity about jobs and much doubt about the viability of benefit programs, including Social Security, Medicare and Medicaid.

"What's really unusual is people are afraid of the future even though they have the means to do well," Mr. Dodge says. "Even if you're making a lot of money, you're afraid you're not going to be making a lot of money tomorrow."

This obsession with investing is catching some companies unprepared. For example, employees at General Signal Corp., of Stamford, Conn., have four investment choices in their 401(k) plan. The really conservative have a safe guaranteed investment contract, while stock offerings include a mutual fund offered by Fidelity Investments, a big-stock index fund, and General Signal stock. The mix has changed little since the plan began in 1976, except for the inclusion of company stock, and employees are getting restless, says Robert Bach, the director of benefits and compensation.

Wanted: Diversification

Mr. Bach says employees want more variety in equity funds, especially funds that invest in small, fast-growing companies as well as foreign-stock funds. Employees also want an 800-number to check on their accounts daily and the right to change their investment mix more than four times a year.

"People are saying, 'Let me decide to play the market-timing game; let me decide when I want to be in international funds,' " Mr. Bach says.

Just how long such investors will stick with their long-term investment plans in the face of a resurgence of inflation, a rise in interest rates, or some other adverse development remains to be seen. Some market veterans think history shows that they won't deal with it very well.

"Go back and look at the flow of funds prior to the 1987 crash," says Peter Anderson, president and chief investment officer at IDS Equity Advisors in Minneapolis. "They were very strong prior to the crash, and then they dried up right after the crash. Heavy inflows do not guarantee prosperity in the stock market."

Nevertheless, today's crop of investors does seem unusually willing to stay with stocks in time of trouble. A recent study by the Investment Company Institute cites the rash of problems in 1994 – the Mexican peso crash, the Orange County, Calif., bankruptcy filing and a series of interest-rate increases by the Federal Reserve – that stock mutual-fund investors virtually ignored.

"The failure of events in 1994 to produce a run on mutual funds likely reflects the characteristics of the typical mutual-fund shareholder," the report states, though conceding that a "critical test" may lie ahead. But based on the recent past, mutual-fund shareholders seem to have learned from their ill-timed selling decisions in 1987 and late 1990.

Although Kevin Sudeith wasn't an investor when the stock market crashed in 1987, he has learned the same lesson that the veterans did: buy on the dips. "If the market fell sharply, I'd gather together every penny I could get my hands on and put it in the stock market," says the 30-year-old artist in Long Island City, N.Y. "History shows that, over the long term, the prices will recover."

And that confidence is predicated on something more than hypothesis. In one of his early forays into the stock market, in 1993, Mr. Sudeith bought International Business Machines Corp. shares for just under $50 following the sharp decline in their price. Yesterday, IBM stock climbed $3.875 to $124.125 a share.

But just as the baby boom had a definite beginning in 1946, so, too, will the flood of the boomers' money into stocks come to an end. Dean Witter's Mr. Dodge likens the growing pool of retirement assets held by boomers to a basket of fruit. The basket probably will continue to grow until the boomers now turning 50 reach retirement age and have to choose between living off dividends and interest payments or liquidating their portfolios. "If they start to eat the fruit, watch out," he warns.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Hypothetical Example of the Inadequacy of
a DCF Return Rate Related to Book Value
When Market Value Exceeds Book Value

	Market Value	Book Value
Per Share	$30.00	$15.00
DCF Cost Rate (1)	10.60%	10.60%
Return in Dollars	$ 3.18	$ 1.59
Dividends (2)	$ 1.80	$ 1.80
Growth in Dollars	$ 1.38	$(0.21)
Return on Market Value	10.60%	5.30%(3)
Rate of Growth on Market Value	4.60%(4)	(0.70%)(5)

Notes:

(1) Comprised of 6.00% yield and 4.60% growth.

(2) $30.00 @ 6.00% yield = $1.80.

(3) $1.59 ÷ $30.00 market value = 5.30%.

(4) Expected rate of growth per market based DCF model.

(5) Actual rate of growth when DCF cost rate is applied to book value ($1.59 possible earnings - $1.80 dividends = ($0.21) for growth ÷ $30.00 market value = (0.70%)).

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Single-Stage Discounted Cash Flow Model
Summary of Conclusion

	Proxy Group of Seven Gas Distribution Companies	Proxy Group of Twenty Value Line Gas Distribution Companies
1. Dividend Yield (1)	5.6 %	5.1 %
2. Dividend Growth Component (2)	0.1	0.1
3. Yield	5.7	5.2
4. Growth Rate (3)	4.6	5.2
5. Indicated Return Rate	10.3 %	10.4 %

Notes: (1) From SCHEDULE FJH-10.

(2) This reflects a growth rate component equal to one-half the conclusion of growth rate (from page 1 of SCHEDULE FJH-12) x Line No. 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus. 5.6% x (1 / 2 x 4.6%) = 0.1%.

(3) Conclusion of growth from page 1 of SCHEDULE FJH-12.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Derivation of Dividend Yield for Use in the
Single-Stage and the Two-Stage Growth
Discounted Cash Flow Model

	Dividend Yield				
	Spot (11-29-96) (1)	Average of Last 3 Months (2)	Average of Last 6 Months (3)	Average of Last 12 Months (4)	Average Dividend Yield (5)
Proxy Group of Seven Gas Distribution Companies					
Bay State Gas Company	5.3 %	5.5 %	5.6 %	5.5 %	5.5 %
Cascade Natural Gas Company	5.6	5.8	6.1	6.1	5.9
Connecticut Energy Corp.	6.1	6.3	6.6	6.5	6.4
Connecticut Natural Gas Corp.	6.4	6.4	6.6	6.5	6.5
Energen Corporation	4.4	4.7	5.0	5.0	4.8
Indiana Energy, Inc.	4.7	4.7	4.5	4.5	4.6
Laclede Gas Company	5.3	5.3	5.4	5.5	5.4
Average	5.4 %	5.5 %	5.7 %	5.7 %	5.6 %
Proxy Group of Twenty Value Line Gas Distribution Companies					
AGL Resources, Inc.	5.1 %	5.3 %	5.4 %	5.5 %	5.3 %
Atmos Energy Corp.	4.1	4.1	4.0	4.1	4.1
Bay State Gas Company	5.3	5.5	5.6	5.5	5.5
Brooklyn Union Gas Company	4.5	4.8	5.1	5.2	4.9
Cascade Natural Gas Company	5.6	5.8	6.1	6.1	5.9
Connecticut Energy Corp.	6.1	6.3	6.6	6.5	6.4
Connecticut Natural Gas Corp.	6.4	6.4	6.6	6.5	6.5
Energen Corporation	4.4	4.7	5.0	5.0	4.8
Indiana Energy, Inc.	4.7	4.7	4.5	4.5	4.6
Laclede Gas Company	5.3	5.3	5.4	5.5	5.4
MCN Corporation	3.4	3.5	3.6	3.7	3.6
New Jersey Resources Corp.	5.3	5.5	5.5	5.5	5.5
NICOR, Inc.	3.6	3.8	4.1	4.5	4.0
Northwest Natural Gas Company	4.8	4.9	5.0	5.2	5.0
ONEOK Inc.	4.4	4.4	4.5	4.7	4.5
Peoples Energy Corp.	5.1	5.2	5.4	5.6	5.3
Piedmont Natural Gas Company	4.6	4.7	4.8	4.9	4.8
South Jersey Industries, Inc.	6.0	6.1	6.4	6.4	6.2
Washington Gas Light Company	4.8	5.0	5.2	5.2	5.1
WICOR, Inc.	4.6	4.7	4.6	4.8	4.7
Average	4.9 %	5.0 %	5.2 %	5.2 %	5.1 %

Notes: (1) The spot dividendThe spot dividend yield is the current annualized dividend per share divided by the spot market pthe spot market price at 11-29-96.

(2) The average 3-mxThe average 3-month dividend yield was computed by relating the indicated annualized divideannualized dividend rate and market price on the last trading day of each of the three months the three months ended November 30, 1996.

(3) The average 6-mxThe average 6-month dividend yield was computed by relating the indicated annualized divideannualized dividend rate and market price on the last trading day of each of the six months enthe six months ended November 30, 1996.

(4) The 12-month diviThe 12-month dividend yield was computed by relating the indicated annualized divideannualized dividend rate and market price on the last trading day of each of the twelve monthsthe twelve months ended November 30, 1996.

(5) Equal weight has Equal weight has been given to the 12-month average, 6-month average, 3-month and spot dividendand spot dividend yield. This provides recognition of current conditions, but does not place undue enot place undue emphasis thereon.

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II

SCHEDULE FJH-10

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Current Institutional Holdings (1) and Individual Holdings (2) for
the Proxy Group of Seven Gas Distribution Companies and the
Proxy Group of Twenty Value Line Gas Distribution Companies

	1	2
	October 1996 Percentage of Institutional Holdings (1)	October 1996 Percentage of Individual Holdings (2)
Proxy Group of Seven Gas Distribution Companies		
Bay State Gas Company	20.6 %	79.4 %
Cascade Natural Gas Company	14.7	85.3
Connecticut Energy Corp.	20.8	79.2
Connecticut Natural Gas Corp.	13.4	86.6
Energen Corporation	27.5	72.5
Indiana Energy, Inc.	20.7	79.3
Laclede Gas Company	18.7	81.3
Average	19.5 %	80.5 %
Proxy Group of Twenty Value Line Gas Distribution Companies		
AGL Resources, Inc.	22.4 %	77.6 %
Atmos Energy Corp.	20.0	80.0
Bay State Gas Company	20.6	79.4
Brooklyn Union Gas Company	27.4	72.6
Cascade Natural Gas Company	14.7	85.3
Connecticut Energy Corp.	20.8	79.2
Connecticut Natural Gas Corp.	13.4	86.6
Energen Corporation	27.5	72.5
Indiana Energy, Inc.	20.7	79.3
Laclede Gas Company	18.7	81.3
MCN Corporation	44.2	55.8
New Jersey Resources Corp.	23.9	76.1
NICOR, Inc.	42.7	57.3
Northwest Natural Gas Company	29.9	70.1
ONEOK Inc.	47.9	52.1
Peoples Energy Corp.	38.5	61.5
Piedmont Natural Gas Company	19.7	80.3
South Jersey Industries, Inc.	15.2	84.8
Washington Gas Light Company	22.4	77.6
WICOR, Inc.	30.1	69.9
Average	26.0 %	74.0 %

Notes: (1) The percentage of institutional holdings is calculated by dividing the number of shares held by institutions by the number of shares outstanding.
(2) (1 - column 1).

Source of Information: Standard & Poor's Stock Guide

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Historical and Projected Growth

	1	2	3	4	5	6	7	8	9	10
	Value Line Historical Five Year Growth Rate (1)		Five-Year Historical BR + SV (2)	Value Line Projected 1993-'95 to 1999-'01 Growth Rate (1)		I/B/E/S Projected Five-Year Growth Rate (3)		Standard & Poor's Projected Five-Year Growth Rate	Five-Year Projected BR + SV (4)	Conclusion of Growth Rate
	DPS	EPS		DPS	EPS	EPS	No. of Analysts	EPS		
Proxy Group of Seven Gas Distribution Companies										
Bay State Gas Company	4.5 %	-- %	3.4 %	4.0 %	8.0 %	4.5 %	[2]	5.0 %	5.7 %	
Cascade Natural Gas Company	2.0	(4.0)	4.4	1.5	9.5	5.3	[2]	7.0	4.0	
Connecticut Energy Corp.	1.5	4.0	4.4	1.0	3.0	5.0	[1]	4.0	4.1	
Connecticut Natural Gas Corp.	1.5	2.5	3.2	1.0	4.0	4.0	[2]	5.0	4.6	
Energen Corporation	5.5	5.5	6.0	4.5	6.0	8.0	[5]	6.0	6.1	
Indiana Energy, Inc.	5.0	2.5	4.4	4.5	7.5	4.7	[3]	6.0	6.1	
Laclede Gas Company	1.5	1.0	2.3	1.5	4.0	3.8	[2]	4.0	3.9	
Average	3.1 %	2.6 % (5)	4.0 %	2.6 %	6.0 %	5.0 %		5.3 %	4.9 %	
								Range of Growth Rates (6)		2.6% - 6.0%
								Midpoint of Range (6)		4.3%
								Average of all Growth Rates (6)		4.6%
								Conclusion of Growth		4.6%
Proxy Group of Twenty Value Line Gas Distribution Companies										
AGL Resources, Inc.	2.0 %	3.0 %	2.7 %	3.0 %	7.0 %	4.9 %	[10]	5.0 %	5.5 %	
Atmos Energy Corp.	4.0	--	7.9	6.0	10.5	9.2	[5]	6.0	7.0	
Bay State Gas Company	4.5	--	3.4	4.0	8.0	4.5	[2]	5.0	5.7	
Brooklyn Union Gas Company	2.5	2.0	3.9	2.5	4.0	5.5	[6]	4.0	4.2	
Cascade Natural Gas Company	2.0	(4.0)	4.4	1.5	9.5	5.3	[2]	7.0	4.0	
Connecticut Energy Corp.	1.5	4.0	4.4	1.0	3.0	5.0	[1]	4.0	4.1	
Connecticut Natural Gas Corp.	1.5	2.5	3.2	1.0	4.0	4.0	[2]	5.0	4.6	
Energen Corporation	5.5	5.5	6.0	4.5	6.0	8.0	[5]	6.0	6.1	
Indiana Energy, Inc.	5.0	2.5	4.4	4.5	7.5	4.7	[3]	6.0	6.1	
Laclede Gas Company	1.5	1.0	2.3	1.5	4.0	3.8	[2]	4.0	3.9	
MCN Corporation	6.5	4.0	8.5	4.5	9.5	6.7	[10]	9.0	9.4	
New Jersey Resources Corp.	2.5	6.5	4.2	2.5	8.5	5.1	[5]	5.0	6.6	
NICOR, Inc.	4.5	1.0	5.8	3.5	5.5	5.2	[8]	5.0	6.9	
Northwest Natural Gas Company	2.0	2.0	5.6	2.0	4.5	4.9	[7]	5.0	5.0	
ONEOK Inc.	12.0	6.0	2.8	4.5	10.0	6.5	[2]	9.0	6.4	
Peoples Energy Corp.	2.5	(2.5)	2.4	2.0	6.0	3.7	[7]	4.0	5.0	
Piedmont Natural Gas Company	5.5	3.5	5.9	5.0	5.0	6.4	[5]	6.0	4.6	
South Jersey Industries, Inc.	1.0	(2.0)	2.4	1.5	6.0	3.5	[2]	5.0	4.2	
Washington Gas Light Company	2.5	2.5	2.8	2.0	6.0	4.1	[6]	4.0	4.5	
WICOR, Inc.	3.0	1.0	4.3	7.0	8.5	9.2	[3]	9.0	5.1	
Average	3.6 %	2.6 % (5)	4.4 %	3.2 %	6.7 %	5.6 %		5.7 %	5.4 %	
								Range of Growth Rates (6)		3.2% - 6.7%
								Midpoint of Range (6)		5.0%
								Average of all Growth Rates (6)		5.3%
								Conclusion of Growth		5.2%

Notes:

(1) As shown on pages 10 through 29 of this Schedule. Historical growth rates are five-year compound growth rates.
(2) From page 3 of this Schedule.
(3) Compound growth rates in earnings per share are the only projected growth rates available from the I/B/E/S monthly summary.
(4) From page 9 of this Schedule.
(5) Excludes negative growth rates, since it is illogical that investors would invest in the common equity of a firm with the expectation of negative growth.
(6) Based upon projected growth rates as explained in detail in Mr. Hanley's accompanying direct testimony.

Source of Information: Value Line Investment Survey, September 27, 1996
I/B/E/S Custom Report, November 14, 1996
Standard & Poor's Earnings Guide, November 1996

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Calculation of Historical BR + SV

	1 BR (1)	2 S Factor (2)	3 V Factor (3)	4 SV (4)	5 BR + SV (5)
Proxy Group of Seven Gas Distribution Companies					
Bay State Gas Company	1.4 %	5.2 %	39.4 %	2.0 %	3.4 %
Cascade Natural Gas Company	1.6	7.0	39.9	2.8	4.4
Connecticut Energy Corp.	1.6	7.4	37.4	2.8	4.4
Connecticut Natural Gas Corp.	1.8	3.2	43.7	1.4	3.2
Energen Corporation	5.1	2.6	33.0	0.9	6.0
Indiana Energy, Inc.	3.5	1.9	44.8	0.9	4.4
Laclede Gas Company	1.4	2.3	39.7	0.9	2.3
Average	2.3 %	4.2 %	39.7 %	1.7 %	4.0 %
Proxy Group of Twenty Value Line Gas Distribution Companies					
AGL Resources, Inc.	0.7 %	4.4 %	44.4 %	2.0 %	2.7 %
Atmos Energy Corp.	3.0	11.7	42.3	4.9	7.9
Bay State Gas Company	1.4	5.2	39.4	2.0	3.4
Brooklyn Union Gas Company	2.0	5.6	34.4	1.9	3.9
Cascade Natural Gas Company	1.6	7.0	39.9	2.8	4.4
Connecticut Energy Corp.	1.6	7.4	37.4	2.8	4.4
Connecticut Natural Gas Corp.	1.8	3.2	43.7	1.4	3.2
Energen Corporation	5.1	2.6	33.0	0.9	6.0
Indiana Energy, Inc.	3.5	1.9	44.8	0.9	4.4
Laclede Gas Company	1.4	2.3	39.7	0.9	2.3
MCN Corporation	5.0	6.9	50.5	3.5	8.5
New Jersey Resources Corp.	1.8	5.8	40.9	2.4	4.2
NICOR, Inc.	5.8	NMF	47.7	NMF	5.8
Northwest Natural Gas Company	3.7	5.1	37.6	1.9	5.6
ONEOK Inc.	2.7	0.3	26.8	0.1	2.8
Peoples Energy Corp.	1.9	1.3	36.7	0.5	2.4
Piedmont Natural Gas Company	3.1	6.2	45.7	2.8	5.9
South Jersey Industries, Inc.	1.2	3.5	33.4	1.2	2.4
Washington Gas Light Company	2.1	1.8	40.2	0.7	2.8
WICOR, Inc.	2.1	5.7	37.9	2.2	4.3
Average	2.6 %	4.4 %	39.8 %	1.9 %	4.4 %

Notes: (1) From column 6, pages 3, 4 and 5 of this Schedule.
(2) From column 12, page 6 of this Schedule.
(3) From column 7, page 7 of this Schedule.
(4) Column 2 * column 3.
(5) Column 1 + column 4.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Historical Internal Growth Rate (1), i.e., BR, for the
Proxy Group of Seven Gas Distribution Companies for the Years 1991-1995

	1	2	3	4	5	6
	1995	1994	1993	1992	1991	Five-Year Average 1991-1995 Internal Growth Rate, i.e., BR
Proxy Group of Seven-Gas Distribution Companies						
Bay State Gas Company						
Common Equity Return Rate	10.49 %	11.64 %	11.49 %	9.94 %	9.79 %	
Retention Ratio	13.50	22.11	19.97	4.45	0.98	
Internal Growth Rate (1)	1.42	2.57	2.29	0.44	0.10	1.4 %
Cascade Natural Gas Company						
Common Equity Return Rate	8.12 %	6.00 %	10.73 %	6.72 %	13.38 %	
Retention Ratio	(20.98)	(62.84)	4.96	(51.79)	20.17	
Internal Growth Rate (1)	(1.70)	(3.77)	0.53	(3.48)	2.70	1.6 (2)
Connecticut Energy Corp.						
Common Equity Return Rate	10.93 %	11.39 %	11.49 %	11.29 %	11.05 %	
Retention Ratio	18.83	16.27	14.39	11.70	8.13	
Internal Growth Rate (1)	2.06	1.85	1.65	1.32	0.90	1.6
Connecticut Natural Gas Corp.						
Common Equity Return Rate	11.71 %	12.79 %	13.28 %	13.42 %	11.21 %	
Retention Ratio	13.32	19.96	17.01	17.48	2.88	
Internal Growth Rate (1)	1.56	2.55	2.26	2.35	0.32	1.8
Energen Corporation						
Common Equity Return Rate	11.33 %	15.46 %	13.38 %	12.46 %	11.64 %	
Retention Ratio	36.14	50.53	40.55	34.56	32.53	
Internal Growth Rate (1)	4.09	7.81	5.43	4.31	3.79	5.1
Indiana Energy, Inc.						
Common Equity Return Rate	11.94 %	13.00 %	14.68 %	11.46 %	11.32 %	
Retention Ratio	27.12	32.97	39.12	17.76	18.28	
Internal Growth Rate (1)	3.24	4.29	5.74	2.04	2.07	3.5
Laclede Gas Company						
Common Equity Return Rate	9.86 %	11.49 %	13.42 %	9.88 %	10.85 %	
Retention Ratio	1.28	13.86	24.46	(2.89)	6.17	
Internal Growth Rate (1)	0.13	1.59	3.28	(0.29)	0.67	1.4 (2)
Average						2.3 %

Notes: (1) The internal growth rate is calculated by multiplying the common equity return rate by the retention ratio (100% minus the dividend payout ratio).
(2) Excludes negatives.

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Historical Internal Growth Rate (1), i.e., BR, for the
Proxy Group of Twenty Value Line Gas Distribution Companies for the Years 1991-1995

	1	2	3	4	5	6
	1995	1994	1993	1992	1991	Five-Year Average 1991-1995 Internal Growth Rate, i.e., BR
Proxy Group of Twenty Value Line Gas Distribution Companies						
AGL Resources, Inc.						
Common Equity Return Rate	4.91 %	11.63 %	11.04 %	11.80 %	11.41 %	
Retention Ratio	(105.27)	11.12	3.92	8.83	1.77	
Internal Growth Rate (1)	(5.17)	1.29	0.43	1.04	0.20	0.7 % (2)
Atmos Energy Corp.						
Common Equity Return Rate	12.26 %	10.98 %	14.67 %	10.77 %	9.31 %	
Retention Ratio	24.80	13.26	41.05	15.10	(0.01)	
Internal Growth Rate (1)	3.04	1.46	6.02	1.63	0.00	3.0 (2)
Bay State Gas Company						
Common Equity Return Rate	10.49 %	11.64 %	11.49 %	9.94 %	9.79 %	
Retention Ratio	13.50	22.11	19.97	4.45	0.98	
Internal Growth Rate (1)	1.42	2.57	2.29	0.44	0.10	1.4
Brooklyn Union Gas Company						
Common Equity Return Rate	11.43 %	11.64 %	11.26 %	9.32 %	10.37 %	
Retention Ratio	26.52	26.86	22.68	3.68	10.62	
Internal Growth Rate (1)	3.03	3.13	2.55	0.34	1.10	2.0
Cascade Natural Gas Company						
Common Equity Return Rate	8.12 %	6.00 %	10.73 %	6.72 %	13.38 %	
Retention Ratio	(20.98)	(62.84)	4.96	(51.79)	20.17	
Internal Growth Rate (1)	(1.70)	(3.77)	0.53	(3.48)	2.70	1.6 (2)
Connecticut Energy Corp.						
Common Equity Return Rate	10.93 %	11.39 %	11.49 %	11.29 %	11.05 %	
Retention Ratio	18.83	16.27	14.39	11.70	8.13	
Internal Growth Rate (1)	2.06	1.85	1.65	1.32	0.90	1.6
Connecticut Natural Gas Corp.						
Common Equity Return Rate	11.71 %	12.79 %	13.28 %	13.42 %	11.21 %	
Retention Ratio	13.32	19.96	17.01	17.48	2.88	
Internal Growth Rate (1)	1.56	2.55	2.26	2.35	0.32	1.8
Energen Corporation						
Common Equity Return Rate	11.33 %	15.46 %	13.38 %	12.46 %	11.64 %	
Retention Ratio	36.14	50.53	40.55	34.56	32.53	
Internal Growth Rate (1)	4.09	7.81	5.43	4.31	3.79	5.1
Indiana Energy, Inc.						
Common Equity Return Rate	11.94 %	13.00 %	14.68 %	11.46 %	11.32 %	
Retention Ratio	27.12	32.97	39.12	17.76	18.28	
Internal Growth Rate (1)	3.24	4.29	5.74	2.04	2.07	3.5
Laclede Gas Company						
Common Equity Return Rate	9.86 %	11.49 %	13.42 %	9.88 %	10.85 %	
Retention Ratio	1.28	13.86	24.46	(2.89)	6.17	
Internal Growth Rate (1)	0.13	1.59	3.28	(0.29)	0.67	1.4 (2)

See page 4 for notes

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Historical Internal Growth Rate (1), i.e., BR, for the
Proxy Group of Twenty Value Line Gas Distribution Companies for the Years 1991-1995

	1	2	3	4	5	6
	1995	1994	1993	1992	1991	Five-Year Average 1991-1995 Internal Growth Rate, i.e., BR
MCN Corporation						
Common Equity Return Rate	16.45 %	15.84 %	16.10 %	14.59 %	10.78 %	
Retention Ratio	39.86	33.79	31.96	21.32	(15.17)	
Internal Growth Rate (1)	6.56	5.35	5.15	3.11	(1.64)	5.0 (2)
New Jersey Resources Corp.						
Common Equity Return Rate	13.33 %	13.43 %	11.79 %	11.44 %	6.32 %	
Retention Ratio	21.02	19.38	6.92	7.16	(82.04)	
Internal Growth Rate (1)	2.80	2.60	0.82	0.82	(5.18)	1.8 (2)
NICOR, Inc.						
Common Equity Return Rate	14.50 %	15.70 %	15.32 %	15.13 %	15.55 %	
Retention Ratio	35.01	39.39	38.10	38.66	39.70	
Internal Growth Rate (1)	5.08	6.18	5.84	5.85	6.17	5.8
Northwest Natural Gas Company						
Common Equity Return Rate	11.79 %	12.19 %	13.66 %	5.77 %	5.41 %	
Retention Ratio	27.63	28.06	33.10	(54.42)	(67.41)	
Internal Growth Rate (1)	3.26	3.42	4.52	(3.14)	(3.65)	3.7 (2)
ONEOK Inc.						
Common Equity Return Rate	11.16 %	9.75 %	10.60 %	9.18 %	10.44 %	
Retention Ratio	29.02	17.18	25.71	20.24	38.61	
Internal Growth Rate (1)	3.24	1.68	2.73	1.86	4.03	2.7
Peoples Energy Corp.						
Common Equity Return Rate	9.69 %	11.72 %	11.79 %	12.02 %	12.19 %	
Retention Ratio	(1.09)	15.90	15.78	14.77	16.63	
Internal Growth Rate (1)	(0.11)	1.86	1.86	1.78	2.03	1.9 (2)
Piedmont Natural Gas Company						
Common Equity Return Rate	12.27 %	12.10 %	13.65 %	14.02 %	9.46 %	
Retention Ratio	24.18	23.97	33.28	34.50	1.98	
Internal Growth Rate (1)	2.97	2.90	4.54	4.84	0.19	3.1
South Jersey Industries, Inc.						
Common Equity Return Rate	11.30 %	8.38 %	10.98 %	11.77 %	9.45 %	
Retention Ratio	12.51	(19.32)	7.33	12.33	(10.49)	
Internal Growth Rate (1)	1.41	(1.62)	0.80	1.45	(0.99)	1.2 (2)
Washington Gas Light Company						
Common Equity Return Rate	12.33 %	12.53 %	12.06 %	12.03 %	11.11 %	
Retention Ratio	22.53	21.60	16.82	15.50	8.23	
Internal Growth Rate (1)	2.78	2.71	2.03	1.86	0.91	2.1
WICOR, Inc.						
Common Equity Return Rate	12.42 %	11.81 %	11.59 %	8.69 %	9.25 %	
Retention Ratio	30.54	17.79	17.79	(6.83)	5.06	
Internal Growth Rate (1)	3.79	2.10	2.06	(0.59)	0.47	2.1 (2)
Average						2.6 %

Notes: (1) The internal growth rate is calculated by multiplying the common equity return rate by the retention ratio (100% minus the dividend payout ratio).
(2) Excludes negatives.

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Calculation of Five Year Average Growth in Common Shares Outstanding (1), i.e., S Factor

	1	2	3	4	5	6	7	8	9	10	11	12
	1990 Common Shares Outstanding (1)	90-91 Growth	1991 Common Shares Outstanding (1)	91-92 Growth	1992 Common Shares Outstanding (1)	92-93 Growth	1993 Common Shares Outstanding (1)	93-94 Growth	1994 Common Shares Outstanding (1)	94-95 Growth	1994 Common Shares Outstanding (1)	Five Year Average Common Share Growth
Proxy Group of Seven Gas Distribution Companies												
Bay State Gas Company	10.425	3.0 %	10.737	16.9 %	12.550	2.7 %	12.890	3.1 %	13.290	0.5 %	13.353	5.2 %
Cascade Natural Gas Company	6.566	1.0	6.632	14.8	7.614	12.5	8.566	4.0	8.912	2.6	9.144	7.0
Connecticut Energy Corp.	6.250	13.6	7.097	1.9	7.235	3.5	7.488	16.2	8.700	1.9	8.865	7.4
Connecticut Natural Gas Corp.	8.498	1.3	8.609	2.1	8.792	8.5	9.542	0.0	9.539	4.1	9.931	3.2
Energen Corporation	9.872	2.4	10.104	0.8	10.183	1.3	10.320	5.8	10.918	(0.1)	10.910	2.6 (2)
Indiana Energy, Inc.	20.583	0.4	20.673	0.5	20.769	8.1	22.460	0.4	22.557	0.0	22.562	1.9
Laclede Gas Company	15.586	0.0	15.586	0.0	15.586	0.0	15.586	0.5	15.670	11.2	17.420	2.3
Average												4.2 %
Proxy Group of Twenty Value Line Gas Distribution Companies												
AGL Resources, Inc.	44.320	7.3 %	47.574	2.3 %	48.670	2.1 %	49.700	2.3 %	50.844	8.0 %	54.926	4.4 %
Atmos Energy Corp.	9.151	11.1	10.171	3.0	10.478	8.6	11.375	34.5	15.297	1.5	15.519	11.7
Bay State Gas Company	10.425	3.0	10.737	16.9	12.550	2.7	12.890	3.1	13.290	0.5	13.353	5.2
Brooklyn Union Gas Company	37.305	13.3	42.279	2.8	43.452	6.7	46.380	2.6	47.590	2.5	48.788	5.6
Cascade Natural Gas Company	6.566	1.0	6.632	14.8	7.614	12.5	8.566	4.0	8.912	2.6	9.144	7.0
Connecticut Energy Corp.	6.250	13.6	7.097	1.9	7.235	3.5	7.488	16.2	8.700	1.9	8.865	7.4
Connecticut Natural Gas Corp.	8.498	1.3	8.609	2.1	8.792	8.5	9.542	0.0	9.539	4.1	9.931	3.2
Energen Corporation	9.872	2.4	10.104	0.8	10.183	1.3	10.320	5.8	10.918	(0.1)	10.910	2.6 (2)
Indiana Energy, Inc.	20.583	0.4	20.673	0.5	20.769	8.1	22.460	0.4	22.557	0.0	22.562	1.9
Laclede Gas Company	15.586	0.0	15.586	0.0	15.586	0.0	15.586	0.5	15.670	11.2	17.420	2.3
MCN Corporation	47.860	10.3	52.774	10.5	58.292	1.2	58.992	1.3	59.788	11.0	66.370	6.9
New Jersey Resources Corp.	13.520	3.3	13.965	16.6	16.286	3.3	16.820	2.9	17.303	2.8	17.793	5.8
NICOR, Inc.	57.932	(1.1)	57.300	(2.7)	55.770	(3.2)	53.959	(4.5)	51.540	(2.4)	50.302	NMF (2)
Northwest Natural Gas Company	17.406	1.6	17.677	10.1	19.460	1.6	19.766	1.8	20.129	10.5	22.244	5.1
ONEOK Inc.	26.627	0.0	26.621	0.0	26.629	0.0	26.634	0.2	26.690	1.2	27.020	0.3
Peoples Energy Corp.	32.701	0.2	32.762	6.1	34.774	0.1	34.823	0.1	34.868	0.1	34.913	1.3
Piedmont Natural Gas Company	21.434	15.4	24.728	4.3	25.796	1.4	26.152	1.6	26.577	8.5	28.835	6.2
South Jersey Industries, Inc.	9.029	2.3	9.238	2.8	9.500	3.2	9.805	9.3	10.715	0.1	10.722	3.5
Washington Gas Light Company	39.230	1.7	39.888	1.8	40.616	2.2	41.494	1.7	42.186	1.8	42.932	1.8
WICOR, Inc.	13.829	4.6	14.464	2.5	14.821	10.7	16.407	3.1	16.918	7.8	18.237	5.7
Average												4.8 %

Notes: (1) Year-end shares outstanding.
(2) Excludes negatives.

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Calculation of the Premium/Discount of a
Company's Stock Price Relative to Its Book Value, i.e., V Factor

	1	2	3	4	5	6	7
	1991 Market to Book Ratio (1)	1992 Market to Book Ratio (1)	1993 Market to Book Ratio (1)	1994 Market to Book Ratio (1)	1995 Market to Book Ratio (1)	Five Year Average Market to Book Ratio	V Factor (2)
Proxy Group of Seven Gas Distribution Companies							
Bay State Gas Company	155.9 %	165.8 %	185.3 %	160.3 %	158.4 %	165.1 %	39.4 %
Cascade Natural Gas Company	164.8	172.6	183.3	155.6	155.3	166.3	39.9
Connecticut Energy Corp.	142.0	172.6	187.5	157.0	140.0	159.8	37.4
Connecticut Natural Gas Corp.	147.5	185.9	212.9	185.5	156.4	177.6	43.7
Energen Corporation	143.6	138.0	170.3	149.3	144.9	149.2	33.0
Indiana Energy, Inc.	174.7	185.8	200.9	173.6	170.6	181.1	44.8
Laclede Gas Company	142.6	158.5	187.4	178.2	162.8	165.9	39.7
Average						166.4 %	39.7 %
Proxy Group of Twenty Value Line Gas Distribution Companies							
AGL Resources, Inc.	183.2 %	181.1 %	195.2 %	169.2 %	171.4 %	180.0 %	44.4 %
Atmos Energy Corp.	146.8	158.4	185.8	179.1	195.9	173.2	42.3
Bay State Gas Company	155.9	165.8	185.3	160.3	158.4	165.1	39.4
Brooklyn Union Gas Company	138.4	145.8	164.5	157.6	155.5	152.4	34.4
Cascade Natural Gas Company	164.8	172.6	183.3	155.6	155.3	166.3	39.9
Connecticut Energy Corp.	142.0	172.6	187.5	157.0	140.0	159.8	37.4
Connecticut Natural Gas Corp.	147.5	185.9	212.9	185.5	156.4	177.6	43.7
Energen Corporation	143.6	138.0	170.3	149.3	144.9	149.2	33.0
Indiana Energy, Inc.	174.7	185.8	200.9	173.6	170.6	181.1	44.8
Laclede Gas Company	142.6	158.5	187.4	178.2	162.8	165.9	39.7
MCN Corporation	170.3	187.2	212.9	224.7	214.7	202.0	50.5
New Jersey Resources Corp.	146.0	160.6	192.1	167.4	179.3	169.1	40.9
NICOR, Inc.	180.0	178.7	216.1	194.4	186.6	191.2	47.7
Northwest Natural Gas Company	156.3	161.6	175.9	161.6	146.1	160.3	37.6
ONEOK Inc.	115.0	125.5	163.0	131.3	148.6	136.7	26.8
Peoples Energy Corp.	149.0	161.5	174.7	152.3	153.0	158.1	36.7
Piedmont Natural Gas Company	158.5	180.1	213.5	185.9	182.2	184.0	45.7
South Jersey Industries, Inc.	139.2	154.1	174.7	141.1	142.0	150.2	33.4
Washington Gas Light Company	150.9	167.2	188.9	165.2	164.1	167.3	40.2
WICOR, Inc.	131.0	156.1	180.7	172.5	164.5	161.0	37.9
Average						167.5 %	39.8 %

Notes: (1) Market to Book Ratio = average of yearly high-low market price divided by the average of beginning and ending year's balance of book common equity.
(2) (1 - (100 / column 6)).

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Calculation of Projected BR + SV

	1	2	3	4	5	6	7	8	9	10	11
	Common Shares Outstanding (1) (000,000)			Projected 1999 - 2001 (1)							
	Actual 1995	Projected 1999-2001	S Factor (2)	High Stock Price	Low Stock Price	Book Value	Average Stock Price (3)	V Factor (4)	SV (5)	BR (6)	BR + SV (7)
Proxy Group of Seven Gas Distribution Companies											
Bay State Gas Company	13.36	14.00	0.9 %	$40	$30	$21.10	$35.00	39.7 %	0.4 %	5.3 %	5.7 %
Cascade Natural Gas Company	9.14	11.50	4.7	18	12	12.00	15.00	20.0	0.9	3.1	4.0
Connecticut Energy Corp.	8.87	10.60	3.6	30	20	17.00	25.00	32.0	1.2	2.9	4.1
Connecticut Natural Gas Corp.	9.93	11.40	2.8	30	25	16.90	27.50	38.5	1.1	3.5	4.6
Energen Corporation	10.91	14.50	5.9	40	30	26.55	35.00	24.1	1.4	4.7	6.1
Indiana Energy, Inc.	22.56	21.60	(0.9)	30	25	16.25	27.50	40.9	(0.4)	6.1	6.1 (8)
Laclede Gas Company	17.42	18.00	0.7	30	25	15.35	27.50	44.2	0.3	3.6	3.9
Average			3.1 % (8)					34.2 %	0.9 % (8)	4.2 %	4.9 %
Proxy Group of Twenty Value Line Gas Distribution Companies											
AGL Resources, Inc.	55.02	60.00	1.7 %	$25	$20	$11.70	$22.50	48.0 %	0.8 %	4.7 %	5.5 %
Atmos Energy Corp.	15.62	17.50	2.4	35	25	19.10	30.00	36.3	0.9	6.1	7.0
Bay State Gas Company	13.36	14.00	0.9	40	30	21.10	35.00	39.7	0.4	5.3	5.7
Brooklyn Union Gas Company	48.79	54.00	2.0	35	25	20.85	30.00	30.5	0.6	3.6	4.2
Cascade Natural Gas Company	9.14	11.50	4.7	18	12	12.00	15.00	20.0	0.9	3.1	4.0
Connecticut Energy Corp.	8.87	10.60	3.6	30	20	17.00	25.00	32.0	1.2	2.9	4.1
Connecticut Natural Gas Corp.	9.93	11.40	2.8	30	25	16.90	27.50	38.5	1.1	3.5	4.6
Energen Corporation	10.91	14.50	5.9	40	30	26.55	35.00	24.1	1.4	4.7	6.1
Indiana Energy, Inc.	22.56	21.60	(0.9)	30	25	16.25	27.50	40.9	(0.4)	6.1	6.1 (8)
Laclede Gas Company	17.42	18.00	0.7	30	25	15.35	27.50	44.2	0.3	3.6	3.9
MCN Corporation	66.37	80.00	3.8	40	30	18.00	35.00	48.6	1.8	7.6	9.4
New Jersey Resources Corp.	17.79	18.25	0.5	40	30	19.45	35.00	44.4	0.2	6.4	6.6
NICOR, Inc.	50.30	47.00	(1.3)	40	30	18.30	35.00	47.7	(0.6)	6.9	6.9 (8)
Northwest Natural Gas Company	22.24	24.00	1.5	30	20	18.75	25.00	25.0	0.4	4.6	5.0
ONEOK Inc.	27.02	28.00	0.7	40	30	18.75	35.00	46.4	0.3	6.1	6.4
Peoples Energy Corp.	34.91	35.05	0.1	40	35	23.05	37.50	38.5	0.0	5.0	5.0
Piedmont Natural Gas Company	28.84	33.50	3.0	30	25	16.35	27.50	40.5	1.2	3.4	4.6
South Jersey Industries, Inc.	10.72	12.50	3.1	30	20	17.25	25.00	31.0	1.0	3.2	4.2
Washington Gas Light Company	42.93	46.50	1.6	25	20	15.00	22.50	33.3	0.5	4.0	4.5
WICOR, Inc.	18.24	20.00	1.9	55	40	25.75	47.50	45.8	0.9	4.2	5.1
Average			2.3 % (8)					37.8 %	0.8 % (8)	4.8 %	5.4 %

Notes:
(1) From pages 10 through 29 of this Schedule.
(2) The S Factor is the five year compound growth rate between the 1995 and 2000 (mid-point of 1999-2001 projection) common shares outstanding.
(3) The Average Stock Price is the average of column 4 and column 5.
(4) (1 - (column 6 / column 7))
(5) Column 3 * column 8.
(6) From page 9, column 14 of this Schedule.
(7) Column 9 + column 10.
(8) Excludes negatives.

Source of Information: Value Line Investment Survey, September 27, 1996

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Projected Internal Growth Rate

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	1995			1999-2001					1998-2000					
	Common Equity (%) (1)	Total Capital ($ mill) (1)	Common Equity ($ mill) (1)	Common Equity (%) (1)	Total Capital ($ mill) (1)	Common Equity ($ mill) (1)	Annual Common Equity Growth Rate (4)	ROE Adjustment Factor (5)	Return on Common Equity (1)	Return on Average Common Equity (6)	EPS (1)	DPS (1)	Retention Ratio (7)	Projected Internal Growth (8)
Proxy Group of Seven Gas Distribution Companies														
Bay State Gas Company	51.80 %	$424.00	$219.63	55.00 %	$530.00	$291.50	5.83 %	1.03	13.00 %	13.39 %	$2.80	$1.70	39.3 %	5.3 %
Cascade Natural Gas Company	45.00	198.50	89.33	48.50	285.00	138.23	9.12	1.04	11.50	11.96	1.40	1.04	25.7	3.1
Connecticut Energy Corp.	52.40	250.90	131.47	53.00	340.00	180.20	6.51	1.03	11.00	11.33	1.85	1.38	25.4	2.9
Connecticut Natural Gas Corp.	49.80	301.40	150.10	51.50	375.00	193.13	5.17	1.03	12.50	12.88	2.15	1.57	27.0	3.5
Energen Corporation	56.90	305.50	173.83	52.50	735.00	385.88	17.29	1.08	9.50	10.26	2.60	1.40	46.2	4.7
Indiana Energy, Inc.	61.40	457.00	280.60	67.00	525.00	351.75	4.62	1.02	14.00	14.28	2.35	1.34	43.0	6.1
Laclede Gas Company	59.30	383.50	227.42	58.00	470.00	272.60	3.69	1.02	12.50	12.75	1.95	1.40	28.2	3.6
Average														4.2 %
Proxy Group of Twenty Value Line Gas Distribution Companies														
AGL Resources, Inc.	47.60 %	$1,170.30 %	$557.06	48.50 %	$1,450.00	$703.25	4.77 %	1.02	15.50 %	15.81 %	$1.80	$1.26	30.0 %	4.7 %
Atmos Energy Corp.	54.70	289.60	158.41	60.00	560.00	336.00	16.23	1.08	11.50	12.42	2.25	1.15	48.9	6.1
Bay State Gas Company	51.80	424.00	219.63	55.00	530.00	291.50	5.83	1.03	13.00	13.39	2.80	1.70	39.3	5.3
Brooklyn Union Gas Company	53.20	1,553.80	826.62	56.00	2,000.00	1,120.00	6.26	1.03	11.00	11.33	2.35	1.60	31.9	3.6
Cascade Natural Gas Company	45.00	198.50	89.33	48.50	285.00	138.23	9.12	1.04	11.50	11.96	1.40	1.04	25.7	3.1
Connecticut Energy Corp.	52.40	250.90	131.47	53.00	340.00	180.20	6.51	1.03	11.00	11.33	1.85	1.38	25.4	2.9
Connecticut Natural Gas Corp.	49.80	301.40	150.10	51.50	375.00	193.13	5.17	1.03	12.50	12.88	2.15	1.57	27.0	3.5
Energen Corporation	56.90	305.50	173.83	52.50	735.00	385.88	17.29	1.08	9.50	10.26	2.60	1.40	46.2	4.7
Indiana Energy, Inc.	61.40	457.00	280.60	67.00	525.00	351.75	4.62	1.02	14.00	14.28	2.35	1.34	43.0	6.1
Laclede Gas Company	59.30	383.50	227.42	58.00	470.00	272.60	3.69	1.02	12.50	12.75	1.95	1.40	28.2	3.6
MCN Corporation	37.90	1,754.70	665.03	40.00	3,650.00	1,460.00	17.03	1.08	13.50	14.58	2.40	1.15	52.1	7.6
New Jersey Resources Corp.	41.00	632.20	259.20	47.00	755.00	354.85	6.48	1.03	15.00	15.45	3.00	1.76	41.3	6.4
NICOR, Inc.	59.00	1,165.20	687.47	59.50	1,440.00	856.80	4.50	1.02	15.50	15.81	2.75	1.55	43.6	6.9
Northwest Natural Gas Company	50.30	643.30	323.58	50.00	900.00	450.00	6.82	1.03	11.50	11.85	2.20	1.35	38.6	4.6
ONEOK Inc.	100.00 (9)	397.60	397.60	100.00	535.00	535.00	6.12	1.03	13.50	13.91	2.60	1.45	44.2	6.1
Peoples Energy Corp.	50.80	1,263.60	641.91	49.00	1,645.00	806.05	4.66	1.02	14.00	14.28	3.20	2.08	35.0	5.0
Piedmont Natural Gas Company	49.60	716.00	355.14	50.00	1,095.00	547.50	9.04	1.04	11.50	11.96	1.90	1.36	28.4	3.4
South Jersey Industries, Inc.	47.90	328.40	157.30	51.00	420.00	214.20	6.37	1.03	12.00	12.36	2.10	1.55	26.2	3.2
Washington Gas Light Company	58.90	870.60	512.78	59.00	1,185.00	699.15	6.40	1.03	12.00	12.36	1.85	1.25	32.4	4.0
WICOR, Inc.	66.40	520.00	345.28	66.50	775.00	515.38	8.34	1.04	13.00	13.52	3.35	2.30	31.3	4.2
Average														4.8 %

Notes:
(1) From pages 10 through 29 of this Schedule .
(2) Column 1 * column 2.
(3) Column 4 * column 5.
(4) Five year compound growth rate in common equity from 1995 to 1999-2001 or ((column 6 / column 3) ^ .20) - 1).
(5) 2 * ((1 + column 7) / (2 + column 7)) .
(6) Column 8 * column 9.
(7) 1 - (column 12 / column 11).
(8) Column 10 * column 13.
(9) Assumed common equity ratio of 100% of net worth since Value Line does not publish a common equity ratio for ONEOK Inc.

Source of Information: Value Line Investment Survey, September 27, 1996

AGL RESOURCES NYSE-ATG

RECENT PRICE	P/E RATIO		RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
20	13.7	(Trailing: 16.5 Median: 14.0)	0.91	5.6%	474

TIMELINESS (Relative Price Performance Next 12 Mos.) 4 Below Average
SAFETY 2 Above Average
(Scale: 1 Highest to 5 Lowest)
BETA .75 (1.00 = Market)

1999-01 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	25	(+25%)	10%
Low	20	(Nil)	6%

Insider Decisions

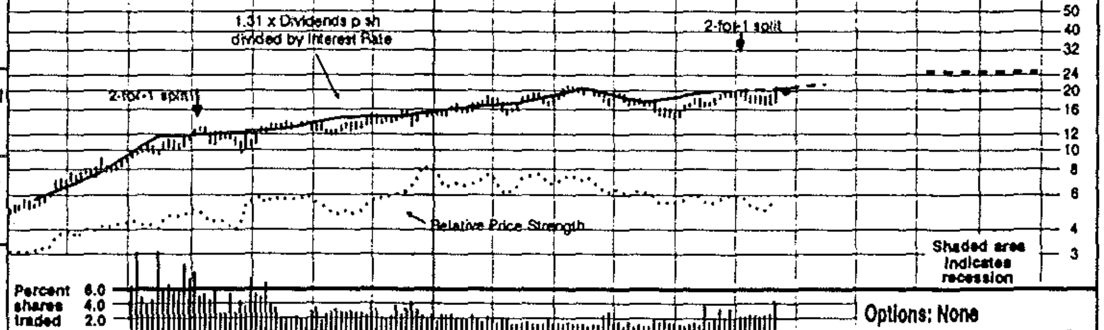
	N	D	J	F	M	A	M	J	J
to Buy	1	0	0	0	0	0	0	0	0
Options	2	0	0	0	0	0	0	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	4Q95	1Q96	2Q96
to Buy	46	45	51
to Sell	34	57	35
Hld's(000)	10889	10672	12890

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
High:	9.5	12.1	13.2	14.0	15.4	16.1	18.8	19.5	21.3	19.4	20.0	21.1
Low:	7.0	9.3	9.7	10.8	11.9	13.3	14.9	15.1	17.0	14.6	14.9	17.1

Target Price Range 1999 | 2000 | 2001



1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
38.56	45.72	52.11	48.27	46.00	37.42	27.58	26.24	22.97	21.63	22.58	20.26	20.43	22.73	23.59	19.32	21.25	22.00	Revenues per sh A	24.25
1.70	1.63	1.50	1.60	1.87	1.69	1.52	1.84	1.90	1.93	2.04	2.07	2.31	2.25	2.24	2.33	2.50	2.60	"Cash Flow" per sh	2.90
.78	.64	.45	.78	1.13	.91	.83	1.02	1.13	.95	1.01	1.04	1.13	1.08	1.17	1.33	1.40	1.50	Earnings per sh B	1.80
.38	.42	.45	.48	.54	.63	.70	.80	.88	.94	.98	1.02	1.03	1.04	1.04	1.04	1.06	1.12	Div'ds Decl'd per sh C■	1.26
1.99	2.45	2.52	2.43	2.95	3.01	3.30	3.59	2.86	2.65	2.73	2.95	2.74	2.49	2.37	2.17	2.15	2.30	Cap'l Spending per sh	2.10
6.26	6.49	6.45	6.37	6.92	7.12	7.59	7.89	8.72	8.83	8.97	9.42	9.70	9.90	10.19	10.12	10.40	10.60	Book Value per sh D	11.70
18.14	18.14	18.53	23.07	26.64	31.12	36.55	37.48	42.47	43.40	44.32	47.57	48.69	49.72	50.86	55.02	55.75	57.00	Common Shs Outst'g E	60.00
4.8	5.9	8.3	5.7	4.7	8.3	11.8	11.5	11.1	13.7	14.2	15.3	15.5	17.9	15.1	12.6	Bold figures are	Value Line	Avg Ann'l P/E Ratio	13.0
.64	.72	.91	.48	.44	.67	.80	.77	.92	1.04	1.05	.98	.94	1.06	.99	.86	estimates		Relative P/E Ratio	1.00
10.2%	11.1%	12.0%	10.9%	10.1%	8.4%	7.1%	6.8%	7.1%	7.2%	6.8%	6.4%	5.9%	5.4%	5.9%	6.2%			Avg Ann'l Div'd Yield	5.4%

CAPITAL STRUCTURE as of 6/30/96
Total Debt $626.4 mill. Due in 5 Yrs $121.9 mill.
LT Debt $554.5 mill. LT Interest $42.5 mill.
(LT interest earned: 3.7x; total interest coverage: 3.4x)

Leases, Uncapitalized Annual rentals $8.0 mill.

Pension Liability None

Pfd Stock $58.5 mill. Pfd Div'd $4.4 mill.
$14.0 mill. 4.50%-8.32% cum., callable at $101.96-$105.25; $44.5 mill. 7.70% cum.

Common Stock 55,526,692 shs.

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
1008.3	983.5	975.6	938.7	1000.9	963.9	994.6	1130.3	1199.9	1063.0	1185	1255	Revenues ($mill) A	1455
29.2	39.4	46.0	42.1	45.6	49.4	55.4	57.5	63.2	74.3	80.0	90.0	Net Profit ($mill)	110
46.0%	47.6%	31.8%	27.6%	31.7%	34.6%	31.6%	32.9%	35.2%	36.9%	37.0%	37.0%	Income Tax Rate	37.0%
2.9%	4.0%	4.7%	4.5%	4.6%	5.1%	5.6%	5.1%	5.3%	7.0%	6.8%	7.2%	Net Profit Margin	7.6%
49.4%	46.2%	49.3%	47.9%	50.2%	49.6%	40.2%	40.5%	49.0%	47.4%	46.5%	47.5%	Long-Term Debt Ratio	47.5%
46.9%	50.3%	48.2%	49.8%	47.8%	48.8%	58.1%	53.1%	45.8%	47.6%	48.5%	48.0%	Common Equity Ratio	48.5%
590.9	587.7	768.5	770.0	831.9	918.3	812.7	925.7	1131.5	1170.3	1190	1265	Total Capital ($mill)	1450
652.1	757.7	866.5	979.1	1049.6	1141.6	1217.9	1281.3	1297.4	1350.3	1450	1550	Net Plant ($mill)	1700
7.6%	9.0%	8.2%	7.8%	7.6%	7.6%	9.4%	8.6%	7.5%	8.2%	8.5%	9.0%	% Earned Total Cap'l	9.5%
9.8%	12.5%	11.8%	10.5%	11.0%	10.7%	11.4%	10.4%	11.0%	12.1%	13.0%	13.5%	% Earned Net Worth	14.5%
9.9%	12.8%	12.0%	10.6%	11.2%	10.8%	11.5%	10.8%	11.3%	12.5%	14.0%	14.5%	% Earned Com Equity	15.5%
1.7%	2.8%	2.7%	.2%	.2%	.2%	1.0%	.4%	3.0%	4.6%	3.5%	3.5%	% Retained to Com Eq	4.5%
84%	79%	79%	98%	98%	98%	91%	96%	75%	66%	77%	76%	% All Div'ds to Net Prof	72%

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	3.3	3.7	2.2
Other	267.8	216.3	245.4
Current Assets	271.1	220.0	247.6
Accts Payable	57.6	72.3	70.0
Debt Due	110.4	51.0	71.9
Other	117.9	107.6	105.0
Current Liab.	285.9	230.9	246.9
Fix. Chg. Cov.	250%	288%	270%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-6.5%	-.5%	1.5%
"Cash Flow"	3.0%	3.0%	4.0%
Earnings	2.5%	3.0%	7.0%
Dividends	6.5%	2.0%	3.0%
Book Value	4.0%	2.5%	2.5%

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec. 31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	334.1	448.2	197.7	150.3	1130.3
1994	361.9	500.2	191.2	146.6	1199.9
1995	328.8	448.2	177.5	108.5	1063.0
1996	328.8	478.8	241.1	136.3	1185
1997	350	505	255	145	1255

Fiscal Year Ends	EARNINGS PER SHARE ABF Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.43	.89	d.07	d.17	1.08
1994	.50	.98	d.09	d.21	1.17
1995	.57	.95	.03	d.19	1.33
1996	.53	.81	.06	Nil	1.40
1997	.55	.85	.10	Nil	1.50

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.255	.26	.26	.26	1.04
1993	.26	.26	.26	.26	1.04
1994	.26	.26	.26	.26	1.04
1995	.26	.26	.26	.265	1.05
1996	.265	.265	.265■		

BUSINESS: AGL Resources, Inc. is a holding company. Its primary subsidiary is Atlanta Gas Light Co., which distributes natural gas to about 1.4 million customers in Georgia and southern Tennessee. Also involved in natural gas and power marketing, energy management services, and wholesale and retail propane sales. System throughput: 262.0 Bcf in FY '95. System throughput (oper. margin) breakdown, FY '95: Residential, 35.0% (62.4%); commercial, 14.4% (20.1%); industrial and interruptible, 23.0% (9.8%); transportation and other, 27.6% (7.7%). Depr. rate: 3.0%. Gas cost: 53.8% of revs. in FY '95. Has about 3,349 empls., 17,250 shrhdrs. Pres. & C.E.O.: David R. Jones. Inc.: GA. Addr.: 303 Peachtree St., N.E., Atlanta, GA 30308. Tel.: 404-584-9470.

AGL Resources' anticipated 1996 fiscal fourth-quarter share-earnings gains will be primarily attributable to weather normalization of rates. (Quarter ends September 30th.) This fiscal year, Atlanta Gas Light Company, its regulated distribution subsidiary, adopted a revised rate structure which shifts some profits from the heating season (November to March) into warmer periods. Hence, the weather normalization will likely boost fourth-quarter share net to the break-even point. Overall annual profits, however, will not be affected by the new rate design.

In fiscal 1997 and beyond, AGL's nonregulated operations should make significant contributions to the bottom line. On August 5, 1996, in response to rapidly growing gas industry deregulation, the company announced its corporate reorganization. Three unregulated subsidiaries—The Energy Spring, AGL Investments, and AGL Energy Services—were formed to focus largely on gas marketing and energy management. Although such efforts are somewhat riskier than AGL's traditional distribution activities, the company's know-how suggests that these businesses will provide worthwhile returns and increase share earnings accordingly.

We expect Atlanta Gas Light Company to maintain its solid operating performance. Strength in Atlanta's economy and various infrastructural needs should provide support for about 2.5% to 3.0% annual customer growth through late decade. These meter additions bode well for AGL's net income in upcoming years.

This issue's investment merit lies mainly in its dividend yield. Income-oriented investors should note the stock's dividend yield, which is more than twice the *Value Line* median. The stock price has risen by about 11% since our last review published in June. A good part of this rise can be attributed to growing investor speculation on mergers between electric and gas utilities. Recent price activity and higher long-term interest rates both contribute to our below-average appreciation expectations for the stock in the year ahead and the 3- to 5-year pull. Success in nonregulated businesses, however, should allay interest-rate concerns associated with the distribution operations.

Oscar L. Vidal *September 27, 1996*

(A) Fiscal year ends September 30th.
(B) Primary egs. Next egs. report due early November. Excl. nonrecurring items: '84, 37¢; '88, 15¢; '95, d83¢.
(C) Next dividend meeting early November. Goes ex mid-November. Approx. div'd payment dates: March 1, June 1, Sept. 1, Dec. 1.
■ Dividend reinvestment plan available.
(D) Incl. def'd chgs. '95: $56.9 mill., $1.04/sh.
(E) In millions, adj'd for stock splits.
(F) Quarters may not add to total due to change in shares outstanding.

Company's Financial Strength	B+
Stock's Price Stability	95
Price Growth Persistence	60
Earnings Predictability	85

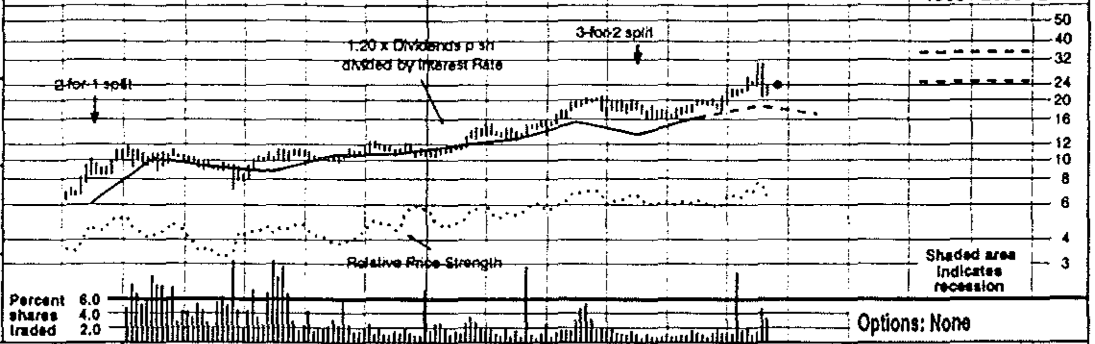
ATMOS ENERGY CORP. NYSE-ATO

RECENT PRICE	24	P/E RATIO	15.0 (Trailing: 14.5 Median: 14.0)	RELATIVE P/E RATIO	1.00	DIV'D YLD	4.2%	VALUE LINE	475

TIMELINESS 3 Average (Relative Price Performance Next 12 Mos.)
SAFETY 3 Average (Scale: 1 Highest to 5 Lowest)
BETA .65 (1.00 = Market)

High:	11.3	11.8	10.5	11.5	12.0	12.5	15.3	15.9	21.2	20.3	23.0	31.0
Low:	6.4	8.8	7.2	8.2	9.8	10.4	10.5	12.7	15.2	15.9	16.1	20.9

Target Price Range 1999 | 2000 | 2001



Options: None

1999-01 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	35	(+45%)	13%
Low	25	(+5%)	5%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	18	21	31
to Sell	24	15	14
Hld's(000)	2921	2988	3134

Atmos Energy's history dates back to 1906 and the Texas Panhandle. Over the years, through various mergers and business combinations, 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 and Greeley Gas in 1993.

1986	1987	1988	1989	1990	1991	1992	P1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
38.58	37.88	35.41	37.46	38.46	33.04	32.46	31.94	32.67	28.08	*30.55*	*31.65*	Revenues per sh A	*38.85*
1.64	2.14	2.57	2.48	2.68	2.38	2.63	2.39	2.19	2.55	*2.85*	*3.00*	"Cash Flow" per sh	*3.70*
.63	.88	1.52	.89	.98	.80	.97	1.19	.97	1.22	*1.55*	*1.65*	Earnings per sh A	*2.25*
.67	.67	.67	.75	.77	.80	.83	.86	.88	.92	*.96*	*1.00*	Div'ds Decl'd per sh B■	*1.15*
2.54	2.61	2.19	2.37	2.77	2.97	3.18	2.67	3.29	4.05	*4.10*	*4.20*	Cap'l Spending per sh	*4.30*
6.69	6.94	8.37	8.50	8.71	8.88	9.17	9.64	9.78	10.20	*11.55*	*13.20*	Book Value per sh	*19.10*
6.13	6.15	9.12	9.14	9.15	10.17	10.48	14.38	15.30	15.52	*16.20*	*16.60*	Common Shs Outst'g C	*17.50*
16.2	11.1	6.4	11.9	11.7	14.4	14.2	14.7	19.2	15.0	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	*13.0*
1.10	.74	.53	.90	.87	.92	.86	.87	1.26	1.02			Relative P/E Ratio	*1.00*
6.5%	6.8%	6.8%	7.1%	6.7%	6.9%	6.0%	4.9%	4.7%	5.0%			Avg Ann'l Div'd Yield	*3.9%*
236.4	232.9	322.8	342.4	352.0	336.1	340.1	459.4	499.8	435.8	*495*	*515*	Revenues ($mill) A	*680*
3.7	5.4	10.6	8.1	9.0	7.9	10.0	17.0	14.7	18.8	*24.5*	*27.5*	Net Profit ($mill)	*38.5*
39.7%	49.0%	38.0%	31.4%	32.2%	27.5%	32.7%	37.7%	35.5%	33.8%	*37.0%*	*37.0%*	Income Tax Rate	*37.0%*
1.6%	2.3%	3.3%	2.4%	2.5%	2.4%	2.9%	3.7%	2.9%	4.3%	*5.0%*	*5.2%*	Net Profit Margin	*5.6%*
45.2%	48.3%	51.4%	54.2%	51.7%	52.3%	49.7%	43.3%	48.0%	45.3%	*44.0%*	*45.0%*	Long-Term Debt Ratio	*40.0%*
54.8%	51.7%	48.6%	45.8%	48.3%	47.7%	50.3%	56.7%	52.0%	54.7%	*56.0%*	*55.0%*	Common Equity Ratio	*60.0%*
74.8	82.5	156.9	169.7	165.2	189.5	190.8	244.6	287.9	289.6	*370*	*335*	Total Capital ($mill)	*560*
109.5	116.0	188.7	194.8	194.9	205.7	219.4	299.3	327.4	363.3	*405*	*450*	Net Plant ($mill)	*570*
6.4%	8.6%	9.6%	7.3%	8.1%	6.6%	7.9%	9.2%	7.2%	8.9%	*9.5%*	*8.5%*	% Earned Total Cap'l	*8.5%*
9.0%	12.7%	13.9%	10.4%	11.2%	8.8%	10.4%	12.3%	9.8%	11.9%	*13.5%*	*12.5%*	% Earned Net Worth	*11.5%*
9.0%	12.7%	13.9%	10.4%	11.2%	8.8%	10.4%	12.3%	9.8%	11.9%	*13.5%*	*12.5%*	% Earned Com Equity	*11.5%*
NMF	3.1%	7.9%	1.6%	2.4%	--	1.6%	5.6%	1.3%	2.9%	*5.0%*	*5.0%*	% Retained to Com Eq	*5.5%*
104%	76%	43%	84%	79%	100%	85%	54%	86%	76%	*63%*	*61%*	% All Div'ds to Net Prof	*52%*

CAPITAL STRUCTURE as of 6/30/96
Total Debt $167.4 mill. **Due in 5 Yrs** $47.0 mill.
LT Debt $125.3 mill. **LT Interest** $10.3 mill.
Incl. $6.3 mill. capitalized leases.
(LT interest earned: 3.0x; total interest coverage: 2.8x)
Leases, Uncapitalized Annual rentals $6.6 mill.
Pension Liability None
Pfd Stock None

Common Stock 15,990,905 shs.

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	2.8	2.3	2.2
Other	50.5	45.9	51.9
Current Assets	53.3	48.2	54.1
Accts Payable	22.0	24.9	30.2
Debt Due	22.1	40.5	42.1
Other	20.1	22.0	37.2
Current Liab.	64.2	87.4	109.5
Fix. Chg. Cov.	281%	306%	297%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-5.0%	-3.5%	*3.5%*
"Cash Flow"	2.0%	-1.5%	*5.0%*
Earnings	-1.0%	--	*10.5%*
Dividends	5.0%	4.0%	*5.0%*
Book Value	4.5%	3.0%	*10.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	130.6	166.2	91.2	71.4	459.4
1994	145.5	186.9	90.0	77.4	499.8
1995	117.8	157.3	84.6	76.1	435.8
1996	130.5	191.1	93.6	*79.8*	*495*
1997	*145*	*200*	*90.0*	*80.0*	*515*

Fiscal Year Ends	EARNINGS PER SHARE A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.46	.75	.06	d.08	1.19
1994	.47	.87	d.08	d.29	.97
1995	.42	.90	.01	d.11	1.22
1996	.59	1.15	.02	*d.21*	*1.55*
1997	*.62*	*1.17*	*d.01*	*d.13*	*1.65*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.207	.207	.207	.213	.83
1993	.213	.213	.213	.221	.86
1994	.22	.22	.22	.23	.89
1995	.23	.23	.23	.24	.93
1996	.24	.24	.24		

BUSINESS: Atmos Energy Corporation is engaged primarily in the distribution and sale of natural gas through four regulated natural gas utility divisions: Energas Co. in West Texas (310,765 customers), Western Kentucky Gas Utility (168,529), Trans Louisiana Gas (70,570), and Greeley Gas (108,250). Combined 1995 volume handled: 140 Bcf. Breakdown: 61% residential and commercial, 39% industrial and other. '95 depreciation rate 4.1%. Has 1,648 employees, 23,625 common stockholders. Lee E. Schlessman owns about 6.4%, all other officers and directors about 2.0%. (12/95 Proxy) Chairman: Charles Vaughan. Chief Operating Officer and President: Robert Stephens. Inc.: Texas. Address: P.O. Box 650205, Dallas, TX 75265. Telephone: 214-934-9227.

Atmos Energy has entered a definitive agreement to merge with United Cities Gas Company. The transaction will create one of the five largest domestic natural gas distributors and increase the customer count by almost 50%. United Cities shareholders will receive one share of Atmos for each United share in this tax-free, pooling of interest merger, valuing the deal at about $340 million. A competitor is contesting the merger, and may offer a higher bid, but, for now, the deal is progressing on schedule. The transaction must receive approval from a handful of state regulatory boards and should close by the end of this year or early in 1997. *Note: The effects of the merger are excluded from our presentation until the deal is finalized.*

The company has done well with its acquisition strategy in the past. Operating profits of the combined entity will likely be boosted by extensive cost reductions. Furthermore, by applying Atmos' marketing muscle, we would not be surprised to see United Cities' penetration rate climb; currently that figure is only about 37% of households, versus 61% for Atmos. Moreover, assuming United Cities' has success with pending rate cases in two states, profits could get a further lift. In addition, the purchase broadens Atmos' geographic diversification. The company will now operate in ten states, each with a different economy, weather, and rate board. All told, while the combination will probably not add to fiscal 1997 share earnings, it might well lift Atmos' bottom line by 40¢ a share during 1998 and thereafter.

Successful rate cases are also likely to help the bottom line in the coming years. It looks like Atmos will be granted a good portion of the $7.7 million rate case the utility filed for 67 cities in Texas.

Atmos is a good selection for investors looking for an aggressive utility. As consolidation continues in the industry following deregulation, Atmos is going to be a likely beneficiary. As an added plus, as part of the terms of the merger, Atmos has agreed to increase the annual dividend to $1.02 a share once the deal is completed. Total return prospects, mediocre for Atmos alone, might be enhance significantly as a result of the United Cities merger.

Thomas A. Mullé, CFA September 27, 1996

(A) Fiscal year ends Sept. 30th. Next earnings report due late October.
(B) Next div. meeting about Nov. 10th. Goes ex about Nov. 20th. Approximate div. pmt. dates: 10th of March, June, Sept., Dec. ■ Div. reinvestment plan avail. (3% discount).
(C) In millions, adjusted for stock splits.
(D) Prior years are not comparable due to acquisition using pooling of interest method.

Company's Financial Strength	B++
Stock's Price Stability	75
Price Growth Persistence	85
Earnings Predictability	65

BAY STATE GAS NYSE-BGC

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
27	12.6 (Trailing: 12.8 Median: 13.0)	0.84	5.9%	476

TIMELINESS 4 Below Average (Relative Price Performance Next 12 Mos.)
SAFETY 2 Above Average (Scale: 1 Highest to 5 Lowest)
BETA .55 (1.00 = Market)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
High:	12.4	18.3	20.3	17.3	22.9	22.5	23.6	26.5	32.0	28.4	29.5	29.9
Low:	9.3	10.8	13.2	13.8	16.8	18.0	18.5	20.8	24.4	22.5	22.3	25.4

Target Price Range 1999 | 2000 | 2001

1999-01 PROJECTIONS

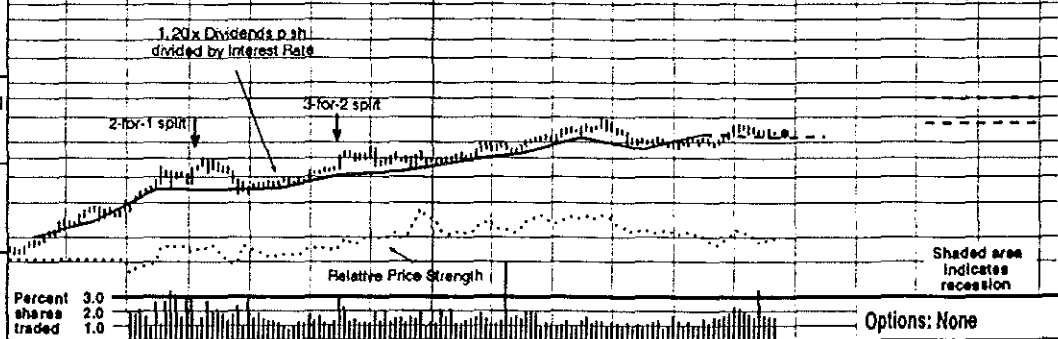
	Price	Gain	Ann'l Total Return
High	40	(+50%)	18%
Low	30	(+10%)	8%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	23	27	20
to Sell	15	15	16
Hld's(000)	2072	2359	2369



Options: None

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
31.06	38.85	45.29	35.87	36.50	35.31	32.31	32.34	29.76	29.44	34.49	31.48	28.72	31.06	33.95	31.31	*32.60*	*32.60*	Revenues per sh A	*39.30*
1.99	1.83	1.69	1.43	2.14	2.36	2.52	2.72	2.94	2.81	3.15	2.63	2.62	3.34	3.59	3.65	*3.85*	*4.05*	"Cash Flow" per sh	*4.80*
1.15	.93	.69	.59	1.16	1.38	1.49	1.61	1.72	1.81	1.78	1.32	1.41	1.75	1.85	1.71	*2.00*	*2.15*	Earnings per sh B	*2.80*
.74	.77	.79	.83	.84	.88	.91	1.00	1.07	1.16	1.24	1.31	1.36	1.40	1.44	1.48	*1.52*	*1.60*	Div'ds Decl'd per sh C ■	*1.70*
2.86	3.01	2.98	1.75	2.05	2.71	2.83	3.25	4.26	3.23	4.49	4.98	5.17	3.59	3.75	3.99	*4.40*	*4.70*	Cap'l Spending per sh	*5.35*
9.42	9.74	9.53	8.82	9.06	9.63	10.02	10.66	11.33	12.81	13.42	13.60	14.90	15.52	16.20	16.46	*17.45*	*18.75*	Book Value per sh	*21.10*
6.75	6.79	6.89	8.57	8.74	8.89	8.92	9.00	9.08	10.27	10.43	10.74	12.55	12.89	13.29	13.38	*13.60*	*13.75*	Common Shs Outst'g D	*14.00*
6.6	7.3	9.4	12.6	6.7	7.7	9.1	10.9	8.6	10.0	11.2	15.2	16.3	15.4	14.3	14.1	*Bold figures are*		Avg Ann'l P/E Ratio	*12.0*
.88	.89	1.04	1.07	.62	.63	.62	.73	.71	.76	.83	.97	.99	.91	.94	.96	*Value Line*		Relative P/E Ratio	*.90*
9.8%	11.4%	12.1%	11.1%	10.8%	8.2%	6.7%	5.7%	7.2%	6.4%	6.2%	6.5%	5.9%	5.2%	5.5%	6.2%	*estimates*		Avg Ann'l Div'd Yield	*6.4%*
						288.2	290.9	270.2	302.4	359.5	338.0	360.4	400.4	451.2	418.1	*430*	*450*	Revenues ($mill) A	*550*
						14.1	14.8	15.9	18.2	20.2	15.8	18.4	22.8	24.5	23.1	*28.0*	*30.0*	Net Profit ($mill)	*39.5*
						47.8%	49.4%	34.4%	32.6%	35.4%	35.5%	33.0%	37.6%	39.1%	38.7%	*38.0%*	*38.0%*	Income Tax Rate	*38.0%*
						4.9%	5.1%	5.9%	6.0%	5.6%	4.7%	5.1%	5.7%	5.4%	5.5%	*6.4%*	*6.7%*	Net Profit Margin	*7.2%*
						45.8%	49.1%	47.1%	43.0%	38.3%	45.2%	36.8%	46.7%	46.4%	46.9%	*46.0%*	*45.0%*	Long-Term Debt Ratio	*43.0%*
						47.9%	47.8%	49.9%	49.1%	53.7%	48.0%	57.0%	51.9%	52.3%	51.8%	*53.0%*	*54.0%*	Common Equity Ratio	*55.0%*
						186.5	200.7	206.2	267.7	260.6	304.1	328.4	385.2	411.6	424.0	*455*	*485*	Total Capital ($mill)	*530*
						238.2	255.6	280.9	301.3	322.0	361.5	410.4	437.8	464.1	498.4	*535*	*575*	Net Plant ($mill)	*675*
						9.2%	9.2%	9.8%	8.6%	9.7%	6.6%	7.4%	7.5%	7.7%	7.5%	*8.5%*	*8.5%*	% Earned Total Cap'l	*10.0%*
						14.0%	14.5%	14.6%	11.9%	12.6%	9.5%	8.8%	11.1%	11.1%	10.3%	*11.0%*	*11.5%*	% Earned Net Worth	*13.0%*
						14.8%	15.0%	15.1%	12.9%	14.4%	9.6%	8.8%	11.1%	11.2%	10.4%	*11.0%*	*11.5%*	% Earned Com Equity	*13.0%*
						8.1%	5.8%	5.7%	4.6%	4.0%	.1%	.4%	2.2%	2.5%	1.4%	*3.0%*	*3.0%*	% Retained to Com Eq	*5.0%*
						49%	63%	63%	66%	73%	99%	96%	81%	78%	87%	*75%*	*75%*	% All Div'ds to Net Prof	*61%*

CAPITAL STRUCTURE as of 6/30/96
Total Debt $241.3 mill. Due in 5 Yrs $54.1 mill.
LT Debt $209.5 mill. LT Interest $17.0 mill.
Incl. $2.7 mill. capitalized leases.
(LT interest earned: 3.6x; Total interest coverage: 3.5x)
Leases, Uncapitalized Annual rentals $5.4 mill.
Pension Liability None
Pfd Stock $5.1 mill. Pfd Div'd $.3 mill.
Cumulative pref'd series: Aggreg. of 39,598 shs. 4.70% to 7.2% (par $50-$100); 7,125 shs. $3.80 (par $50) vol. liq. value $83. 17,922 shs. $3.25 (par $50); subject to various call provisions and sinking funds. Sinking fund requirements '94-97, $2.8 mill.
Common Stock 13,407,244 shares

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	4.0	2.8	4.2
Other	98.3	64.1	90.1
Current Assets	102.3	66.9	94.3
Accts Payable	26.7	28.7	33.4
Debt Due	37.8	31.5	31.8
Other	50.8	57.4	57.3
Current Liab.	115.3	117.6	122.5
Fix. Chg. Cov.	355%	365%	331%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-1.0%	.5%	*5.0%*
"Cash Flow"	6.0%	3.5%	*7.0%*
Earnings	5.5%	--	*8.0%*
Dividends	5.5%	4.5%	*4.0%*
Book Value	6.0%	5.0%	*6.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	123.0	171.5	61.4	44.5	400.4
1994	136.1	205.6	64.8	44.7	451.2
1995	119.3	174.2	75.7	48.9	418.1
1996	132.7	181.3	67.7	*48.3*	*430*
1997	*140*	*190*	*72.0*	*48.0*	*450*

Fiscal Year Ends	EARNINGS PER SHARE A B E Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	1.03	1.62	d.22	d.60	1.75
1994	.91	1.75	d.24	d.57	1.85
1995	.78	1.60	d.18	d.49	1.71
1996	1.07	1.75	d.22	*d.50*	*2.00*
1997	*1.09*	*1.78*	*d.21*	*d.51*	*2.15*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.335	.345	.345	.345	1.37
1993	.345	.345	.355	.355	1.40
1994	.355	.355	.365	.365	1.44
1995	.365	.365	.375	.375	1.48
1996	.375	.375	.375		

BUSINESS: Bay State Gas Company is a regulated natural gas distributor serving parts of Massachusetts, New Hampshire, and Maine. Has 287,000 customers (80% in Mass.). Firm revenue mix: residential, 56%; commercial and industrial, 44%. Fiscal 1995 volume: 84.0 billion cubic feet. (77% to firm customers). Purchased gas costs, 66.9%. Spot market purchases accounted for 48.3% of gas supply. Depreciation rate: 3.8%. Estimated plant age: 9 years. Acquired Northern Utilities (NH and ME) in 1979. Has 1,062 employees, 11,077 common shareholders. Insiders control about 7.7% of the common stock. (12/95 Proxy) Chairman: Charles H. Tenney II. Pres. & C.E.O.: Roger A. Young. Address: 300 Friberg Parkway, Westborough, MA 01581. Telephone: 508-836-7000.

Bay State Gas is planning for the eventual deregulation of the natural gas industry. The company is leading the way with the largest pilot residential unbundling program in the country. Unbundling will allow customers to purchase gas from any supplier and let Bay State earn a fee for transporting the fuel. While this will not directly benefit the utility, competition between marketers should lead to greater customer growth and lower selling expense at Bay State. In addition to this program, the company has created three distinct operating units, Local Transportation (regulated), Energy Products and Services, and Energy Ventures (both unregulated). All told, we believe Bay State will be well positioned for the changing marketplace.

Changes are coming to the Energy Ventures unit. The company has earmarked its investment in MASSPOWER for sale. The cogeneration facility provided decent returns, but management wishes to focus on core operations and plans to invest the proceeds in its developing units. Separately, the company received bad news from FERC, the industry federal regulatory board. Plans for the construction of a liquid natural gas storage tank have been put on hold, since the company must evaluate other sites. The facility is expected to be completed a year later than planned, probably by late 1999.

Customer growth in core operations remains at decent levels. The region where the company operates was one of the last in the country to be served with a natural gas pipeline; as such, there appears to be ample opportunity to increase the penetration rate. Although the rate of customer growth has slowed a bit, we think that gains here will continue to exceed the industry average.

These shares are an attractive selection for conservative investors seeking solid 3- to 5-year total return potential. Management has taken quite a few steps that should enhance long-term earnings prospects. In addition, the dividend remains well-covered and provides a hefty yield at the current quotation. Investors will also be attracted to the Above-Average rating for Safety and the high marks for Stock Price Stability.

Thomas A. Mullé, CFA September 27, 1996

(A) Fiscal year ends Sept. 30th beginning 1986; prior to that Dec. 31st. (B) Based on average shares outstanding. Excl. accounting gains: '80, 15¢; '85, 39¢. Excl. nonrecurring gain (charge): '85, (30¢); '87, 7¢, (6¢). Next earnings report due late Oct. (C) Next div'd. meeting about Oct. 25. Goes ex about Nov. 14. Div'd. payment dates about the 1st of Jan., April, July, Oct. ■ Div'd. reinvestment plan avail. (3% discount). (D) In millions, adjusted for stock splits. (E) Quarters don't add to total due to change in shares outstanding.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	50
Earnings Predictability	70

B'KLYN UNION GAS NYSE-BU

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
27	12.9 (Trailing: 14.0 / Median: 12.0)	0.86	5.4%	477

TIMELINESS 4 Below Average (Relative Price Performance Next 12 Mos.)
SAFETY 1 Highest (Scale: 1 Highest to 5 Lowest)
BETA .60 (1.00 = Market)

1999-01 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	35	(+30%)	*11%*
Low	25	(-5%)	*4%*

Insider Decisions

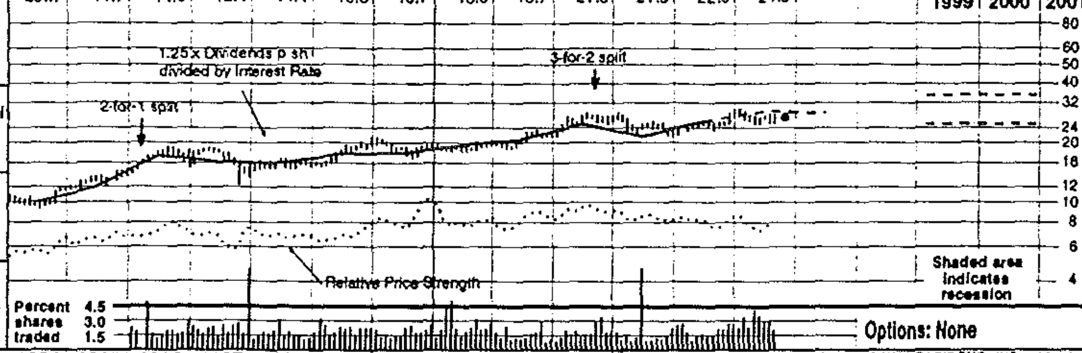
	N	D	J	F	M	A	M	J	J
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	56	53	50
to Sell	39	44	53
Hld's(000)	13557	13165	13503

High:	14.9	19.3	19.0	16.9	21.5	21.5	20.8	23.4	28.5	28.6	29.6	29.9
Low:	11.7	14.0	12.4	14.4	15.3	16.7	18.0	18.7	21.6	21.5	22.0	24.9

Target Price Range 1999 | 2000 | 2001



Options: None

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
26.70	29.59	35.00	32.12	33.87	32.22	30.49	27.12	25.51	26.71	26.64	23.43	24.74	25.99	28.13	24.93	*28.20*	*27.95*	Revenues per sh A	*30.50*
1.86	2.08	2.30	2.19	2.36	2.58	2.28	2.46	2.55	2.64	2.62	2.38	3.03	3.04	3.29	3.35	*3.40*	*3.55*	"Cash Flow" per sh	*4.00*
1.20	1.35	1.53	1.51	1.55	1.67	1.57	1.62	1.66	1.68	1.62	1.45	1.35	1.73	1.85	1.90	*1.95*	*2.05*	Earnings per sh B	*2.35*
.74	.80	.90	.97	1.00	1.04	1.08	1.11	1.15	1.19	1.23	1.27	1.29	1.32	1.35	1.39	*1.42*	*1.45*	Div'ds Decl'd per sh C ■	*1.60*
2.10	2.12	2.91	2.47	2.46	2.57	2.33	2.84	3.46	4.30	3.51	3.44	3.95	4.37	4.15	4.36	*3.75*	*3.60*	Cap'l Spending per sh	*3.50*
8.66	9.12	9.71	10.16	10.68	11.34	11.53	12.19	12.77	13.36	13.68	14.37	14.55	15.54	16.27	16.94	*17.65*	*18.45*	Book Value per sh D	*20.85*
23.51	24.21	25.14	29.24	30.60	31.91	33.03	34.08	35.23	36.29	37.30	42.28	43.45	46.38	47.59	48.79	*49.80*	*50.70*	Common Shs Outst'g E	*54.00*
6.0	5.5	5.4	6.5	6.6	7.4	10.2	10.8	9.4	10.1	11.9	13.1	15.1	14.3	13.7	12.7	Bold figures are	Value Line	Avg Ann'l P/E Ratio	*13.0*
.80	.67	.59	.55	.61	.60	.69	.72	.78	.76	.88	.84	.92	.84	.90	.87		estimates	Relative P/E Ratio	*1.00*
10.3%	10.7%	11.0%	9.8%	9.7%	8.4%	6.7%	6.3%	7.4%	7.0%	6.4%	6.7%	6.4%	5.3%	5.3%	5.8%			Avg Ann'l Div'd Yield	*5.2%*

CAPITAL STRUCTURE as of 6/30/96
Total Debt $727.5 mill. Due in 5 Yrs $50.0 mill.
LT Debt $727.5 mill. LT Interest $49.0 mill.
(total interest coverage: 3.8x)

Pension Liability None

Pfd Stock $6.6 mill. Pfd Div'd $.3 mill.
Inc. 69,000 shs. 4.60% cum. ($100 par) placed privately.

Common Stock 49,773,292 shs.

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
1007.0	924.1	898.7	969.2	993.9	990.5	1074.9	1205.5	1338.6	1216.3	*1405*	*1415*	Revenues ($mill) A	*1650*
58.6	59.1	61.7	64.3	63.6	61.8	59.9	76.6	87.4	91.8	*96.5*	*103*	Net Profit ($mill)	*126*
42.7%	38.0%	30.0%	29.2%	26.0%	30.2%	34.0%	35.1%	31.8%	32.0%	*36.0%*	*36.0%*	Income Tax Rate	*36.0%*
5.8%	6.4%	6.9%	6.6%	6.4%	6.2%	5.6%	6.4%	6.5%	7.6%	*6.9%*	*7.3%*	Net Profit Margin	*7.6%*
44.2%	44.7%	47.2%	51.0%	49.0%	51.2%	51.6%	48.6%	47.3%	46.4%	*45.0%*	*44.0%*	Long-Term Debt Ratio	*43.5%*
48.9%	49.1%	47.7%	44.7%	46.8%	45.4%	47.8%	50.8%	52.2%	53.2%	*54.5%*	*55.5%*	Common Equity Ratio	*56.0%*
779.1	845.8	942.9	1084.2	1090.0	1337.5	1322.1	1417.9	1482.8	1553.8	*1615*	*1670*	Total Capital ($mill)	*2000*
758.8	802.9	896.5	989.4	1062.7	1151.3	1228.7	1305.5	1405.3	1512.6	*1400*	*1500*	Net Plant ($mill)	*1800*
9.8%	8.9%	8.4%	7.7%	7.6%	6.0%	6.1%	7.0%	7.5%	7.5%	*7.0%*	*7.5%*	% Earned Total Cap'l	*8.0%*
13.5%	12.6%	12.4%	12.1%	11.4%	9.5%	9.4%	10.5%	11.2%	11.0%	*11.0%*	*11.0%*	% Earned Net Worth	*11.0%*
13.4%	13.1%	12.8%	12.4%	11.7%	9.5%	9.1%	10.6%	11.2%	11.1%	*11.0%*	*11.0%*	% Earned Com Equity	*11.0%*
4.1%	4.1%	3.9%	3.6%	2.8%	1.0%	.3%	2.4%	3.0%	2.9%	*3.0%*	*3.0%*	% Retained to Com Eq	*3.5%*
73%	71%	72%	73%	77%	90%	96%	77%	73%	74%	*73%*	*71%*	% All Div'ds to Net Prof	*68%*

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	53.5	16.0	85.9
Other	331.7	294.4	332.9
Current Assets	385.2	310.4	418.8
Accts Payable	132.5	103.7	98.8
Debt Due	- -	- -	- -
Other	118.4	107.7	141.3
Current Liab.	250.9	211.4	240.1
Fix. Chg. Cov.	336%	334%	370%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-2.0%	- -	*2.5%*
"Cash Flow"	3.0%	4.5%	*3.5%*
Earnings	1.5%	2.0%	*4.0%*
Dividends	3.0%	2.5%	*2.5%*
Book Value	4.0%	4.0%	*4.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	347.3	489.4	208.5	160.3	1205.5
1994	371.5	549.0	240.7	177.4	1338.6
1995	358.3	481.6	217.7	158.7	1216.3
1996	398.1	595.4	239.3	*172.2*	*1405*
1997	*410*	*575*	*250*	*180*	*1415*

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.93	1.63	d.15	d.68	1.73
1994	.90	1.57	d.16	d.46	1.85
1995	.90	1.53	d.13	d.40	1.90
1996	.91	1.51	d.09	*d.38*	*1.95*
1997	*.94*	*1.62*	*d.13*	*d.38*	*2.05*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.323	.323	.323	.323	1.29
1993	.33	.33	.33	.33	1.32
1994	.338	.338	.338	.338	1.35
1995	.348	.348	.348	.348	1.39
1996	.355	.355	.355		

BUSINESS: Brooklyn Union Gas Co. supplies natural gas to Brooklyn, Queens, and Staten Island boroughs (187 sq. miles) of New York City. Service area pop.: 4.0 mill. Primary market is residential (one-family homes, apartment bldgs. Has 1.1 mill. active meters; 454,000 heating customers; 76% share of the one- and two-family resident. market. Major suppliers: Transco, Texas Eastern, and Mobil. Fuel Resources, an exploration subsid., produces 2% of BUG's gas supply. Owns 68% of Houston Exploration; 19% of Iroquois Pipeline. KeySpan Energy, a marketing sub., formed in '96, buys and resells gas supplies. Nonutility egs., 10% of the total. Has 3,506 empls., 31,478 stkhldrs. Chrmn.: R.B. Catell. Inc.: NY. Address: 1 MetroTech Ctr., Brooklyn, NY 11201. Tel.: 718-403-2000.

New York's Public Service Commission is letting Brooklyn Union reorganize into a holding company. Under the new corporate framework, the company will have more latitude for moving afield of regulated gas distribution. The PSC's backing will permit the parent, KeySpan Energy Corp., to put up to 50% of its capital in nonregulated businesses, up from 15% today. The holding company structure takes effect in February pending a shareholder vote then.

The company has begun to branch out into nonutility energy services. KeySpan Energy Services, a marketing venture, acts as a dealer in supplying natural gas to customers primarily in and around the Brooklyn Union service area. Its role is to obtain the supplies for all comers and arrange for delivery via pipeline into the local distribution system, which will pump the gas to the burner tip. The marketer also offers fuel-use management services and does equipment maintenance. KeySpan also solicits business in territories distant from BUG's local market, such as Atlantic City, where it has joined with South Jersey Gas Co. to service the hotel/casino colony in that Eastern gambling mecca. The subsidiary may need a few years to draw enough customers to become a major profit contributor.

This income stock remains top-quality. The marketing venture is in response to regulatory moves to get utilities to unbundle their traditional services and to promote competition. So KeySpan will have to share its turf with other gas marketers. There won't be a state-imposed earnings ceiling, but the pending rivalry makes KeySpan a shareholder-risk business. For its part, BUG still operates as a utility, delivering gas as a franchised distributor through its webwork of mains, competing with suppliers of alternate fuels. It generates profits based on a PSC-decreed tariff structured to provide a fair return on the gas plant. BUG typically earns its allowed return each year. So its dividend can grow a bit faster than the payouts of most other gas utilities. Though not a performance stock, BUG is a low-risk income vehicle, with a current yield (on a growing dividend) that about equals the gas-industry average.

Gerald Holtzman *September 27, 1996*

(A) Fiscal year ends September 30th of calendar year. (B) Based on average shares outstanding. Excludes nonrecurring charges: '86, 43¢; '90, 19¢. Next earnings report due late Oct. (C) Next dividend meeting about Dec. 18. Goes ex about Dec.24. Dividend payment dates: Feb. 1, May 1, Aug. 1, Nov. 1. ■ Dividend reinvestment plan available. (D) Includes deferred charges. In 1995: $172.8 million, $3.54/sh. (E) In millions, adjusted for splits.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	60
Earnings Predictability	80

CASCADE NAT'L GAS NYSE-CGC

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
16	15.5 (Trailing: 18.0 / Median: 16.0)	1.03	6.1%	478

TIMELINESS 3 Average (Relative Price Performance Next 12 Mos.)
SAFETY 3 Average (Scale: 1 Highest to 5 Lowest)
BETA .55 (1.00 = Market)

High:	12.3	13.3	12.2	10.8	13.8	12.7	16.9	16.8	19.4	18.1	17.5	16.6
Low:	8.6	9.9	7.3	9.2	9.4	10.1	11.1	13.6	15.5	12.8	13.0	13.4

Target Price Range 1999 | 2000 | 2001

1999-01 PROJECTIONS

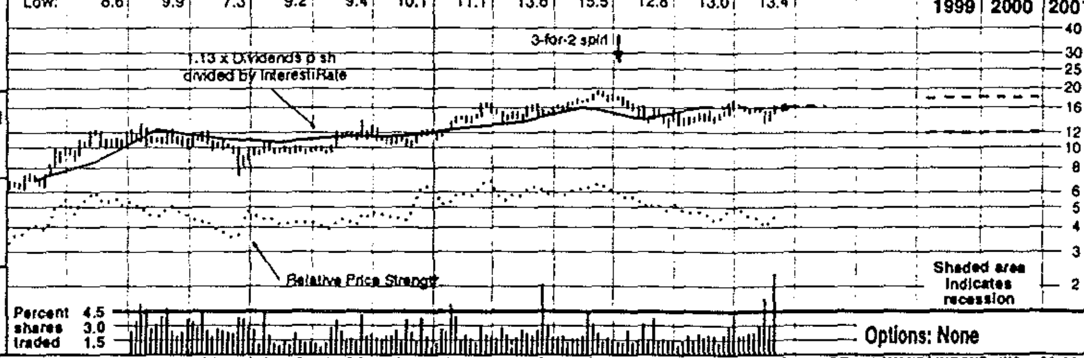
	Price	Gain	Ann'l Total Return
High	18	(+15%)	9%
Low	12	(-25%)	1%

Insider Decisions

	H	D	J	F	M	A	M	J	J
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	12	9	13
to Sell	16	17	13
Hld's(000)	1455	1430	1421



Options: None

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
43.89	38.36	37.99	35.53	43.76	37.80	25.06	24.07	24.51	26.87	24.45	23.27	20.03	21.88	21.59	19.98	*18.10*	*19.05*	Revenues per sh	*20.85*
2.05	1.67	1.49	1.35	2.35	2.18	1.14	1.56	1.97	2.47	2.36	2.29	1.66	2.04	1.71	2.07	*2.30*	*2.50*	"Cash Flow" per sh	*2.90*
1.05	.86	.57	.41	1.39	1.25	.16	.64	.84	1.29	1.26	1.14	.63	1.05	.60	.80	*1.00*	*1.15*	Earnings per sh(A)	*1.40*
.65	.71	.75	.75	.76	.81	.85	.85	.85	.85	.87	.90	.93	.94	.96	.96	*.96*	*.98*	Div'ds Decl'd per sh(B)■	*1.04*
2.61	1.78	1.45	1.86	.97	1.40	2.02	1.43	1.62	1.99	2.50	2.97	4.64	3.85	3.06	4.12	*3.30*	*3.20*	Cap'l Spending per sh	*3.00*
8.29	7.77	7.57	7.21	7.83	8.25	7.60	7.45	7.46	7.96	8.33	8.63	9.09	9.96	9.81	9.76	*10.55*	*11.35*	Book Value per sh(C)	*12.00*
4.01	4.99	5.09	5.22	5.34	5.78	5.84	6.36	6.43	6.49	6.56	6.63	7.61	8.57	8.91	9.14	*10.60*	*10.75*	Common Shs Outst'g(D)	*11.50*
6.2	6.8	10.4	15.6	5.4	8.5	NMF	16.0	11.7	8.6	8.9	12.2	23.7	16.6	25.7	18.2	Bold figures are		Avg Ann'l P/E Ratio	*11.0*
.82	.83	1.15	1.32	.50	.69	NMF	1.07	.97	.65	.66	.78	1.44	.98	1.69	1.22	Value Line		Relative P/E Ratio	*.85*
10.0%	12.1%	12.7%	11.7%	10.2%	7.6%	7.7%	8.3%	8.7%	7.7%	7.8%	6.4%	6.2%	5.4%	6.2%	6.6%	estimates		Avg Ann'l Div'd Yield	*6.8%*

CAPITAL STRUCTURE as of 6/30/96

Total Debt $118.6 mill. Due in 5 Yrs $28.5 mill.
LT Debt $102.1 mill. LT Interest $7.8 mill.
(LT interest earned: 2.4x; total interest coverage: 2.2x)

Pension Liability $7.6 mill. in '95 vs. $2.7 mill. in '94.

Pfd Stock $7.1 mill. Pfd Div'd $.5 mill.

Common Stock 9,249,611 shs.

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
146.4	153.1	157.6	174.5	160.5	154.3	152.5	187.5	192.4	182.7	*192*	*205*	Revenues ($mill)	*240*
1.1	4.0	5.6	8.5	8.4	7.7	4.8	8.9	5.8	7.7	*10.0*	*13.0*	Net Profit ($mill)	*16.5*
46.2%	42.6%	34.2%	37.9%	35.3%	35.5%	36.8%	37.0%	37.8%	36.8%	*37.5%*	*38.0%*	Income Tax Rate	*38.0%*
.8%	2.6%	3.5%	4.9%	5.2%	5.0%	3.2%	4.7%	3.0%	4.2%	*5.2%*	*6.3%*	Net Profit Margin	*6.9%*
55.5%	56.2%	55.7%	52.4%	51.5%	46.6%	49.2%	48.3%	51.3%	51.4%	*46.0%*	*47.0%*	Long-Term Debt Ratio	*48.5%*
41.0%	40.7%	41.3%	45.1%	46.3%	46.7%	45.6%	47.3%	44.8%	45.0%	*51.0%*	*50.0%*	Common Equity Ratio	*48.5%*
108.3	116.3	116.0	114.7	118.2	122.5	151.8	180.2	194.9	198.5	*220*	*245*	Total Capital ($mill)	*285*
118.2	121.2	124.0	129.3	137.0	148.1	174.7	197.4	213.9	239.1	*250*	*275*	Net Plant ($mill)	*315*
4.1%	6.5%	7.7%	10.1%	9.7%	8.7%	5.2%	6.6%	4.9%	5.9%	*6.5%*	*7.5%*	% Earned Total Cap'l	*7.5%*
2.3%	7.8%	10.8%	15.5%	14.6%	11.7%	6.3%	9.5%	6.1%	8.0%	*8.5%*	*10.0%*	% Earned Net Worth	*11.5%*
2.1%	7.9%	11.2%	16.1%	15.0%	13.1%	6.1%	9.7%	5.9%	8.1%	*8.5%*	*10.5%*	% Earned Com Equity	*11.5%*
NMF	NMF	NMF	5.4%	4.5%	3.9%	NMF	1.6%	NMF	NMF	*NMF*	*2.0%*	% Retained to Com Eq	*3.0%*
NMF	NMF	102%	67%	71%	71%	NMF	84%	NMF	NMF	*95%*	*85%*	% All Div'ds to Net Prof	*75%*

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	5.4	2.2	3.8
Other	37.1	35.7	21.0
Current Assets	42.5	37.9	24.8
Accts Payable	18.4	16.4	10.3
Debt Due	19.5	32.0	16.5
Other	10.3	13.6	13.0
Current Liab.	48.2	62.0	39.8
Fix. Chg. Cov.	194%	198%	186%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-6.0%	-3.5%	*Nil*
"Cash Flow"	.5%	-2.0%	*7.0%*
Earnings	-.5%	-4.0%	*9.5%*
Dividends	2.5%	2.0%	*1.5%*
Book Value	2.5%	5.0%	*3.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.)(E) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	61.7	37.1	29.4	59.1	187.5
1994	64.7	36.3	28.9	62.5	192.4
1995	64.6	34.7	26.5	56.9	182.7
1996	67.6	33.5	*28.0*	*62.9*	*192*
1997	*69.0*	*38.0*	*31.0*	*67.0*	*205*

Cal-endar	EARNINGS PER SHARE (A) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	.84	d.13	d.25	.59	1.05
1994	.54	d.16	d.28	.50	.60
1995	.63	d.11	d.27	.56	.80
1996	.72	d.12	*d.25*	*.65*	*1.00*
1997	*.75*	*d.10*	*d.25*	*.75*	*1.15*

Cal-endar	QUARTERLY DIVIDENDS PAID (B)■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.227	.233	.233	.233	.93
1993	.233	.237	.237	.237	.94
1994	.24	.24	.24	.24	.96
1995	.24	.24	.24	.24	.96
1996	.24	.24	.24		

BUSINESS: Cascade Natural Gas Corp. distributes natural gas to more than 151,000 cust. in 90 communities in Washington (81% of gas distrib. revs.) and Oregon. In 1995, total throughput was 95.4 billion cu.ft. Core customers: resident., commercial, firm indust., interruptible (69% of oper. margin, 24% of gas deliveries); non-core: ind'l, transport. svce. (31%, 76%). Serves pulp & paper, plywood, chem. fertilizers, oil refining, & food process. inds. Main connecting pipeline: Northwest Pipeline Corp. '95 deprec. rate: 3.2%. Est'd plant age: 13 yrs. Has 475 employees, 9,249 common shrhldrs. Off. and Dir. own under 1% of com. (3/96 proxy). Chrmn. & C.E.O.: W.B. Matsuyama. Pres. & C.O.O.: Ralph Boyd. Inc.: WA. Address: 222 Fairview Ave. N., Seattle, WA 98109. Tel.: 206-624-3900.

Cascade's recent rate case settlement should contribute to profits in 1997 and beyond. In July, the Washington Utility and Transportation Commission authorized the company to increase its gas rates by $3.8 million, on an annualized basis, effective August 1st. This is its first general rate increase in Washington State in the last 10 years. Moreover, Cascade will raise its monthly service charge to residential, commercial, and core industrial customers by one dollar a month, starting August 1, 1997, and once again the following year. Revenues derived from the added charges will be offset by a cut in rates for its transportation customers. Additionally, Cascade's core customers will receive credit for deferred gas-cost reductions, totaling about $1.4 million a year over the next four years. Finally, the company has agreed not to request general rate increases for the next three years. In all, the new gas rates should benefit Cascade's annual share earnings to the tune of nearly 15¢ a share.

Capital spending levels will likely remain high through the end of the decade. This year, the company will spend close to $35 million on various capital projects and, over the next five years, expenditures may well exceed $150 million. As a result, we would expect the company to use the capital markets more frequently to help finance the ambitious spending program. Last month, Cascade completed a 1.35 million-share common stock offering, raising more than $19 million from the sale.

We have reduced our calendar 1996 and 1997 earnings estimates by 10¢ and 5¢ a share, respectively. (Cascade is converting to a September fiscal year in 1996, which will conform more closely with other gas utilities.) Meanwhile, our estimates remain on a calendar-year basis pending the changeover. Our lowered expectations reflect recent declines in industrial margins, increased availability of competing hydro power, and some dilution from the recent common stock offering.

This issue should appeal to investors seeking current income. But the heavy capital spending and financing requirements will likely limit dividend growth prospects in the coming 3 to 5 years.

Maurice Levenson *September 27, 1996*

(A) Primary earnings. Excludes nonrecurring gains: '91, 19¢; '93, 3¢; '96, 8¢. Qtrly egs per share in '95 do not sum to total due to change in s/o. Amortizing FASB 106 liability over 20 years, began 1993. Next earnings report due late Oct. (B) Next dividend meeting mid-Dec. Next ex date abt. Oct. 9. Divd. payment dates: abt. Feb. 15, May 15, Aug. 15, Nov. 15. ■ Dividend reinvestment plan available. (C) Incl. deferred charges. In '95: $16.6 mill., $1.82/sh. (D) In millions, adj. for stock split. (E) 1993 qtrs. do not sum due to rounding.

Company's Financial Strength	B
Stock's Price Stability	90
Price Growth Persistence	55
Earnings Predictability	50

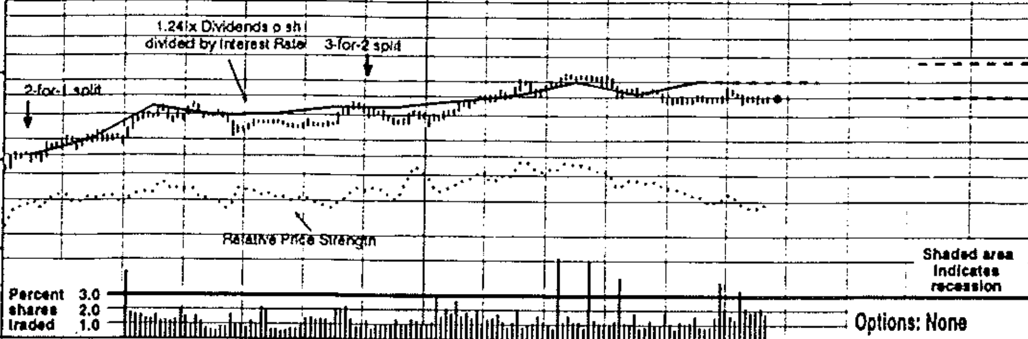
CONN. ENERGY NYSE-CNE

RECENT PRICE 20 | P/E RATIO 10.9 (Trailing: 12.5 Median: NMF) | RELATIVE P/E RATIO 0.73 | DIV'D YLD 6.7% | VALUE LINE 479

TIMELINESS 3 Average (Relative Price Perform-ance Next 12 Mos.)
SAFETY 2 Above Average (Scale: 1 Highest to 5 Lowest)
BETA .65 (1.00 = Market)

High:	13.3	18.0	18.6	15.3	18.9	18.0	20.4	24.8	26.5	25.0	22.5	22.3	
Low:	10.7	12.1	12.5	13.5	14.0	14.5	14.3	18.9	22.5	18.6	18.5	18.6	

Target Price Range 1999 | 2000 | 2001



1999-01 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	30	(+50%)	15%
Low	20	(Nil)	6%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	19	17	14
to Sell	7	14	14
Hld's(000)	1858	1806	1821

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
25.54	31.07	37.62	37.08	36.28	31.45	29.56	29.52	25.79	27.73	27.90	25.25	28.06	28.41	27.69	26.18	*28.90*	*26.00*	Revenues per sh A	*27.85*
1.94	2.34	2.22	2.61	3.06	2.54	2.34	2.79	2.83	2.93	2.81	2.75	3.06	3.08	2.97	3.17	*3.30*	*3.25*	"Cash Flow" per sh	*3.55*
.99	1.11	.94	1.36	1.35	1.21	1.16	1.39	1.49	1.28	1.12	1.38	1.43	1.50	1.58	1.60	*1.65*	*1.70*	Earnings per sh B	*1.65*
.83	.87	.90	.93	1.01	1.07	1.12	1.12	1.17	1.20	1.23	1.24	1.26	1.28	1.30	1.30	*1.32*	*1.33*	Div'ds Decl'd per sh C■	*1.38*
2.02	2.46	2.58	2.37	3.00	3.33	3.90	3.34	3.30	3.86	3.74	2.87	3.15	3.49	3.07	3.12	*2.90*	*2.60*	Cap'l Spending per sh	*2.50*
9.43	9.66	9.65	10.04	10.38	10.67	11.03	11.44	12.04	12.14	11.91	12.49	12.80	13.33	14.45	14.84	*15.60*	*16.10*	Book Value per sh D	*17.00*
4.22	4.23	4.33	4.43	4.52	5.21	5.28	5.35	6.09	6.18	6.25	7.10	7.24	7.49	8.70	8.87	*9.00*	*10.00*	Common Shs Outst'g E	*10.60*
7.1	6.1	7.4	6.2	7.5	9.9	13.4	11.4	9.7	12.4	12.4	12.1	14.7	16.1	14.2	12.2	*Bold figures are*		Avg Ann'l P/E Ratio	*13.0*
.94	.74	.82	.52	.70	.80	.91	.76	.81	.94	.94	.77	.89	.95	.93	.82	*Value Line*		Relative P/E Ratio	*1.00*
11.8%	12.9%	12.9%	11.0%	10.0%	8.9%	7.2%	7.1%	8.1%	7.6%	7.6%	7.4%	6.0%	5.3%	5.8%	6.6%	*estimates*		Avg Ann'l Div'd Yield	*5.7%*

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
156.0	157.9	157.0	171.3	174.4	179.2	203.0	212.8	240.9	232.1	*260*	*260*	Revenues ($mill) A	*295*
6.1	7.3	9.4	7.8	6.9	9.0	10.3	11.1	12.8	14.1	*15.0*	*17.0*	Net Profit ($mill)	*19.5*
46.4%	46.3%	35.0%	53.5%	41.6%	38.9%	23.9%	25.7%	29.6%	34.6%	*35.5%*	*36.0%*	Income Tax Rate	*36.0%*
3.9%	4.6%	6.0%	4.6%	4.0%	5.0%	5.1%	5.2%	5.3%	6.1%	*6.0%*	*6.5%*	Net Profit Margin	*6.6%*
47.0%	48.5%	46.4%	51.2%	54.9%	49.4%	50.2%	54.5%	48.8%	47.6%	*47.0%*	*46.0%*	Long-Term Debt Ratio	*47.0%*
46.5%	46.0%	49.2%	48.2%	44.6%	50.1%	49.4%	45.2%	51.2%	52.4%	*53.0%*	*54.0%*	Common Equity Ratio	*53.0%*
125.0	132.9	148.9	155.5	166.7	176.7	187.4	221.0	245.6	250.9	*265*	*290*	Total Capital ($mill)	*340*
147.1	157.3	168.9	182.2	189.9	199.4	210.5	221.8	237.0	250.1	*260*	*270*	Net Plant ($mill)	*295*
7.3%	7.9%	8.7%	7.5%	6.6%	7.7%	7.9%	7.3%	7.5%	7.7%	*7.5%*	*7.5%*	% Earned Total Cap'l	*7.5%*
9.2%	10.7%	11.8%	10.3%	9.2%	10.1%	11.0%	11.0%	10.2%	10.7%	*10.5%*	*10.5%*	% Earned Net Worth	*11.0%*
8.3%	10.6%	11.9%	10.4%	9.3%	10.2%	11.0%	11.0%	10.2%	10.7%	*10.5%*	*10.5%*	% Earned Com Equity	*11.0%*
NMF	.9%	2.5%	.7%	NMF	.9%	1.3%	1.6%	1.7%	2.0%	*2.0%*	*2.5%*	% Retained to Com Eq	*3.0%*
117%	92%	81%	93%	110%	92%	88%	86%	84%	81%	*80%*	*78%*	% All Div'ds to Net Prof	*75%*

CAPITAL STRUCTURE as of 6/30/96
Total Debt $139.5 mill. **Due in 5 Yrs** $41.8 mill.
LT Debt $119.2 mill. **LT Interest** $10.3 mill.
(LT interest earned: 3.2x; total interest coverage: 2.9x)

Leases, Uncapitalized Annual rentals $3.1 mill.

Pension Liability $24.9 mil. in '95 vs. $17.6 mil. in '94.

Pfd Stock None

Common Stock 8,979,462 shs. as of 8/5/96

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	1.6	4.6	4.4
Other	47.4	44.5	59.1
Current Assets	49.0	49.1	63.5
Accts Payable	10.9	9.6	12.6
Debt Due	19.4	24.8	20.3
Other	18.2	16.8	35.3
Current Liab.	48.5	51.2	68.2
Fix. Chg. Cov.	263%	279%	294%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-2.5%	--	.5%
"Cash Flow"	1.0%	1.5%	2.5%
Earnings	2.0%	4.0%	3.0%
Dividends	2.5%	1.5%	1.0%
Book Value	3.0%	3.5%	3.0%

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	64.2	91.6	33.8	23.2	212.8
1994	66.7	111.9	36.8	25.5	240.9
1995	65.5	103.3	39.8	23.5	232.1
1996	69.8	120.2	44.0	*26.0*	*260*
1997	*72.0*	*113*	*45.0*	*30.0*	*260*

Fiscal Year Ends	EARNINGS PER SHARE AB Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.79	1.59	d.31	d.57	1.50
1994	.61	1.69	d.16	d.56	1.58
1995	.57	1.79	d.23	d.53	1.60
1996	.57	1.64	d.08	*d.48*	*1.65*
1997	*.60*	*1.80*	*d.20*	*d.50*	*1.70*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.312	.32	.32	.32	1.27
1993	.32	.32	.32	.32	1.28
1994	.32	.325	.325	.325	1.30
1995	.325	.325	.325	.325	1.30
1996	.325	.33			

BUSINESS: Connecticut Energy Corporation, through its principal subsidiary, the Southern Connecticut Gas Co., is primarily engaged in the distribution of natural gas to about 157,000 customers in 22 Conn. communities. The company has moved away from being a pure play in gas distrib. by forming subs. to compete in nonregulated energy businesses. Revenue mix for FY '95: residential, 58%; commercial, 20%; industrial, 8%; interruptible (incl. transportation), 14%. In FY '95 purchased gas costs equaled 49.8% of revenues. FY '95 deprec. rate: 3.9%. Has 532 employees, 11,688 shareholders. Brinson Partners owns 5.6% of common stock; Off. & Dir., less than 1% (12/95 Proxy). Chair., Pres., and C.E.O.: J.R. Crespo. Inc.: CT. Addr: 855 Main Street, Bridgeport, CT 06604. Tel: 203-579-1732.

We expect Connecticut Energy to report modestly higher share net in fiscal 1996 (ends September 30th). CE's south-central Connecticut service territory (including Bridgeport) has exhibited some positive economic signs recently, such as a rise in small business startups and increased sales-tax collections. Moreover, new home construction appears more stable versus this time last year. And, because CE provides gas-heating services to only about half the residences located adjacent to its gas mains, the company is placing added emphasis on converting alternate fuel users to gas. In fiscal 1996, the company likely added about 2,400 new residential accounts, which is comparable to last year's new account growth; we expect a similar increase next year.

We look for fiscal 1997 earnings to rise slightly, to $1.70 a share. Connecticut Energy's Weather Normalization Adjustment (WNA) allows it to smooth out year-to-year distortions in customers' heating bills that are attributable to significant variations in monthly temperatures from an historic average. CE's customers benefited this year, when heating demand rose substantially because of last winter's severity. We would, however, expect CE to derive benefits from the WNA in fiscal 1997, assuming that climatic conditions in the Northeast this coming winter prove less ferocious than those experienced in fiscal 1996. If so, CE's customers' bills will be adjusted to offset any shortfall from average monthly demand.

CE is moving forward with its plans to widen the scope of its nonregulated businesses. CE's two newly created subsidiaries, Connecticut Energy Development and CNE Energy Services Group, are, in fact, seeking joint-venture and marketing-alliance opportunities with regional operators, including other utilities. Their goal is to provide a full range of customized energy services to commercial and industrial companies, located primarily in the New England region.

This good-quality stock should appeal to income-oriented investors, because of its good yield from a well-supported dividend and prospects for modest dividend growth out to 1999-2001. The shares are an Average selection for the year ahead.

Maurice Levenson *September 27, 1996*

(A) Fiscal yr. ends Sept. 30th.; calendar year prior to 1990. (B) Based on weighted average shares. Incl. unusual item: '89, d4¢. Excl. extra. items: '88, 37¢; '89, 21¢. Next egs. report due early November. (C) Next div'd mtg. about November 26. Goes ex. about December 4. Div'd payment dates: about Mar. 31, June 30, Sept. 30, Dec. 30. ■ Div'd reinvestment plan available. (D) Incl. deferred chgs. In '95: $70.8 mill., $7.99/sh. (E) In millions, adjusted for splits.

Company's Financial Strength	B+
Stock's Price Stability	95
Price Growth Persistence	50
Earnings Predictability	65

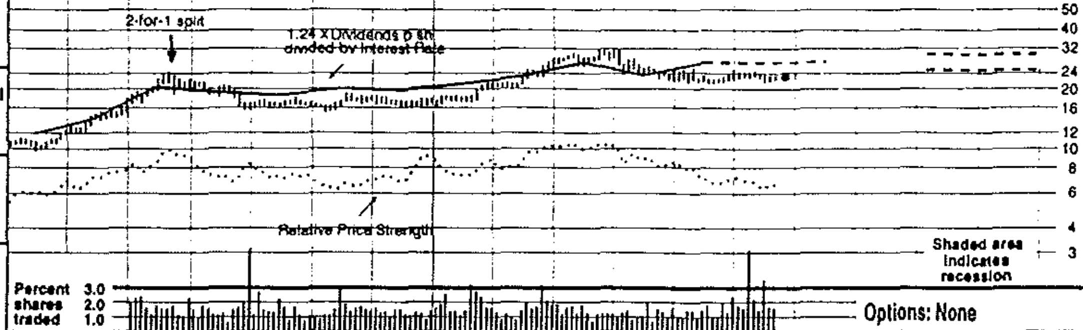
CONN. NATURAL GAS NYSE-CTG

RECENT PRICE 23 | P/E RATIO 12.9 (Trailing: 12.6 Median: 12.0) | RELATIVE P/E RATIO 0.86 | DIV'D YLD 6.6% | VALUE LINE 480

TIMELINESS 3 Average (Relative Price Performance Next 12 Mos.)
SAFETY 2 Above Average (Scale: 1 Highest to 5 Lowest)
BETA .55 (1.00 = Market)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
High:	18.0	24.5	22.0	18.3	19.0	18.6	21.5	28.4	32.4	31.8	25.3	24.6
Low:	12.0	17.0	15.8	16.0	15.1	16.0	16.3	20.0	26.3	21.9	21.3	21.8

Target Price Range 1999 | 2000 | 2001



1999-01 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	30	(+30%)	13%
Low	25	(+10%)	8%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	16	19	15
to Sell	12	13	13
Hld's(000)	1142	1292	1323

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
35.63	43.77	36.93	31.10	28.62	28.91	28.20	25.35	25.61	26.79	26.29	24.86	26.86	27.81	30.47	27.71	30.20	28.70	Revenues per sh A	30.70
2.32	2.84	2.12	1.77	2.07	2.35	2.42	2.42	2.48	2.59	2.62	2.60	3.06	3.08	3.47	3.23	3.50	3.60	"Cash Flow" per sh	4.00
1.15	1.59	1.25	1.16	1.34	1.57	1.57	1.62	1.46	1.60	1.51	1.44	1.75	1.76	1.85	1.52	1.85	1.85	Earnings per sh B	2.15
.85	.95	1.10	1.15	1.20	1.25	1.30	1.33	1.36	1.36	1.37	1.40	1.44	1.46	1.48	1.48	1.50	1.51	Div'ds Decl'd per sh C■	1.57
3.09	3.72	--	1.77	1.53	2.19	3.81	3.20	3.64	3.00	2.97	3.87	2.97	2.68	2.92	2.70	2.35	2.40	Cap'l Spending per sh	2.35
8.97	9.61	9.32	9.33	9.53	10.04	10.52	11.50	11.90	12.49	12.77	12.77	13.26	14.29	14.62	15.12	16.60	16.55	Book Value per sh D	16.90
3.47	3.47	5.06	6.29	6.55	6.77	6.93	7.55	7.73	8.33	8.50	8.61	8.79	9.54	9.54	9.93	10.60	10.80	Common Shs Outst'g E	11.40
6.8	4.9	7.0	8.7	8.1	9.1	13.1	11.9	11.6	10.7	11.3	12.3	12.4	15.9	14.4	15.0	Bold figures are		Avg Ann'l P/E Ratio	13.0
.90	.60	.77	.74	.75	.74	.89	.80	.96	.81	.84	.79	.75	.94	.94	1.01	Value Line		Relative P/E Ratio	1.00
10.9%	12.1%	12.6%	11.4%	11.0%	8.8%	6.3%	6.9%	8.0%	7.9%	8.0%	7.9%	6.6%	5.2%	5.6%	6.5%	estimates		Avg Ann'l Div'd Yield	5.6%

CAPITAL STRUCTURE as of 6/30/96
Total Debt $153.1 mill. Due in 5 Yrs $49.0 mill.
LT Debt $149.2 mill. LT Interest $12.5 mill.
(Total interest coverage: 3.7x)

Pension Liability None.

Pfd Stock $.90 mill. Pfd Div'd $.06 mill.

Common Stock 10,630,480 shs. as of 7/23/96

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
195.4	191.3	197.9	223.0	223.5	214.1	236.2	265.3	290.7	275.2	320	310	Revenues ($mill) A	350
10.8	11.5	11.3	12.7	12.8	12.3	15.3	16.9	17.7	15.2	19.5	20.0	Net Profit ($mill)	25.0
49.8%	42.9%	40.3%	46.8%	46.9%	47.3%	44.7%	45.4%	43.2%	42.6%	48.0%	49.0%	Income Tax Rate	50.0%
5.5%	6.0%	5.7%	5.7%	5.7%	5.8%	6.5%	6.4%	6.1%	5.5%	6.1%	6.4%	Net Profit Margin	7.0%
49.2%	50.1%	48.5%	53.2%	50.6%	50.0%	50.9%	50.1%	52.3%	49.9%	46.0%	47.0%	Long-Term Debt Ratio	48.3%
49.5%	48.8%	50.5%	46.1%	48.7%	49.5%	48.7%	49.5%	47.3%	49.8%	53.8%	52.8%	Common Equity Ratio	51.5%
147.3	177.7	182.1	225.5	222.9	222.0	239.1	275.3	294.6	301.4	325	340	Total Capital ($mill)	375
173.1	189.0	207.5	223.4	232.6	249.2	269.2	296.6	311.7	322.1	325	335	Net Plant ($mill)	350
9.6%	8.7%	8.4%	7.4%	8.1%	8.0%	8.8%	7.9%	7.9%	7.1%	8.0%	8.0%	% Earned Total Cap'l	8.5%
14.4%	13.0%	12.0%	12.1%	11.6%	11.1%	13.0%	12.3%	12.6%	10.1%	11.0%	11.0%	% Earned Net Worth	12.5%
14.7%	13.2%	12.2%	12.2%	11.7%	11.2%	13.0%	12.3%	12.6%	10.1%	11.0%	11.0%	% Earned Com Equity	12.5%
2.5%	3.4%	.9%	1.8%	1.1%	.3%	2.3%	2.1%	2.5%	.3%	2.5%	2.0%	% Retained to Com Eq	3.5%
83%	74%	93%	85%	91%	97%	83%	83%	80%	97%	80%	80%	% All Div'ds to Net Prof	73%

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	1.1	3.0	31.2
Other	60.3	52.7	53.7
Current Assets	61.4	55.7	84.9
Accts Payable	37.9	46.3	35.9
Debt Due	22.3	8.1	3.9
Other	7.8	8.9	17.9
Current Liab.	68.0	63.3	57.7
Fix. Chg. Cov.	337%	268%	320%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-.5%	2.0%	1.0%
"Cash Flow"	4.5%	5.0%	3.5%
Earnings	2.5%	2.5%	4.0%
Dividends	2.0%	1.5%	1.0%
Book Value	4.5%	3.5%	2.5%

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	76.6	106.4	42.3	40.0	265.3
1994	80.2	122.6	50.0	37.9	290.7
1995	76.5	105.5	50.2	43.0	275.2
1996	90.5	130.6	54.0	44.9	320
1997	90.0	120	54.0	46.0	310

Fiscal Year Ends	EARNINGS PER SHARE AB Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.65	1.40	.01	d.30	1.76
1994	.70	1.57	d.10	d.33	F 1.85
1995	.61	1.30	d.06	d.33	1.52
1996	.82	1.40	d.06	d.31	1.85
1997	.80	1.35	d.05	d.25	1.85

Calendar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.36	.36	.36	.36	1.44
1993	.36	.37	.37	.37	1.47
1994	.37	.37	.37	.37	1.48
1995	.37	.37	.37	.37	1.48
1996	.37	.38	.38		

BUSINESS: Connecticut Natural Gas Corporation is engaged primarily in the distribution and sale of natural gas to 145,000 customers in 22 municipalities in Connecticut. It is also involved in district heating and cooling operations in its service area by providing steam for heating and chilled water for cooling to a number of Hartford office buildings. 1995 revenue breakdown: regulated, 92%; non-regulated, 8%. Pre-tax operating income: regulated, 86%; non-regulated, 14%. Gas costs: 57% of regulated revenues. '95 depreciation rate: 3.7%. Has about 610 employees, 10,180 stockholders. Chairman, President, and Chief Executive Officer: Victor H. Frauenhofer. Inc.: Connecticut. Address: 100 Columbus Boulevard, Hartford, Connecticut 06144-1500. Telephone: 860-727-3000.

Connecticut Natural Gas is looking to strengthen its commercial and industrial revenue base. Gas utilities face increasing competition because of the unbundling of natural gas purchasing, transportation, and ancillary services that began on April 1st. The company is in the process of forming a holding company, which will enable it to effectively separate its regulated and nonregulated operations. And, over time, we expect nonregulated businesses to represent 20%, or more, of the bottom line, especially as economic vitality returns to the northern Connecticut service area. Though the region is still lagging, several recent signposts, including rising non-manufacturing employment and disposable personal income, suggest that the area may be experiencing a gradual economic recovery. And, with gas priced competitively with alternative fuels and given its more environmentally friendly attributes, we expect CNG's strategies to enhance operating profits over the next 3 to 5 years.

Because of its likely strong fiscal 1996 performance (ends September 30th), CNG will have difficulty improving its share net in fiscal 1997. Our earnings estimate for fiscal 1997 is $1.85 per share, the same as for fiscal 1996. In the year just ending, operating margins benefited from the colder-than-normal temperatures experienced during the winter heating season. The extended winter cold contributed about 53¢ a share to first-half profits. Too, 1996 earnings were enhanced by an October, 1995 rate case settlement, which authorized $8.9 million in higher gas rates. Moreover, this year's performance compares with a weak fiscal 1995, which featured above-average temperatures.

Fiscal 1997 capital spending will likely remain at the $23-$24 million level. CNG raised $15.6 million in June from the sale of 700,000 common shares, and will apply the funds to its current construction program. We don't expect any additional equity offerings in the next two years.

This stock should appeal to investors seeking current income. We consider the dividend, which provides a high yield, to be secure, based on our projections. Moreover, we look for modest increases out to 1999-2001.

Maurice Levenson *September 27, 1996*

(A) Fisc. yr. ends Sept. 30; cal. yr. prior to 1991. (B) Primary egs. Excl. extra. items: '82, 8¢; '86, d2¢; '87, 33¢, d10¢; '88, 17¢; '91, 27¢. Excl. gain from discont. ops.: '90, 5¢. Excl. net non-rec. gain: '95, 19¢. Next egs. report due late Nov. (C) Next div'd mtg. abt. Nov. 27. Goes ex about Dec. 4. Div'd payment dates about March 29, June 28, Sept. 27, Dec. 27. ■ Div'd reinvest. plan available. (D) Incl. def'd chgs. In '95: $25.3 mill., $2.55/sh. (E) In millions, adj'd for stock split. (F) Qtrs. don't add due to changes in shs. outstanding.

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	35
Earnings Predictability	65

ENERGEN CORP. NYSE-EGN

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
24	12.1 (Trailing: 12.8 Median: 12.0)	0.81	5.0%	481

TIMELINESS 4 Below Average (Relative Price Performance Next 12 Mos.)
SAFETY 2 Above Average (Scale: 1 Highest to 5 Lowest)
BETA .65 (1.00 = Market)

High:	10.8	14.4	16.5	17.2	24.4	20.5	18.9	19.3	26.8	23.9	25.1	25.4
Low:	8.2	9.1	11.4	12.3	15.4	16.0	16.0	15.0	18.1	19.3	20.1	21.8

Target Price Range 1999 | 2000 | 2001

1999-01 PROJECTIONS

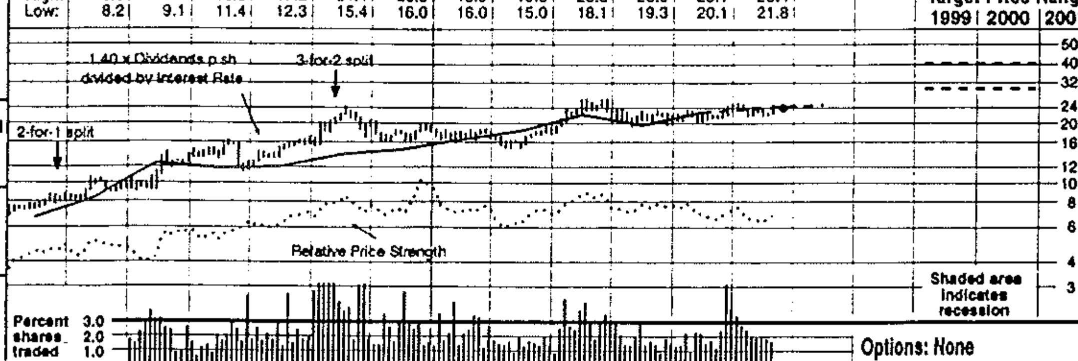
	Price	Gain	Ann'l Total Return
High	40	(+65%)	17%
Low	30	(+25%)	10%

Insider Decisions

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

Institutional Decisions

	4Q95	1Q96	2Q96
to Buy	27	17	23
to Sell	19	29	20
Hld's(000)	3865	3788	3653



1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
50.02	52.65	57.39	66.16	68.78	59.77	57.07	50.12	45.49	31.83	32.91	32.23	32.60	34.60	34.54	29.44	*34.80*	*31.40*	Revenues per sh A	*37.95*
1.93	2.12	2.30	2.94	2.88	3.16	3.19	4.03	4.24	3.46	3.67	3.78	4.12	4.20	4.56	4.48	*5.20*	*5.10*	"Cash Flow" per sh	*6.15*
.92	.97	1.15	1.05	1.02	.95	.81	1.41	1.67	1.19	1.35	1.42	1.54	1.77	2.01	1.77	*1.90*	*2.10*	Earnings per sh B	*2.60*
.50	.53	.53	.56	.59	.65	.70	.73	.78	.84	.91	.96	1.01	1.05	1.09	1.13	*1.17*	*1.21*	Div'ds Decl'd per sh C■	*1.40*
1.94	1.90	2.77	2.57	2.97	5.43	6.63	6.65	5.16	6.14	4.25	4.64	2.21	4.23	4.17	6.32	*12.95*	*9.50*	Cap'l Spending per sh	*8.30*
7.41	7.85	8.46	8.95	9.36	9.66	9.30	10.04	11.19	11.68	12.21	12.07	12.75	13.60	15.30	15.94	*17.80*	*20.65*	Book Value per sh D	*26.55*
5.92	5.92	5.92	5.92	6.00	6.25	6.47	6.54	7.99	9.69	9.87	10.10	10.18	10.32	10.92	10.91	*11.20*	*13.70*	Common Shs Outst'g E	*14.50*
5.4	5.2	4.2	5.8	7.4	9.5	12.8	10.1	8.3	16.1	13.3	12.6	11.0	12.4	11.1	12.3	*Bold figures are*		Avg Ann'l P/E Ratio	*13.0*
.72	.63	.46	.49	.69	.77	.87	.68	.69	1.22	.99	.80	.67	.73	.73	.84	*Value Line*		Relative P/E Ratio	*1.00*
10.3%	10.5%	11.1%	9.1%	7.9%	7.2%	6.7%	5.2%	5.6%	4.4%	5.1%	5.4%	6.0%	4.8%	4.9%	5.2%	*estimates*		Avg Ann'l Div'd Yield	*4.2%*

CAPITAL STRUCTURE as of 6/30/96
Total Debt $151.5 mill. Due in 5 Yrs $33.6 mill.
LT Debt $130.7 mill. LT Interest $8.8 mill.
(Total interest coverage: 2.8x)

Leases, Uncapitalized Annual rentals $2.2 mill.

Pension Liability None

Pfd Stock None

Common Stock 11,059,576 shs.

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
369.1	328.0	363.4	308.6	324.9	325.6	332.0	357.1	377.1	321.2	*390*	*430*	Revenues ($mill) A	*550*
5.3	9.3	12.9	11.2	13.3	14.2	15.8	18.2	21.8	19.3	*21.0*	*25.0*	Net Profit ($mill)	*37.0*
39.1%	31.3%	15.9%	8.6%	8.9%	2.5%	2.4%	15.8%	22.7%	16.0%	*21.0%*	*15.0%*	Income Tax Rate	*20.0%*
1.4%	2.8%	3.5%	3.6%	4.1%	4.4%	4.8%	5.1%	5.8%	6.0%	*5.4%*	*5.8%*	Net Profit Margin	*6.7%*
40.1%	44.3%	36.7%	42.7%	40.4%	38.6%	40.8%	38.0%	41.5%	43.1%	*48.0%*	*50.5%*	Long-Term Debt Ratio	*47.5%*
57.0%	53.4%	61.6%	56.1%	58.7%	60.6%	58.4%	62.0%	58.5%	56.9%	*52.0%*	*49.5%*	Common Equity Ratio	*52.5%*
105.4	123.2	145.0	201.9	205.2	201.5	222.3	226.2	285.3	305.5	*385*	*570*	Total Capital ($mill)	*735*
176.5	198.4	215.6	246.6	262.2	273.5	254.6	273.1	287.2	327.3	*430*	*550*	Net Plant ($mill)	*685*
7.1%	9.5%	10.5%	7.2%	8.3%	8.8%	9.1%	10.1%	9.5%	8.3%	*7.0%*	*6.0%*	% Earned Total Cap'l	*6.5%*
8.5%	13.6%	14.0%	9.7%	10.9%	11.5%	12.0%	12.9%	13.1%	11.1%	*10.5%*	*9.0%*	% Earned Net Worth	*9.5%*
8.6%	13.9%	14.3%	9.8%	10.9%	11.6%	12.1%	12.9%	13.1%	11.1%	*10.5%*	*8.5%*	% Earned Com Equity	*9.5%*
1.2%	6.7%	7.7%	2.9%	3.7%	3.8%	4.2%	5.2%	6.0%	4.0%	*4.0%*	*3.5%*	% Retained to Com Eq	*4.5%*
87%	53%	47%	70%	67%	68%	66%	60%	54%	64%	*62%*	*58%*	% All Div'ds to Net Prof	*54%*

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	27.5	36.7	12.1
Other	81.6	82.3	93.7
Current Assets	109.1	119.0	105.8
Accts Payable	27.5	32.2	42.5
Debt Due	16.1	34.1	20.8
Other	67.1	72.0	86.0
Current Liab.	110.7	138.3	149.3
Fix. Chg. Cov.	317%	274%	264%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-6.5%	-2.0%	*2.5%*
"Cash Flow"	4.0%	3.0%	*5.5%*
Earnings	6.5%	5.5%	*6.0%*
Dividends	6.0%	5.5%	*4.5%*
Book Value	5.0%	5.0%	*10.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	84.1	149.7	75.3	48.0	357.1
1994	87.9	168.2	73.1	47.9	377.1
1995	73.5	140.8	61.5	45.4	321.2
1996	78.8	171.0	87.1	*53.1*	*390*
1997	*90.0*	*190*	*95.0*	*55.0*	*430*

Fiscal Year Ends	EARNINGS PER SHARE AB Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.26	1.95	.11	d.55	1.77
1994	.22	2.05	.17	d.43	2.01
1995	.25	1.99	.10	d.57	1.77
1996	.21	2.13	.10	*d.54*	*1.90*
1997	*.25*	*2.18*	*.15*	*d.48*	*2.10*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.25	.25	.26	.26	1.02
1993	.26	.26	.27	.27	1.06
1994	.27	.27	.28	.28	1.10
1995	.28	.28	.29	.29	1.14
1996	.29	.29	.30		

BUSINESS: Energen Corporation is a holding company. Its principal subsidiary, the Alabama Gas Corporation, sells to more than 450,000 customers in central Alabama (pop.: 1.2 million), including Birmingham and Montgomery. 1995 utility revenues: residential, 65.6%; commercial and industrial, 23.2%; transport and other, 11.2%. 1995 deliveries: 101.4 bcf. Taurus Exploration, a subsidiary, engages primarily in exploration and production of natural gas. 1995 gas reserves: coalbed methane; 25.0 bcf; conventional; 70.2 bcf. Estimated present value: $63.6 mill. Has about 1,430 employees. Chairman & C.E.O.: Rex J. Lysinger. President & C.O.O.: Wm. Michael Warren, Jr. Inc.: AL. Address: 2101 Sixth Avenue North, Birmingham, Alabama 35203. Telephone: 205-326-2700.

Energen Corporation's strong fiscal 1996 first half should allow for some rebound in full-year share net. (Year ends September 30th.) Alagasco, Energen's gas utility subsidiary, benefited from colder-than-normal weather this past winter heating season. The company has also been able to receive its allowed rate of return on a larger investment base. We expect share earnings of about $1.90 for the year, given the strong first half and Energen's typical fourth-quarter loss.

Exploration and production (E&P) efforts continue. Taurus Exploration Inc., Energen's primary E&P subsidiary, is in the first year of its aggressive, five-year growth plan. Over that period, this strategy calls for about a $400 million investment in producing properties and another $100 million in offshore exploration and development. Due to this program's extensive capital needs, the company recently filed a shelf registration for $250 million of debt and equity. We anticipate borrowings from this shelf of approximately $40 million this fiscal year, followed by an equity offering of $50 million to $75 million and debt offerings of about $135 million in fiscal 1997.

We expect Taurus to make a significant contribution to fiscal 1997 bottom-line growth . . . So far in fiscal 1996, Taurus has invested more than $102 million, resulting in an additional 165 billion cubic feet equivalent (Bcfe) of oil and gas reserves. Production from these properties should provide a considerable boost to share net in fiscal 1997 and beyond. Also, effective income-tax rates should fall, largely due to Nonconventional Fuels Tax Credits associated with Taurus' purchase of 100 Bcf of coalbed methane reserves last July.

. . . which should complement stability at Alagasco. The utility ought to be able to provide its usual income contribution, on the heels of steady customer growth. These meter additions will likely be largely driven by continued municipal gas system purchases.

This issue is best suited for income investors. This stock's worthwhile dividend yield offsets its below-average appreciation prospects in the year ahead and over the 3- to 5-year pull.

Oscar L. Vidal *September 27, 1996*

(A) Fiscal year ends September 30th.
(B) Primary earnings. Excl. nonrecurring items: '86, d50¢; '92, 10¢; '94, 18¢. Excl. loss from discont. operations: '89, 27¢.
Next earnings report due late Oct.
(C) Next dividend meeting about Oct. 25. Goes ex about Nov. 13. Approx. dividend payment dates: March 1, June 1, Sept. 1, Dec. 1.
■ Dividend reinvestment plan available.
(D) Includes intangible assets. In '95: $9.7 mill., 89¢/sh.
(E) In millions, adjusted for stock splits.

Company's Financial Strength	B++
Stock's Price Stability	85
Price Growth Persistence	50
Earnings Predictability	60

INDIANA ENERGY NYSE-IEI

RECENT PRICE 25 | P/E RATIO 13.7 (Trailing: 12.8; Median: 13.0) | RELATIVE P/E RATIO 0.91 | DIV'D YLD 4.6% | VALUE LINE 482

TIMELINESS 4 Below Average (Relative Price Perform-ance Next 12 Mos.)
SAFETY 2 Above Average (Scale: 1 Highest to 5 Lowest)
BETA .65 (1.00 = Market)

High:	9.9	12.5	11.8	10.8	14.6	16.5	20.5	20.0	24.8	23.4	24.1	29.4
Low:	7.3	9.0	7.9	8.2	10.5	12.5	14.0	17.7	18.8	17.5	17.6	22.9

Target Price Range 1999 | 2000 | 2001

1999-01 PROJECTIONS

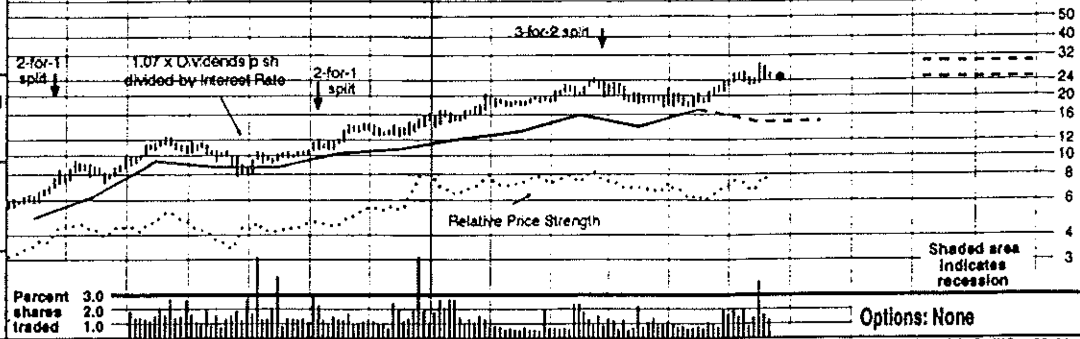
	Price	Gain	Ann'l Total Return
High	30	(+20%)	9%
Low	25	(Nil)	5%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	39	32	26
to Sell	16	29	32
Hld's(000)	4304	4447	4581



1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
19.35	23.27	21.57	26.21	28.23	25.72	22.58	18.44	19.55	20.87	17.15	18.84	19.80	22.23	21.07	17.90	*24.00*	*23.75*	Revenues per sh A	*27.80*
1.27	1.44	1.13	1.56	2.13	2.05	1.89	1.91	2.38	2.55	2.15	2.26	2.36	2.45	2.82	2.85	*3.50*	*3.40*	"Cash Flow" per sh	*4.20*
.63	.75	.57	.77	1.29	1.16	.92	.86	1.22	1.28	1.27	1.11	1.16	1.28	1.53	1.46	*1.90*	*1.80*	Earnings per sh B	*2.35*
.43	.46	.51	.52	.57	.64	.69	.71	.74	.81	.87	.92	.96	.99	1.03	1.07	*1.11*	*1.16*	Div'ds Decl'd per sh C ■	*1.34*
1.60	1.87	1.92	1.34	1.49	1.97	2.15	1.85	2.16	2.36	2.09	2.32	2.84	2.54	2.53	2.44	*2.65*	*2.65*	Cap'l Spending per sh	*3.05*
5.46	5.74	5.48	5.72	6.44	6.99	7.23	7.54	7.99	8.47	9.78	9.97	10.22	11.52	12.03	12.44	*13.15*	*13.70*	Book Value per sh D	*16.25*
12.97	13.02	15.59	15.88	16.12	16.32	16.42	16.45	16.52	16.52	20.59	20.67	20.77	22.46	22.56	22.56	*22.30*	*22.10*	Common Shs Outst'g E	*21.60*
7.2	5.3	7.3	6.1	4.7	7.1	11.1	12.3	7.8	9.1	10.7	14.1	16.0	16.5	13.5	13.2	*Bold figures are*		Avg Ann'l P/E Ratio	*12.0*
.96	.64	.80	.52	.44	.58	.75	.82	.65	.69	.79	.90	.97	.97	.89	.88	*Value Line*		Relative P/E Ratio	*.90*
9.6%	11.5%	12.3%	10.9%	9.3%	7.8%	6.7%	6.7%	7.8%	6.9%	6.4%	5.8%	5.2%	4.7%	4.9%	5.6%	*estimates*		Avg Ann'l Div'd Yield	*4.8%*

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
370.7	303.4	322.9	344.7	353.1	389.6	411.3	499.3	475.3	403.8	*535*	*525*	Revenues ($mill) A	*600*
16.2	14.4	21.5	22.9	23.5	24.8	25.7	28.5	34.4	33.0	*45.0*	*40.0*	Net Profit ($mill)	*50.0*
45.5%	41.6%	33.1%	33.2%	32.8%	32.3%	35.1%	35.7%	36.1%	36.8%	*37.0%*	*37.0%*	Income Tax Rate	*37.0%*
4.4%	4.8%	6.7%	6.6%	6.6%	6.4%	6.2%	5.7%	7.2%	8.2%	*8.4%*	*7.6%*	Net Profit Margin	*8.3%*
44.2%	43.8%	43.0%	43.1%	31.8%	41.6%	39.3%	38.9%	36.9%	38.6%	*37.5%*	*36.5%*	Long-Term Debt Ratio	*33.0%*
52.3%	56.2%	49.5%	49.7%	62.1%	53.2%	55.5%	61.1%	63.1%	61.4%	*62.5%*	*63.5%*	Common Equity Ratio	*67.0%*
227.2	220.7	266.7	281.3	324.2	387.2	382.6	423.6	430.0	457.0	*470*	*480*	Total Capital ($mill)	*525*
290.6	303.5	319.6	336.7	391.3	417.9	476.6	505.6	533.0	555.3	*580*	*600*	Net Plant ($mill)	*675*
9.2%	8.8%	10.0%	10.2%	8.4%	8.2%	8.3%	8.4%	9.5%	8.9%	*11.5%*	*10.0%*	% Earned Total Cap'l	*11.0%*
12.7%	11.6%	14.2%	14.3%	10.6%	11.0%	11.1%	11.0%	12.7%	11.7%	*15.5%*	*13.0%*	% Earned Net Worth	*14.0%*
12.7%	11.4%	15.2%	15.3%	10.9%	11.2%	11.3%	10.9%	12.7%	11.7%	*15.5%*	*13.0%*	% Earned Com Equity	*14.0%*
3.3%	2.0%	6.0%	5.8%	3.4%	2.0%	2.0%	2.8%	4.2%	3.2%	*7.0%*	*4.5%*	% Retained to Com Eq	*6.0%*
76%	82%	63%	64%	71%	83%	83%	75%	67%	73%	*59%*	*64%*	% All Div'ds to Net Prof	*58%*

CAPITAL STRUCTURE as of 6/30/96

Total Debt $182.0 mill. **Due In 5 Yrs** $30.4 mill.
LT Debt $178.2 mill. **LT Interest** $13.0 mill.
(Long-term interest earned: 4.5x;
Total interest coverage: 4.3x)
Leases, Uncapitalized Annual rentals $1.7 mill.

Pension Liability None

Pfd Stock None

Common Stock 22,474,402 shs.

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	10.2	.1	36.2
Other	90.4	84.4	65.3
Current Assets	100.6	84.5	101.5
Accts Payable	34.6	48.1	30.8
Debt Due	34.6	6.3	3.8
Other	81.5	57.9	74.8
Current Liab.	150.7	112.3	109.4
Fix. Chg. Cov.	420%	421%	435%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-2.5%	1.0%	*5.5%*
"Cash Flow"	3.5%	3.0%	*7.5%*
Earnings	3.0%	2.5%	*7.5%*
Dividends	6.0%	5.0%	*4.5%*
Book Value	6.5%	6.5%	*5.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	155.5	178.3	101.2	64.3	499.3
1994	151.9	195.7	77.8	49.9	475.3
1995	113.1	150.4	83.1	57.2	403.8
1996	154.3	222.6	91.2	*66.9*	*535*
1997	*160*	*200*	*95.0*	*70.0*	*525*

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.65	.85	.03	d.19	1.28
1994	.67	.96	.11	d.21	1.53
1995	.48	.98	.19	d.19	1.46
1996	.85	1.16	.13	*d.24*	*1.90*
1997	*.82*	*1.12*	*.14*	*d.28*	*1.80*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.237	.237	.247	.247	.97
1993	.247	.247	.247	.255	1.00
1994	.255	.255	.265	.265	1.04
1995	.265	.265	.275	.275	1.08
1996	.275	.275	.285		

BUSINESS: Indiana Energy, Inc. is the holding company for Indiana Gas Company, a natural gas distribution utility with 454,817 customers (at 9/30/95) in 48 Indiana counties. Includes Terre Haute Gas Corp. and Richmond Gas Corp. (both acquired 7/90). Fiscal 1995 volume: 109.5 bill. cu. feet. Residential, 37%; commercial, 15%; industrial (sold and transported) 48%. Main suppliers: Panhandle Eastern Pipe Line Co., Texas Gas Transmission Corp. Gas costs: 61% of rev's; labor, 10%. '95 deprec. rate: 3.7%. Est'd plant age: 9 yrs. Has 1,150 employees; 9,421 shareholders. Offcrs. & dir. own 7% of common (1/96 Proxy). Chairman and C.E.O.: Lawrence A. Ferger. Incorp.: Indiana. Address: 1630 North Meridian St., Indianapolis, IN 46202. Tel.: 317-926-3351.

Indiana Energy's utility is delivering record gas volumes in fiscal 1996 (ends September 30th). The primary variable in determining gas demand is the weather, and Indiana Gas has enjoyed temperatures 8% colder than normal (in utility degree-days) and some 24% colder than the previous year. In addition, the utility has maintained steady growth across all customer classes. Indiana Gas should finish the fiscal year with almost 470,000 customers, marking system growth of more than 3% and the largest number of new additions (excluding mergers) in the decade. Consequently, the utility managed to break its full-year record for gas throughput (sales plus gas transported for industrial customers) just nine months into fiscal 1996 and should deliver more than 128 billion cubic feet for the full year.

The company's earnings are surging. Indiana Gas does not have a weather normalization rider in its rates, so the increased volumes are flowing directly to the bottom line. Utility income should be up more than 25% for the year. In fact, Indiana Energy is trying to contain the advance, to some extent, by accelerating discretionary spending on projects to maintain and strengthen the distribution system. The company will likely earn a record $1.90 a share for fiscal 1996 and show a return on equity of about 15%, the highest level seen in the '90s. Share earnings will probably fall back by 10¢ in '97.

Indiana Energy is moving to keep up with trends in the industry. The gas distribution business has been opened to more competition with the loosening of regulations. Indiana Energy has formed ProLiance Energy in partnership with Citizens Gas and Coke of Indianapolis to obtain gas supplies for themselves and to market to other utilities in Indiana and the surrounding states. However, the venture is currently being challenged before the Indiana Utility Regulatory Commission by several large-volume industrial customers. It is uncertain what degree of regulation will ultimately be imposed.

This stock is suitable for income-oriented accounts. Indiana Energy has raised the dividend for the 24th straight year, giving this quality issue a healthy yield.

Ben Sharav, CFA *September 27, 1996*

(A) Fiscal year ends Sept. 30.
(B) Based on average shares. Excludes nonrecurring gains: '87, 15¢; '93, 34¢. '93 quarters don't sum due to change in shs. outstanding.
Next earnings report due late October.
(C) Next dividend meeting about October 24. Goes ex about November 18. Dividend payment dates: About March 1, June 1, Sept. 1, Dec. 1. ■ Dividend reinvestment plan available.
(D) Includes deferred charges. In '95: $16.4 mill., 73¢/sh.
(E) In millions, adjusted for stock splits.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	85
Earnings Predictability	75

LACLEDE GAS NYSE-LG

RECENT PRICE	P/E RATIO	(Trailing: 12.5 Median: 13.0)	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
25	13.7		0.91	5.1%	483

TIMELINESS 3 Average (Relative Price Performance Next 12 Mos.)

SAFETY 1 Highest (Scale: 1 Highest to 5 Lowest)

BETA .55 (1.00 = Market)

1999-01 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	30	(+20%)	9%
Low	25	(Nil)	5%

Insider Decisions

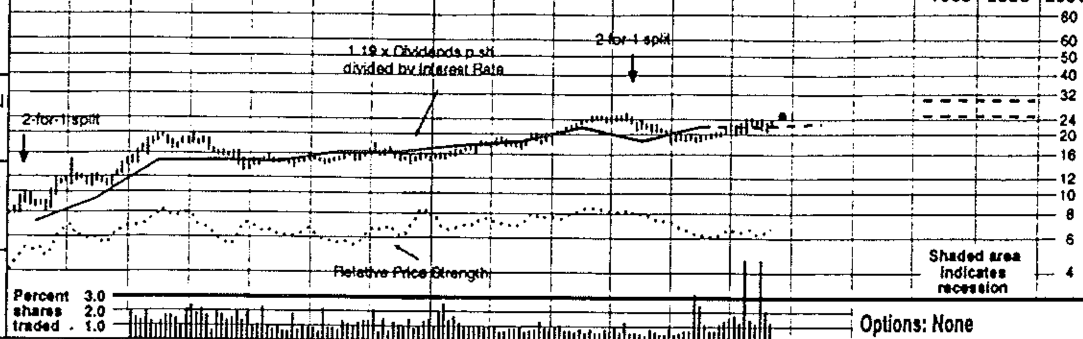
	N	D	J	F	M	A	M	J	J
to Buy	0	0	0	0	0	0	2	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	17	20	24
to Sell	15	12	16
Hld's(000)	2647	3145	3292

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
High:	15.0	19.9	20.3	15.9	17.0	18.0	18.7	20.5	24.9	25.6	23.1	24.8
Low:	10.8	14.0	13.0	13.5	14.0	14.2	14.9	16.9	20.0	18.3	18.4	20.0

Target Price Range 1999 | 2000 | 2001



1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
24.29	24.75	34.07	37.29	38.64	35.36	34.89	28.38	30.82	31.57	30.21	28.10	26.83	32.33	33.43	24.79	*30.95*	*29.60*	Revenues per sh A	*32.00*
1.52	1.46	1.79	1.97	2.71	2.62	2.95	2.44	2.51	2.47	2.13	2.37	2.32	2.81	2.65	2.55	*3.30*	*3.15*	"Cash Flow" per sh	*3.50*
.88	.79	1.08	.98	1.70	1.64	1.87	1.44	1.57	1.45	1.08	1.28	1.17	1.61	1.42	1.27	*1.90*	*1.75*	Earnings per sh B	*1.95*
.47	.54	.60	.65	.75	.85	.95	1.06	1.10	1.15	1.18	1.20	1.20	1.22	1.22	1.24	*1.26*	*1.30*	Div'ds Decl'd per sh C ■	*1.40*
.92	1.48	1.23	1.01	1.10	1.31	1.56	1.53	1.92	1.82	1.87	2.46	2.87	2.62	2.50	2.63	*2.15*	*2.25*	Cap'l Spending per sh	*2.50*
7.12	7.38	7.86	8.17	9.12	9.92	10.54	10.98	11.44	11.74	11.75	11.83	11.79	12.19	12.44	13.05	*13.60*	*14.00*	Book Value per sh D	*15.35*
17.45	17.45	17.45	17.45	17.45	17.45	15.74	15.74	15.68	15.59	15.59	15.59	15.59	15.59	15.67	17.42	*17.60*	*17.75*	Common Shs Outst'g E	*18.00*
5.5	6.3	4.6	6.7	5.0	7.1	8.8	11.0	9.2	10.3	14.6	12.5	15.8	13.5	16.4	15.5	*Bold figures are*		Avg Ann'l P/E Ratio	*13.0*
.73	.77	.51	.57	.47	.58	.60	.74	.76	.78	1.08	.80	.96	.80	1.08	1.06	*Value Line*		Relative P/E Ratio	*1.00*
9.7%	10.8%	12.2%	10.1%	8.8%	7.3%	5.8%	6.7%	7.6%	7.7%	7.5%	7.5%	6.5%	5.6%	5.3%	6.3%	*estimates*		Avg Ann'l Div'd Yield	*5.6%*

CAPITAL STRUCTURE as of 6/30/96

Total Debt $191.3 mill. Due in 5 Yrs $12.0 mill.
LT Debt $179.3 mill. LT Interest $13.5 mill.
(LT interest earned: 4.9x; total interest coverage: 3.9x)

Leases, Uncapitalized None
Pension Liability None

Pfd Stock $2.0 mill. Pfd Div'd $.1 mill.

Common Stock 17,557,540 shs. as of 8/13/96

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
549.0	446.6	483.1	492.2	470.8	438.1	418.2	504.0	523.9	431.9	*545*	*525*	Revenues ($mill) A	*575*
29.9	22.9	24.8	22.7	16.9	20.0	18.3	25.2	22.2	20.9	*33.5*	*31.0*	Net Profit ($mill)	*35.0*
37.4%	42.3%	30.2%	27.4%	28.5%	35.1%	31.2%	37.3%	36.0%	32.1%	*35.0%*	*36.0%*	Income Tax Rate	*36.0%*
5.4%	5.1%	5.1%	4.6%	3.6%	4.6%	4.4%	5.0%	4.2%	4.8%	*6.1%*	*5.9%*	Net Profit Margin	*6.0%*
38.5%	37.1%	39.7%	38.7%	41.2%	46.9%	44.1%	46.3%	43.9%	40.2%	*43.0%*	*42.5%*	Long-Term Debt Ratio	*41.5%*
59.1%	61.5%	59.3%	60.6%	58.1%	52.5%	55.3%	53.1%	55.5%	59.3%	*56.5%*	*57.0%*	Common Equity Ratio	*58.0%*
280.6	281.0	302.5	302.0	314.9	351.1	332.4	357.6	351.1	383.5	*420*	*430*	Total Capital ($mill)	*470*
262.8	271.5	288.5	302.4	316.3	339.3	367.3	390.8	411.7	434.3	*445*	*460*	Net Plant ($mill)	*510*
12.0%	9.7%	9.8%	9.3%	7.3%	7.8%	7.6%	9.1%	8.1%	7.1%	*9.5%*	*9.0%*	% Earned Total Cap'l	*9.0%*
17.3%	12.9%	13.6%	12.3%	9.1%	10.8%	9.8%	13.1%	11.3%	9.1%	*14.0%*	*12.5%*	% Earned Net Worth	*12.5%*
17.8%	13.1%	13.7%	12.4%	9.2%	10.8%	9.9%	13.2%	11.3%	9.2%	*14.0%*	*12.5%*	% Earned Com Equity	*12.5%*
8.8%	3.5%	4.2%	2.6%	NMF	.7%	NMF	3.3%	1.6%	.4%	*4.5%*	*3.0%*	% Retained to Com Eq	*3.5%*
51%	73%	70%	79%	110%	93%	103%	75%	85%	96%	*67%*	*75%*	% All Div'ds to Net Prof	*72%*

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	1.6	1.6	5.2
Other	113.6	106.2	106.5
Current Assets	115.2	107.8	111.7
Accts Payable	20.1	21.1	24.7
Debt Due	53.5	59.5	12.0
Other	70.6	47.2	41.6
Current Liab.	144.2	127.8	78.3
Fix. Chg. Cov.	302%	258%	331%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-2.0%	-.5%	*1.0%*
"Cash Flow"	1.0%	2.5%	*4.0%*
Earnings	--	1.0%	*4.0%*
Dividends	5.0%	1.5%	*1.5%*
Book Value	3.5%	1.5%	*3.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	160.0	214.1	76.0	53.9	504.0
1994	167.2	233.1	74.6	49.0	523.9
1995	122.2	191.6	67.6	50.5	431.9
1996	154.9	246.6	86.0	*57.5*	*545*
1997	*155.0*	*240*	*78.5*	*51.5*	*525*

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.87	1.30	d.14	d.42	1.61
1994	.77	1.19	d.18	d.36	1.42
1995	.58	1.15	d.12	d.25	1.27
1996	.90	1.37	d.02	*d.35*	*1.90*
1997	*.90*	*1.30*	*d.15*	*d.30*	*1.75*

Calendar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.30	.30	.30	.30	1.20
1993	.30	.305	.305	.305	1.22
1994	.305	.305	.305	.305	1.22
1995	.31	.31	.31	.31	1.24
1996	.315	.315	.315	-	

BUSINESS: Laclede Gas Company is a regulated utility that distributes natural gas in eastern Missouri (population, 2 million; growing about 1% per year), including the city of St. Louis, St. Louis County, and parts of 8 other counties. Had 603,975 customers at 9/95. Therms sold and transported in '95: 978.1 mill. Revenue mix: residential, 70%; commercial and industrial, 26%; transportation, 3%; other, 1%. Purchased gas accounts for 51% of rev.; labor costs, 25%. Operates underground gas storage fields. Est'd. plant age: 16 yrs. Has 2,151 employees; 11,564 shareholders. Officers & directors control less than 1% of common (12/95 Proxy). Chairman, C.E.O. and President: Robert C. Jaudes. Inc.: Missouri. Address: 720 Olive Street, St. Louis, MO 63101. Telephone: 314-342-0500.

Laclede Gas Company's profits have rebounded this year thanks to the weather. In the first three quarters of fiscal 1996 (year ends September 30th), Laclede's service area was 22% colder than last year and 3% colder than normal. The resulting pickup in natural gas demand, as well as an increase in other income due to some off-system gas sales, led to a very solid earnings improvement ($2.25 a share versus $1.58 per share in the year-earlier period).

The impressive earnings gain removes any doubt about the security of the dividend. In fiscal 1995, the company's dividend payout ratio was a lofty 96%. In contrast, even with a 2¢-per-share annual increase in the dividend, the payout ratio appears likely to fall below 70% this year. Dividend coverage hasn't been this healthy since 1988, and the company's finances are also strong. Consequently, we would not be surprised to see a larger-than-normal dividend increase (of 4¢ a share on an annual basis) announced by the end of calendar 1996.

In fiscal 1997, the company is likely to benefit from modest rate relief. Laclede recently reached a settlement, which we expect will be approved shortly in substantially its current form by the Missouri Public Service Commission, that calls for a $9.5 million annual rate increase effective September 1, 1996. The settlement also includes incentive regulation allowing the company and its customers to share savings realized in limited areas, such as gas supply and off-system gas sales. The modest rate increase would, of course, be a positive factor, but it is unlikely to be sufficient to offset the earnings shortfall that would occur if the weather is less favorable next year, which appears to be a reasonable assumption.

Conservative, income-oriented investors should consider these high-quality shares. The yield is above average for a natural gas utility, it appears well covered by both earnings and Laclede's good finances, and the company is committed to moderate annual increases. The company's growth prospects are modest, but the stock's 3- to 5-year total return potential is respectable on a risk-adjusted basis.

Cranston Paull *September 27, 1996*

(A) Fiscal year ends Sept. 30th.
(B) Based on average shares outstanding. '95 quarterly earnings do not add to total due to changes in shares outstanding. Next earnings report due early Nov. (C) Next dividend meeting about Nov. 23. Goes ex about Dec. 6. Approx. dividend payment dates: 1st of January, April, July, October.■ Dividend reinvestment plan available. (D) Incl. deferred charges. In '95: $71.8 mill., $4.12/sh.
(E) In millions, adjusted for stock splits.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	35
Earnings Predictability	60

MCN CORP. NYSE-MCN

RECENT PRICE	27	P/E RATIO	15.9 (Trailing: 15.3, Median: NMF)	RELATIVE P/E RATIO	1.06	DIV'D YLD	3.6%	VALUE LINE	484

TIMELINESS **3** Average (Relative Price Performance Next 12 Mos.)

SAFETY **2** Above Average (Scale: 1 Highest to 5 Lowest)

BETA .70 (1.00 = Market)

High:	9.8	11.9	11.9	12.3	15.5	18.3	20.3	23.5	27.6	
Low:	8.8	8.5	9.1	9.8	10.8	14.5	16.9	16.5	21.6	

Target Price Range 1999 2000 2001

1999-01 PROJECTIONS

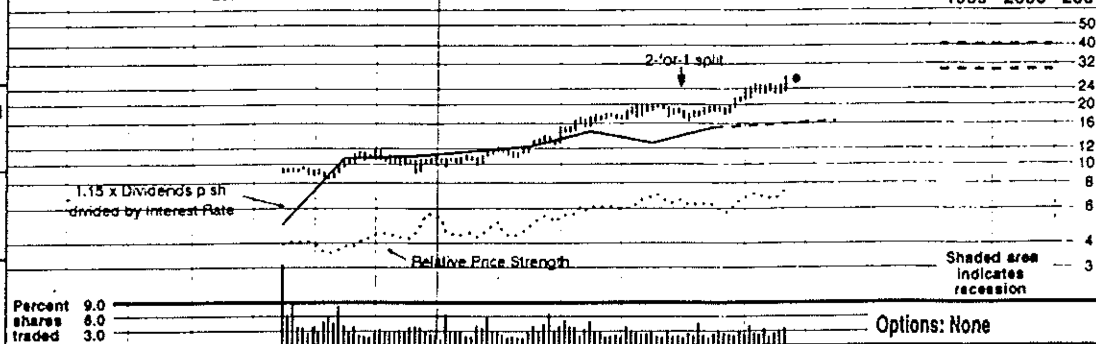
	Price	Gain	Ann'l Total Return
High	40	(+50%)	13%
Low	30	(+10%)	6%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	68	67	59
to Sell	56	64	64
Hld's(000)	32306	31191	30685



MCN Corporation was established on January 3, 1989, as a holding company for Michigan Consolidated Gas Company and for MCN Investment Corporation, which is developing several businesses outside the utility area. MichCon was a wholly owned subsidiary of Primark for several years prior to May 31, 1988. On that date, Primark spun off MichCon to its stockholders. Public offering of 2.8 million shares at $17.38 per share took place in March, 1989. MichCon's financial record before 1989 corresponds perfectly to the record of MCN.

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
--	--	31.29	27.91	25.27	24.18	24.67	24.91	25.85	23.88	*30.60*	*29.80*	Revenues per sh	*36.50*
--	--	2.76	2.58	2.20	2.18	2.40	2.73	3.03	3.29	*3.65*	*3.95*	"Cash Flow" per sh	*5.00*
--	--	1.16	1.10	.69	.71	1.06	1.24	1.31	1.49	*1.70*	*1.80*	Earnings per sh A	*2.40*
--	--	.40	.79	.82	.82	.83	.85	.87	.90	*.94*	*.98*	Div'ds Decl'd per sh B■	*1.15*
--	--	1.77	1.67	3.04	2.42	2.94	3.54	5.96	8.09	*11.20*	*9.25*	Cap'l Spending per sh	*8.15*
--	--	6.03	6.43	6.31	6.61	7.44	7.97	8.56	10.02	*10.95*	*13.25*	Book Value per sh	*18.00*
--	--	40.95	46.46	47.86	52.78	58.29	58.99	59.79	66.37	*67.00*	*73.00*	Common Shs Outst'g C	*80.00*
--	--	8.1	9.2	15.2	15.3	11.8	13.4	14.4	13.0	*Bold figures are*		Avg Ann'l P/E Ratio	*14.0*
--	--	.67	.70	1.13	.98	.72	.79	.94	.89	*Value Line*		Relative P/E Ratio	*1.10*
--	--	4.2%	7.8%	7.8%	7.5%	6.6%	5.1%	4.6%	4.9%	*estimates*		Avg Ann'l Div'd Yield	*3.4%*
1450.5	1242.9	1281.3	1296.6	1209.3	1276.3	1438.3	1469.6	1545.8	1584.9	*2050*	*2175*	Revenues ($mill)	*2925*
50.0	47.0	47.7	49.8	32.3	35.1	57.1	72.8	77.8	96.8	*115*	*125*	Net Profit ($mill)	*190*
55.6%	37.7%	33.6%	33.8%	34.9%	35.2%	33.7%	33.1%	27.9%	28.2%	*28.5%*	*29.0%*	Income Tax Rate	*30.0%*
3.4%	3.8%	3.7%	3.8%	2.7%	2.7%	4.0%	5.0%	5.0%	6.1%	*5.5%*	*5.8%*	Net Profit Margin	*6.5%*
46.8%	50.7%	48.1%	49.3%	50.3%	47.6%	46.2%	51.0%	52.7%	56.6%	*58.0%*	*54.0%*	Long-Term Debt Ratio	*52.0%*
48.7%	45.4%	48.1%	47.9%	47.4%	50.6%	52.7%	48.4%	39.4%	37.9%	*32.0%*	*35.0%*	Common Equity Ratio	*40.0%*
496.8	538.1	513.6	624.1	637.3	689.0	822.6	970.6	1299.6	1754.7	*2300*	*2750*	Total Capital ($mill)	*3650*
830.7	853.5	863.5	873.7	964.7	1023.2	1115.1	1236.6	1492.4	1897.2	*2370*	*2850*	Net Plant ($mill)	*3850*
12.3%	10.6%	11.2%	9.6%	7.0%	7.0%	8.8%	9.0%	7.5%	6.8%	*6.5%*	*6.0%*	% Earned Total Cap'l	*7.0%*
18.9%	17.7%	17.9%	15.7%	10.2%	9.7%	12.9%	15.3%	12.7%	13.6%	*12.5%*	*10.5%*	% Earned Net Worth	*11.0%*
19.9%	18.5%	19.3%	16.7%	10.7%	10.1%	13.2%	15.5%	15.2%	14.6%	*15.0%*	*13.0%*	% Earned Com Equity	*13.5%*
2%	NMF	3.9%	4.8%	NMF	NMF	2.8%	4.9%	5.1%	5.8%	*7.0%*	*6.0%*	% Retained to Com Eq	*7.0%*
99%	105%	80%	71%	116%	115%	79%	68%	66%	60%	*56%*	*56%*	% All Div'ds to Net Prof	*50%*

CAPITAL STRUCTURE as of 6/30/96
Total Debt $1210.2 mill. Due in 5 Yrs $500 mill.
LT Debt $1048.3 mill. LT Interest $57.0 mill.
Incl. $ 18.5 mill. capitalized leases.
(LT interest earned: 3.8x; total interest coverage: 3.3x)

Pension Liability None
Pfd stock of a subsidiary $100.0 mill.
4,000,000 shs. 9 3/8% cum., liqu. val. $25 per share.
Common Stock 67,027,931 shares.

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	11.5	19.3	57.8
Other	532.0	596.2	469.5
Current Assets	543.5	615.5	527.3
Accts Payable	142.6	217.2	192.3
Debt Due	236.1	252.6	161.9
Other	186.0	182.5	246.7
Current Liab.	564.7	652.3	600.9
Fix. Chg. Cov.	316%	342%	284%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	--	-2.0%	6.5%
"Cash Flow"	--	2.5%	9.0%
Earnings	--	4.0%	9.5%
Dividends	--	6.5%	4.5%
Book Value	--	5.0%	11.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	556.7	287.6	180.5	444.8	1469.6
1994	656.7	272.6	204.4	412.1	1545.8
1995	548.0	283.1	213.2	540.6	1584.9
1996	793.2	356.9	*250*	*649.9*	*2050*
1997	*815*	*370*	*275*	*715*	*2175*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	.93	.03	d.19	.47	1.24
1994	1.16	.06	d.26	.35	1.31
1995	1.02	.04	d.13	.63	1.49
1996	1.18	.08	*d.11*	*.55*	*1.70*
1997	*1.18*	*.10*	*d.08*	*.60*	*1.80*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.205	.205	.205	.21	.83
1993	.21	.21	.21	.215	.85
1994	.215	.215	.215	.223	.87
1995	.223	.223	.223	.233	.90
1996	.233	.233	.233		

BUSINESS: MCN Corporation is a holding company; its principal subsidiary is Michigan Consolidated Gas Company (MichCon), a natural gas distribution company serving 1.1 million customers in 500 Michigan communities, one-third in Detroit. Other activities include exploration and production, gas storage, cogeneration, gas marketing, computer services, and natural gas technology. Gas Distribution 69% of revenues, 83% of operating income; Diversified Gas Services (25%, 12%); Computer Services (6%, 5%). 1995 MichCon gas deliveries 730 bill. cu. ft. Officers & directors own .7% of common (3/96 Proxy). Chairman & Chief Executive Officer: Alfred R. Glancy III. Incorporated: MI. Address: 500 Griswold Street, Detroit, Michigan 48226. Telephone: 313-256-6324.

MCN Corporation's earnings continue to rise at an impressive rate. Excluding the contribution from MCN's recently sold computer services company (a 54¢-per-share gain from the sale and 3¢ per share from operations), net income in the first half of 1996 was up 28% over year-ago levels. Part of the increase came from natural gas (and oil) production volumes that are on a pace to more than double this year to about 70 billion cubic feet of natural gas equivalent. Most of the remaining increase came from the company's distribution utility, thanks largely to colder weather in the utility's service area.

But the stock price has risen even more rapidly. It has appreciated about 50% since its lows last September. This is an unusually strong performance for the stock of a company dependent on regulated operations for over 80% of its earnings.

Apparently, investors believe that MCN's aggressive expansion of its less-regulated natural gas businesses will lead to an acceleration in earnings growth. MCN plans to double its asset base by the year 2000 through total capital outlays of about $3 billion, primarily targeted at exploration and production and gathering and processing operations. MCN reduces the risks inherent in such an aggressive strategy by investing in small, relatively low-risk ventures with established partners who operate the project and assume the capital equipment costs. The company also has an extensive price-hedging program that covers the majority of its planned production for the next ten years (with prices rising about 3% a year). These conservative strategies increase the likelihood that our 3- to 5-year projections will be attained. Still, a significant amount of external funding will be required, including the issuance of about 12 million shares of common stock through the year 2000, we estimate. So share-earnings dilution is likely to be a significant factor. In any case . . .

We think this appraisal is essentially correct. But in view of the stock's strong recent price performance and the difficult weather comparisons facing MCN this winter, investors may want to wait for a pullback to purchase these shares.

Cranston Paull *September 27, 1996*

(A) Based on average shares outstanding. Excludes extraordinary charge: '88, 15¢. Excludes non-recurring gains: 1H'96, 57¢. 1995 quarterly egs. do not add due to change in shares outstanding. Next earnings report due mid October. (B) Next dividend meeting about Oct. 26th. Goes ex-dividend November 6th. Dividend payment dates: about 25th of Feb., May, Aug., Nov. ■ Dividend reinvestment plan available. (C) In millions; adjusted for stock split.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	75
Earnings Predictability	60

NEW JERSEY RES. NYSE-NJR

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
28	12.8 (Trailing: 13.6 / Median: 14.0)	0.85	5.7%	486

TIMELINESS 4 Below Average (Relative Price Performance Next 12 Mos.)
SAFETY 2 Above Average (Scale: 1 Highest to 5 Lowest)
BETA .65 (1.00 = Market)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
High:	14.5	16.9	23.6	20.6	21.5	20.9	21.1	25.1	29.5	27.4	30.5	29.9
Low:	12.4	12.8	14.8	16.8	17.1	17.1	17.0	18.3	24.0	19.8	21.5	26.6

Target Price Range 1999 | 2000 | 2001

1999-01 PROJECTIONS

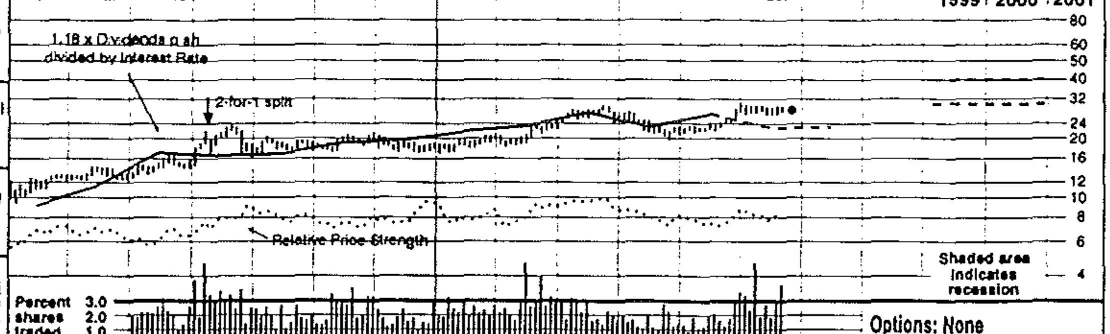
	Price	Gain	Ann'l Total Return
High	40	(+45%)	14%
Low	30	(+5%)	7%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	30	30	29
to Sell	20	19	24
Hld's(000)	4741	4896	4807



1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
30.75	29.77	39.48	41.48	41.33	40.15	35.12	30.05	27.03	25.02	24.02	23.98	25.32	27.04	28.82	25.55	30.30	33.45	Revenues per sh A	38.35
2.07	1.59	2.19	2.20	2.96	2.90	2.34	2.70	2.63	2.46	2.31	2.36	2.93	3.20	3.46	3.20	3.30	3.50	"Cash Flow" per sh	4.30
1.20	1.01	1.21	1.10	1.59	1.35	.69	1.27	1.59	1.45	.97	.83	1.64	1.72	1.89	1.93	2.05	2.15	Earnings per sh B	3.00
.75	.81	.85	.89	.97	1.06	1.13	1.20	1.28	1.36	1.44	1.50	1.52	1.52	1.52	1.52	1.55	1.60	Div'ds Decl'd per sh C■	1.76
2.43	2.78	4.33	4.55	6.03	5.86	6.93	7.64	7.84	6.56	6.55	4.36	2.99	3.46	3.15	2.66	3.15	3.45	Cap'l Spending per sh	4.00
8.26	8.00	8.33	8.52	9.26	8.78	8.61	10.73	12.40	13.64	13.27	12.85	14.16	14.72	14.46	14.55	15.20	15.45	Book Value per sh D	19.45
5.09	6.37	6.55	6.75	6.89	7.06	7.21	8.96	10.93	13.18	13.52	13.97	16.29	16.82	17.30	17.79	18.15	17.50	Common Shs Outst'g E	18.25
6.4	7.6	5.7	7.5	7.2	9.8	20.4	14.7	11.6	13.0	24.0	22.3	12.4	15.1	13.0	11.8	Bold figures are		Avg Ann'l P/E Ratio	12.0
.85	.92	.63	.63	.67	.80	1.38	.98	.96	.98	1.78	1.42	.75	.89	.85	.79	Value Line		Relative P/E Ratio	.90
9.7%	10.6%	12.3%	10.7%	8.5%	8.0%	8.0%	6.4%	6.9%	7.2%	6.2%	8.1%	7.5%	5.8%	6.2%	6.7%	estimates		Avg Ann'l Div'd Yield	4.9%

CAPITAL STRUCTURE as of 6/30/96

Total Debt $318.1 mill. Due in 5 Yrs $151.2 mill.
LT Debt $303.5 mill. LT Interest $22.0 mill.
Incl. $.2 mill. capitalized leases.
(LT interest earned: 3.1x; total interest coverage: 2.9x)

Pension Liability None

Pfd Stock $21.0 mill. Pfd Div'd $1.5 mill.

Common Stock 18,117,156 shs. as of 8/17/96

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
253.2	269.2	295.4	329.9	324.8	334.9	412.3	454.7	498.7	454.6	550	585	Revenues ($mill) A	700
5.9	11.2	16.2	17.4	13.9	12.4	25.9	30.5	33.9	35.6	39.0	40.0	Net Profit ($mill)	55.0
30.7%	34.6%	34.2%	31.3%	31.4%	31.1%	30.4%	29.3%	30.4%	31.0%	32.0%	32.0%	Income Tax Rate	32.0%
2.3%	4.2%	5.5%	5.3%	4.3%	3.7%	6.3%	6.7%	6.8%	7.8%	7.1%	6.8%	Net Profit Margin	7.9%
56.2%	56.8%	51.0%	51.9%	54.2%	55.3%	48.9%	53.5%	54.3%	55.7%	51.5%	53.5%	Long-Term Debt Ratio	50.5%
38.1%	37.8%	44.5%	44.7%	42.7%	37.8%	44.8%	42.6%	42.0%	41.0%	45.0%	43.5%	Common Equity Ratio	47.0%
162.7	254.6	304.5	402.0	420.4	475.0	515.2	580.9	595.8	632.2	610	620	Total Capital ($mill)	755
265.2	321.5	391.4	463.1	533.3	567.0	592.2	632.6	640.4	596.1	620	640	Net Plant ($mill)	725
6.2%	6.3%	7.3%	6.1%	5.8%	5.3%	7.4%	7.3%	7.5%	7.6%	8.5%	8.5%	% Earned Total Cap'l	9.0%
8.3%	10.2%	10.8%	9.0%	7.2%	5.8%	9.8%	11.3%	12.5%	12.7%	13.0%	14.0%	% Earned Net Worth	15.0%
8.0%	10.7%	11.2%	9.1%	7.2%	6.3%	10.2%	11.5%	12.9%	13.1%	13.5%	14.5%	% Earned Com Equity	15.0%
NMF	.6%	1.8%	.9%	NMF	NMF	.8%	1.6%	2.6%	2.8%	3.5%	3.5%	% Retained to Com Eq	6.0%
NMF	95%	85%	91%	NMF	NMF	93%	87%	81%	79%	76%	75%	% All Div'ds to Net Prof	59%

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	2.0	1.1	14.0
Other	101.2	184.8	134.4
Current Assets	103.2	185.9	148.4
Accts Payable	36.2	33.8	46.1
Debt Due	46.3	18.8	14.6
Other	32.5	53.6	61.4
Current Liab.	115.0	106.2	122.1
Fix. Chg. Cov.	245%	251%	254%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-4.0%	1.5%	4.5%
"Cash Flow"	2.0%	6.0%	4.5%
Earnings	3.0%	6.5%	8.5%
Dividends	4.5%	2.5%	2.5%
Book Value	5.0%	2.0%	5.5%

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	132.6	189.5	75.7	56.9	454.7
1994	136.1	222.8	75.6	64.2	498.7
1995	126.0	197.2	74.4	57.0	454.6
1996	159.7	233.9	94.5	61.9	550
1997	165	245	100	75.0	585

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.61	1.37	.06	d.32	1.72
1994	.62	1.37	.19	d.29	1.89
1995	.65	1.46	.07	d.25	1.93
1996	.69	1.50	.12	d.26	2.05
1997	.72	1.60	.10	d.27	2.15

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.38	.38	.38	.38	1.52
1993	.38	.38	.38	.38	1.52
1994	.38	.38	.38	.38	1.52
1995	.38	.38	.38	.38	1.52
1996	.38	.39	.39		

BUSINESS: New Jersey Resources Corp. is the holding company for New Jersey Natural Gas Co., a natural gas utility (352,377 customers at 9/30/95) in Monmouth, Ocean, and parts of other N.J. counties. Fiscal 1995 volume (38% firm, 10% interruptible industrial and electric utility, 52% off-system and capacity release): 120.8 bill. cu. ft. Also owns Paradigm Resources Corp., which through NJR Energy and Paradigm Power does oil and gas expl. and prod.; and Commercial Realty and Resources. '95 deprec. rate: 2.8%. Est'd plant age: 8 years. Has 814 utility employees, 16,300 stockholders. Officers & dir. own about 8% of common stock (1/96 Proxy). Chairman and President: Laurence M. Downes. Inc.: N.J. Addr.: 1415 Wyckoff Road, Wall, NJ 07719. Tel.: 908-938-1480.

New Jersey Resources' utility is well situated. New Jersey Natural Gas distributes in a central and southern New Jersey territory that is being transformed from a rural to a suburban character, drawing population and business from New York City and Philadelphia. The construction market is fairly strong there and the vast majority of new houses use gas for energy. In addition, there is a steady stream of conversions from oil to gas heating, spurred in part by insurance considerations. Over the past decade, NJNG has been adding customers at a 3%-3.5% annual clip, close to double the national average; conversions represent some 40% of the increase. The utility has added more than 11,000 customers in fiscal 1996 (ends September 30th), fewer than in the previous year but enough to add about 1.9 bcf to annual throughput. Spurred too by cold weather, volumes were up more than 10% in fiscal '96. New Jersey Resources is set to report record earnings of $2.05 a share for the twelve months.

The company is moving to take advantage of structural changes in the gas distribution business. Deregulation has allowed large-volume industrial customers to use the utility as a transporter of independently-purchased gas. The main advantage of the shift is that it avoids a gross receipts and franchise tax, which is imposed when gas is bought directly from a utility; the utility earns its normal margin on gas transported. Now, the advent of gas marketing companies is enabling smaller industrial and commercial customers to obtain gas in a similar manner. NJR has established its own marketing subsidiary, New Jersey Natural Energy, which enables the company to offer these options to many of its utility customers and to earn additional profits on those who switch over. NJNE expanded rapidly in fiscal '96 and should become a bigger factor in '97, helping raise New Jersey Resources' earnings to $2.15 a share.

This stock is suitable for conservative accounts. It offers a healthy dividend yield. While NJR is earmarking some of its recently generated excess cash to a stock buyback, rather than to a larger-than-normal dividend hike, this should give support to the share price.

Ben Sharav, CFA *September 27, 1996*

(A) Fiscal year ends Sept. 30th.
(B) Primary earnings. Next earnings report due late October. Excludes nonrec. gain (loss): '86, (18¢); '88, 8¢; '94, 6¢.
(C) Next div'd meeting about November 10. Goes ex about December 14. Approx. div'd payment dates: 1st of Jan., Apr., July, Oct. ■ Dividend reinvestment plan available.
(D) Includes deferred charges. In 1995: $44.3 million, $2.49/share.
(E) In millions, adjusted for stock split.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	45
Earnings Predictability	60

NICOR, INC. NYSE-GAS

RECENT PRICE	34	P/E RATIO	14.2 (Trailing: 15.2; Median: 11.0)	RELATIVE P/E RATIO	0.95	DIV'D YLD	4.0%	VALUE LINE	487

TIMELINESS 3 Average (Relative Price Perform- ance Next 12 Mos.)
SAFETY 1 Highest (Scale: 1 Highest to 5 Lowest)
BETA .70 (1.00 = Market)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
High:	16.9	15.8	16.6	16.1	23.0	23.5	23.7	25.8	31.6	29.3	28.5	33.6
Low:	9.5	10.8	10.0	11.6	14.8	17.4	19.4	19.0	24.1	21.9	21.8	25.4

Target Price Range 1999 | 2000 | 2001

1999-01 PROJECTIONS

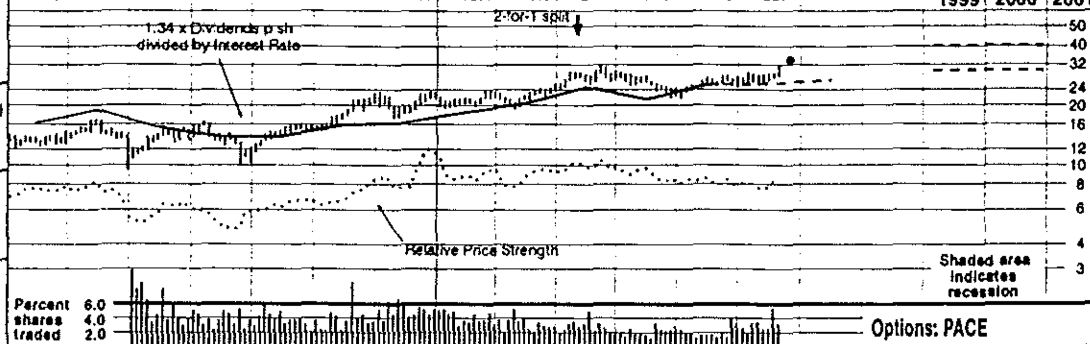
	Price	Gain	Ann'l Total Return
High	40	(+20%)	8%
Low	30	(-10%)	2%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	72	60	73
to Sell	65	73	68
Hld's(000)	23773	24317	24127



1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
42.69	48.83	43.21	42.80	44.17	37.74	30.48	24.25	25.46	27.37	26.52	26.46	28.90	31.02	31.23	29.42	*35.25*	*37.45*	Revenues per sh	*44.15*
4.16	5.42	4.51	3.90	4.07	3.34	3.15	3.03	3.72	3.79	3.86	3.92	4.14	3.80	4.11	4.19	*4.80*	*5.10*	"Cash Flow" per sh	*5.85*
2.50	2.76	1.65	.83	1.04	1.36	1.48	1.34	1.74	1.99	1.93	1.86	1.92	1.97	2.07	1.96	*2.35*	*2.45*	Earnings per sh A	*2.75*
1.34	1.42	1.48	1.52	1.52	1.54	.90	.90	.94	1.00	1.06	1.12	1.18	1.22	1.25	1.28	*1.31*	*1.37*	Div'ds Decl'd per sh B■	*1.55*
8.59	13.39	6.96	3.75	3.20	3.23	2.33	2.44	2.98	2.53	3.00	3.65	3.12	2.62	3.34	3.12	*2.65*	*2.55*	Cap'l Spending per sh	*2.55*
16.66	17.63	16.73	15.91	10.76	6.58	8.86	9.30	10.09	11.05	11.67	12.28	12.76	13.05	13.26	13.67	*14.65*	*15.50*	Book Value per sh	*18.30*
40.77	43.31	50.13	52.26	54.77	56.40	59.29	59.19	59.28	59.24	57.93	57.30	55.77	53.96	51.54	50.30	*49.50*	*48.75*	Common Shs Outst'g C	*47.00*
6.8	6.6	8.7	17.8	13.1	10.8	9.2	10.2	8.4	9.2	10.7	11.5	11.6	14.1	12.5	13.1	*Bold figures are*		Avg Ann'l P/E Ratio	*13.0*
.90	.80	.96	1.50	1.22	.88	.62	.68	.70	.70	.79	.73	.70	.83	.82	.89	*Value Line*		Relative P/E Ratio	*1.00*
7.9%	7.9%	10.3%	10.3%	11.2%	10.4%	6.6%	6.6%	6.4%	5.5%	5.1%	5.2%	5.3%	4.4%	4.8%	5.0%	*estimates*		Avg Ann'l Div'd Yield	*4.4%*

CAPITAL STRUCTURE as of 6/30/96
Total Debt $587.3 mill. Due in 5 Yrs $265.7 mill.
LT Debt $443.9 mill. LT Interest $30.6 mill.
(Total interest coverage: 5.1x)

Pension Liability None

Pfd Stock $8.7 mill. Pfd Div'd $.4 mill.
Incl. 120,746 and 55,972 shares of 4.48% & 5.0% cum. ($50.00 par), respectively.

Common Stock 50,073,401 shares as of 7/31/96

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
1806.9	1435.5	1509.3	1621.7	1536.1	1516.1	1611.6	1673.9	1609.4	1480.1	*1745*	*1825*	Revenues ($mill)	*2075*
93.0	83.7	106.1	119.9	113.5	108.6	108.3	109.4	109.5	99.8	*115*	*120*	Net Profit ($mill)	*130*
40.0%	37.9%	33.1%	35.9%	29.7%	31.1%	31.3%	33.1%	31.8%	35.3%	*35.5%*	*35.5%*	Income Tax Rate	*35.0%*
5.1%	5.8%	7.0%	7.4%	7.4%	7.2%	6.7%	6.5%	6.8%	6.7%	*6.6%*	*6.6%*	Net Profit Margin	*6.3%*
44.7%	39.9%	41.3%	36.6%	37.6%	38.7%	36.4%	38.9%	39.8%	40.2%	*41.5%*	*41.5%*	Long-Term Debt Ratio	*40.5%*
49.1%	54.9%	55.8%	61.1%	60.3%	59.4%	62.1%	59.7%	59.3%	59.0%	*58.0%*	*58.0%*	Common Equity Ratio	*59.5%*
1069.7	1002.7	1072.2	1071.3	1121.7	1184.7	1146.1	1179.5	1151.7	1165.2	*1240*	*1285*	Total Capital ($mill)	*1440*
1545.5	1577.1	1622.0	1582.6	1641.8	1732.1	1762.7	1656.2	1717.0	1779.3	*1800*	*1850*	Net Plant ($mill)	*1950*
10.4%	10.1%	11.6%	13.0%	11.8%	10.4%	11.4%	10.8%	11.0%	10.1%	*11.0%*	*11.0%*	% Earned Total Cap'l	*10.5%*
15.7%	13.9%	16.9%	17.6%	16.2%	14.9%	14.9%	15.2%	15.8%	14.3%	*16.0%*	*16.0%*	% Earned Net Worth	*15.0%*
16.6%	14.4%	17.2%	18.0%	16.6%	15.2%	15.1%	15.4%	15.9%	14.4%	*16.5%*	*16.0%*	% Earned Com Equity	*15.5%*
6.5%	4.8%	8.0%	9.1%	7.5%	6.1%	5.8%	5.9%	6.2%	5.0%	*7.0%*	*7.0%*	% Retained to Com Eq	*6.5%*
63%	69%	55%	50%	55%	60%	62%	62%	61%	65%	*56%*	*56%*	% All Div'ds to Net Prof	*56%*

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	42.3	26.4	17.8
Other	375.7	363.4	253.5
Current Assets	418.0	389.8	271.3
Accts Payable	258.4	308.4	242.4
Debt Due	296.7	248.8	143.4
Other	45.3	68.5	65.1
Current Liab.	600.4	625.7	450.9
Fix. Chg. Cov.	460%	432%	490%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-3.0%	3.0%	*6.5%*
"Cash Flow"	0.5%	1.0%	*6.5%*
Earnings	6.5%	1.0%	*5.5%*
Dividends	-2.0%	4.5%	*3.5%*
Book Value	2.0%	4.0%	*5.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	672.6	278.0	185.5	537.8	1673.9
1994	780.3	267.6	166.0	395.5	1609.4
1995	609.8	246.9	157.1	466.3	1480.1
1996	700.9	336.5	*190*	*517.6*	*1745*
1997	*740*	*350*	*195*	*540*	*1825*

Cal-endar	EARNINGS PER SHARE A D Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	.83	.30	.16	.68	1.97
1994	.95	.30	.14	.68	2.07
1995	.80	.34	.12	.70	1.96
1996	.90	.50	*.25*	*.70*	*2.35*
1997	*.95*	*.50*	*.25*	*.75*	*2.45*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.28	.295	.295	.295	1.17
1993	.295	.305	.305	.305	1.21
1994	.305	.315	.315	.315	1.25
1995	.315	.32	.32	.32	1.28
1996	.32	.33	.33		

BUSINESS: NICOR, Inc. operates one of the nation's largest gas utilities, Northern Illinois Gas Company. Serves about 1.84 million customers in northern and western Illinois. '95 gas delivered: 530.8 bcf, incl. 229.6 bcf from transportation. '95 gas sales (301.2 bcf): residential, 76.8%; commercial, 19.7%; industrial, 3.5%. Principal supplying pipelines: Natural Gas Pipeline, Midwestern Gas, and Northern Natural. Current operations incl. Tropical Shipping subsidiary. Divested inland barging, 7/86; contract drilling, 9/86; oil and gas E&P, 6/93. Has about 3,400 employees, 43,765 stockholders. Off. and dir. own about 2.9% of common; First Union Corp., 5.3% (3/96 Proxy). Chrmn., Pres. & C.E.O.: Thomas L. Fisher. Inc.: IL. Addr.: 1844 Ferry Road, Naperville, IL 60563. Tel.: 630-305-9500.

We expect a considerable advance in NICOR's 1996 share net over last year's level. The bottom-line gains can be primarily attributed to the $33.7 million general rate increase granted by the Illinois Commerce Commission earlier this year, effective April 11, 1996. Third-quarter income comparisons, in particular, stand to benefit from weather-adjustment of rates, which were also part of the April ruling. This adjustment shifts revenues from the cold heating months to warmer periods. Tropical Shipping's contribution to share earnings should improve as Caribbean hurricane-recovery supply shipments are replaced by traditional, higher-margin cargoes of tourist-related goods. This subsidiary already provides $15 million to $20 million of free cash flow, which equates to approximately one-fourth of NICOR's dividend.

In 1997 and beyond, share-earnings growth should occur at a slower, more-normal pace. Such bottom-line advances will likely be driven by the utility's sustained customer growth, as well as by its market-share dominance in the space-heating market. We also expect the company to keep tight reins on its operating and maintenance expenses. Continued strong economic conditions in the eastern Caribbean ought to allow Tropical Shipping to make its usual income contribution.

NICOR's stock price has risen more than 20% since our June report. The jump likely stems from strong operating performance throughout the company and growing investor speculation on gas and electric utility mergers. Both gas and electric utilities face increasingly deregulated environments, and mergers serve as one means of dealing with the resulting growth in competition. NICOR's solid operations and balance sheet make it a noteworthy candidate for such a combination.

This issue is well suited for income-oriented investors. Due, in part, to the aforementioned price activity, 3- to 5-year appreciation potential is below average. NICOR's healthy cash flows and financial strength, however, indicate that the company should be able to maintain an above-average dividend yield. The stock also holds our highest rank (1) for Safety.

Oscar L. Vidal *September 27, 1996*

(A) Based on primary earnings. Excludes nonrecurring items: '84, d$4.56; '85, d$3.43; '86, $1.53; '89, $.07. Excludes items from discontinued operations: '85, d78¢; '93, 4¢. Next earnings report due late October.
(B) Next div'd meeting about Dec. 15. Goes ex approx. Dec. 22. Approx. div'd payment dates: February 1, May 1, August 1, November 1.
■ Dividend reinvestment plan available.
(C) In millions, adjusted for stock split.
(D) Quarters may not add due to changes in shares outstanding.

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

N.W. NAT'L GAS NDQ-NWNG

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
24	12.6 (Trailing: 12.9 Median: 12.0)	0.84	5.0%	488

TIMELINESS 3 Average (Relative Price Perform-ance Next 12 Mos.)
SAFETY 2 Above Average (Scale: 1 Highest to 5 Lowest)
BETA .45 (1.00 = Market)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
High:	13.5	16.8	16.8	14.5	17.9	17.9	22.3	22.7	25.8	24.3	22.8	24.5
Low:	10.7	12.4	11.2	12.8	12.5	13.9	16.5	17.2	19.0	18.8	18.3	20.8

Target Price Range 1999 | 2000 | 2001

1999-01 PROJECTIONS

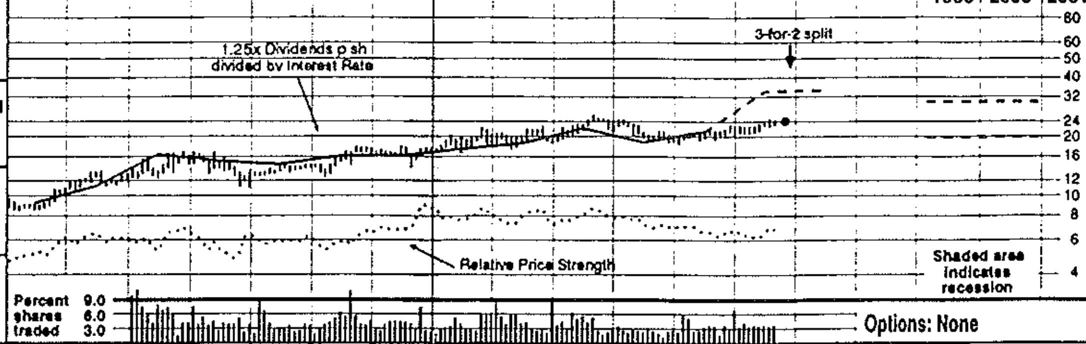
	Price	Gain	Ann'l Total Return
High	30	(+25%)	10%
Low	20	(-15%)	1%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	37	33	30
to Sell	23	26	26
Hld's(000)	6187	6376	6515



1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01[E]
28.26	29.50	29.61	27.54	29.95	27.87	20.59	19.69	17.39	15.22	17.02	16.74	14.10	18.15	18.30	16.02	*17.20*	*17.80*	Revenues per sh	*21.00*
1.79	2.00	2.05	2.07	2.26	2.45	2.27	2.38	2.79	2.85	3.22	2.57	--	3.74	3.50	3.41	*3.60*	*3.75*	"Cash Flow" per sh	*4.50*
.93	1.11	1.15	1.07	1.23	1.40	1.16	1.20	1.33	1.58	1.62	.67	.74	1.74	1.63	1.61	*1.85*	*1.90*	Earnings per sh A	*2.20*
.73	.83	.85	.87	.92	.97	1.02	1.04	1.05	1.07	1.10	1.13	1.15	1.17	1.17	1.18	*1.20*	*1.22*	Div'ds Decl'd per sh B■	*1.35*
2.75	2.62	2.08	1.87	2.46	2.54	2.19	2.17	2.82	3.36	3.85	3.58	3.73	3.61	4.23	3.02	*3.50*	*3.70*	Cap'l Spending per sh	*3.70*
8.63	9.02	9.25	9.42	9.75	10.23	10.44	10.92	11.25	12.04	12.61	12.23	12.41	13.08	13.63	14.55	*25.25*	*16.30*	Book Value per sh C	*18.75*
11.87	12.18	12.69	13.22	13.94	14.79	15.29	15.69	15.96	17.14	17.41	17.68	19.46	19.77	20.13	22.24	*22.65*	*23.05*	Common Shs Outst'g D	*24.00*
9.9	6.8	6.6	7.9	7.6	8.6	12.3	11.8	10.2	9.8	10.2	28.1	27.0	12.9	13.0	12.9	*Bold figures are*		Avg Ann'l P/E Ratio	*10.5*
1.31	.83	.73	.67	.71	.70	.83	.79	.85	.74	.76	1.79	1.64	.76	.85	.86	*Value Line*		Relative P/E Ratio	*.80*
7.9%	10.9%	11.3%	10.3%	9.8%	8.0%	7.1%	7.3%	7.7%	6.9%	6.7%	5.9%	5.7%	5.2%	5.5%	5.7%	*estimates*		Avg Ann'l Div'd Yield	*5.3%*

CAPITAL STRUCTURE as of 6/30/96
Total Debt $306.8 mill. Due in 5 Yrs $104.0 mill.
LT Debt $253.5 mill. LT Interest $21.0 mill.
Incl. $11.9 mill. 7¼% debs. due 3/1/12, each conv. into 33.5 com. shs. at $29.85.
(LT interest earned: 4.1x; total interest coverage: 3.9x)

Pension Liability None

Pfd Stock $38.7 mill. Pfd Div'd $2.7 mill.
Incl. 65,323 shs. $2.38 (Red. Val. $27.38) ea. cv. into 2.48 shs. at $10.10 a sh.
Common Stock 22,315,022 shs.
(adj. for 3-for-2 split 9-6-96.)

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
314.9	308.9	277.6	260.9	296.3	295.9	274.4	358.7	368.3	356.3	*390*	*410*	Revenues ($mill)	*500*
19.6	20.5	23.7	28.4	30.7	14.4	15.8	37.7	35.5	38.1	*44.0*	*46.0*	Net Profit ($mill)	*55.0*
47.7%	41.9%	35.4%	35.7%	30.7%	13.9%	30.6%	37.0%	36.6%	36.8%	*36.0%*	*36.0%*	Income Tax Rate	*36.0%*
6.2%	6.6%	8.5%	10.9%	10.4%	4.9%	5.8%	10.5%	9.6%	10.7%	*11.3%*	*11.2%*	Net Profit Margin	*11.0%*
44.3%	45.5%	45.8%	47.9%	46.1%	50.6%	46.1%	47.5%	47.9%	43.5%	*44.5%*	*44.5%*	Long-Term Debt Ratio	*46.0%*
47.9%	48.1%	45.1%	44.8%	47.0%	43.2%	43.9%	45.0%	45.1%	50.3%	*50.0%*	*50.5%*	Common Equity Ratio	*50.0%*
333.3	356.3	398.0	460.8	466.8	500.3	550.3	575.2	607.7	643.3	*690*	*745*	Total Capital ($mill)	*900*
358.2	374.6	439.3	505.4	545.6	553.0	575.0	606.9	654.3	697.2	*720*	*765*	Net Plant ($mill)	*900*
8.3%	8.1%	8.1%	8.3%	9.0%	5.1%	5.0%	8.5%	7.6%	7.7%	*8.0%*	*8.0%*	% Earned Total Cap'l	*8.0%*
10.6%	10.6%	11.0%	11.8%	12.2%	5.8%	5.3%	12.5%	11.2%	10.5%	*11.5%*	*11.0%*	% Earned Net Worth	*11.5%*
11.0%	10.9%	11.8%	12.4%	12.8%	5.5%	5.5%	13.2%	11.8%	10.9%	*12.0%*	*11.5%*	% Earned Com Equity	*11.5%*
1.3%	1.5%	2.6%	4.0%	4.1%	NMF	NMF	4.4%	3.3%	3.0%	*4.0%*	*4.0%*	% Retained to Com Eq	*4.5%*
89%	88%	81%	71%	71%	NMF	NMF	70%	74%	74%	*68%*	*68%*	% All Div'ds to Net Prof	*65%*

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	8.1	2.9	3.4
Other	87.4	52.6	54.2
Current Assets	95.5	55.5	57.6
Accts Payable	48.5	30.2	36.2
Debt Due	54.7	44.2	53.3
Other	22.9	24.2	23.8
Current Liab.	126.1	98.6	113.3
Fix. Chg. Cov.	237%	275%	320%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-5.0%	1.0%	3.0%
"Cash Flow"	4.5%	4.0%	4.0%
Earnings	3.0%	2.0%	4.5%
Dividends	2.5%	2.0%	2.0%
Book Value	3.5%	3.0%	4.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	128.7	61.8	47.5	120.7	358.7
1994	128.5	66.5	48.5	124.8	368.3
1995	125.4	71.0	48.6	111.3	356.3
1996	137.6	71.9	*51.0*	*129.5*	*390*
1997	*145*	*75.0*	*55.0*	*135*	*410*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	1.21	.10	d.27	.70	1.74
1994	.91	.09	d.23	.86	1.63
1995	.88	.13	d.23	.86	F1.61
1996	1.02	.21	*d.11*	*.73*	*1.85*
1997	*1.08*	*.17*	*d.12*	*.77*	*1.90*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.286	.287	.286	.287	1.15
1993	.287	.293	.293	.293	1.17
1994	.293	.293	.293	.293	1.17
1995	.293	.293	.293	.30	1.18
1996	.30	.30	.30		

BUSINESS: Northwest Natural Gas Co. distributes natural gas at retail to 90 communities, 416,005 customers, in Oregon (96% of revenues) and in southwest Washington state. Principal cities served: Portland and Eugene, OR; Vancouver, WA. Service area population: 2.4 million (77% in OR). Company buys nearly all of its gas supply from Canadian and U.S. producers; has firm transportation rights on Northwest Pipeline system to bring gas to market. Has local underground storage system. Revenue mix: residential & commercial 76%; industrial, 16%; transportation and other, 8%. Employs 1,288. Has 12,293 common shrhldrs. Chief Exec. Off.: R.L. Ridgley. President: R.G. Reiten. Incorp.: Oregon. Address: 220 N.W. Second Ave., Portland, OR 97209. Telephone: 503-226-4211.

Northwest Natural Gas is running its business on a smooth course. The Pacific Northwest economy is humming along nicely as high-tech industrial development in the region increases employment and stimulates population growth. Importantly, these economic elements are driving a high rate of construction activity, which is the foundation for utility growth. During the past several years, with natural gas in the region priced more competitively vis a vis the cost of electricity and fuel oil, NNG has been connecting its mains to most of the new construction. This year, it is getting 90% of the newly built homes and commercial/industrial facilities in the service area. Notably, construction activity is contributing only about two-thirds of NNG's customer additions in the high-margin, space-heating category; the rest is coming from the conversion of fuel-burning facilities to gas heat. In all, the customer roll continues to grow very fast at more than 5% a year. And this distributor still sells to only 40%-45% of the local space-heating market, leaving it ample room for further market penetration.

The stock is a good-quality income vehicle. NNG hasn't had a formal rate increase since 1989 to recover investment in gas plant. In a practical sense, the utility hasn't needed higher tariffs. Back then, regulators set a 13.25% return on equity. But though that rate order doesn't cover the major plant additions made in the ensuing years, the fast-growing customer base (plus a strong assist this year from colder weather) has generated enough revenue to cover fixed costs adequately, leaving a satisfactory profit for shareholders. The utility's overall return on equity in 1996 may be only a little more than 11.5%. But that would exceed today's industry norm, which is in a range of 11.0%-11.5%. In effect, NNG is slightly better off at this juncture without a rate order and can maintain a growing dividend. The current yield matches the gas-equity average.

NNG has modified its accounting to shift more of the pipeline's fixed demand charges to the coldest months of the year when revenues are highest; this change has no impact on annual earnings. Also, all per-share data are adjusted for the 3-for-2 split on September 6th.

Gerald Holtzman *September 27, 1996*

(A) Based on average shares outstanding. Excludes nonrecurring gain: '87, 27¢. Next earnings report due late Oct. (B) Next dividend meeting about Oct. 3. Goes ex about Oct. 18. Div'd payment dates: about the 15th of February, May, August, November. ■ Dividend reinvestment plan available. (C) Includes intangible assets. In '95: $43.5 mill., $1.95/sh. (D) In millions. (E) Assumes full dilution 3 to 5 years hence. (F) Quarterly earnings do not sum to year's total due to issuance of additional shares.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	55
Earnings Predictability	20

ONEOK INC. NYSE-OKE

RECENT PRICE	28	P/E RATIO	14.1 (Trailing: 13.6 / Median: 12.0)	RELATIVE P/E RATIO	0.94	DIV'D YLD	4.4%	VALUE LINE	489

TIMELINESS 3 Average (Relative Price Performance Next 12 Mos.)
SAFETY 3 Average (Scale: 1 Highest to 5 Lowest)
BETA .80 (1.00 = Market)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
High:	16.9	17.9	22.0	9.9	17.0	16.5	16.9	18.9	26.3	20.3	24.8	28.9
Low:	13.9	13.6	7.3	4.8	9.3	11.9	12.5	14.0	17.6	15.8	17.1	20.0

Target Price Range 1999 | 2000 | 2001

1999-01 PROJECTIONS

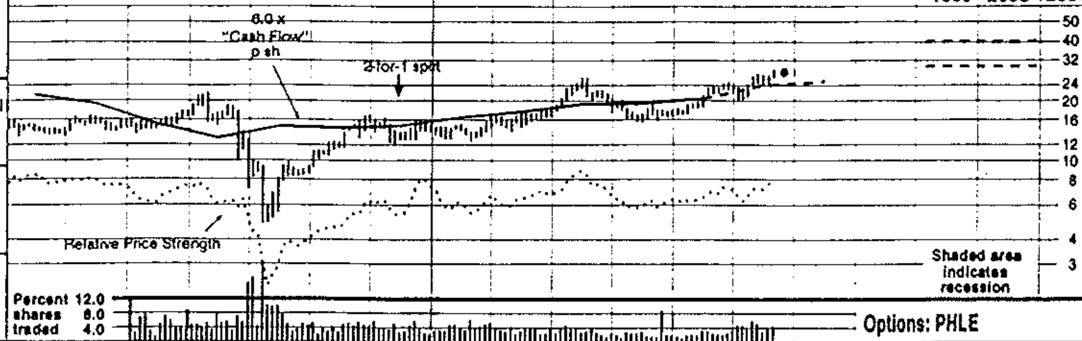
	Price	Gain	Ann'l Total Return
High	40	(+45%)	13%
Low	30	(+5%)	6%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	57	55	65
to Sell	42	52	49
Hld's(000)	12453	12322	13043



1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
41.10	51.73	47.27	42.76	44.91	38.88	26.68	20.93	20.37	22.43	25.09	25.90	25.43	29.63	29.69	35.16	*43.50*	*44.35*	Revenues per sh A	*51.80*
2.94	3.35	3.86	2.79	3.58	3.21	2.56	2.18	2.48	2.45	2.51	2.77	2.97	3.23	3.25	3.43	*4.25*	*4.40*	"Cash Flow" per sh	*5.50*
1.91	2.21	2.44	1.26	1.73	1.50	1.24	.68	.76	1.29	1.21	1.33	1.21	1.43	1.34	1.58	*2.00*	*2.05*	Earnings per sh B	*2.60*
.95	1.05	1.15	1.20	1.24	1.28	1.28	1.28	.64	.48	.76	.82	.96	1.06	1.11	1.12	1.18	*1.22*	Div'ds Decl'd per sh C■	*1.45*
3.09	5.02	7.65	3.10	2.43	2.81	2.66	1.17	.87	1.55	2.64	4.32	2.62	3.24	2.77	2.77	*2.00*	*2.20*	Cap'l Spending per sh	*3.50*
11.11	12.28	14.27	14.25	14.70	14.81	12.36	11.22	11.34	12.11	12.51	13.03	13.28	13.63	13.88	14.38	*15.25*	*15.90*	Book Value per sh D	*18.75*
20.92	20.98	23.68	24.76	26.02	26.99	27.62	28.04	28.05	27.57	26.63	26.62	26.63	26.63	26.69	27.02	*27.25*	*27.40*	Common Shs Outst'g E	*28.00*
6.1	8.0	5.8	10.5	8.5	10.0	12.2	25.8	12.7	8.5	12.0	10.8	12.9	14.3	14.0	11.9	*12.1*		Avg Ann'l P/E Ratio	*13.5*
.81	.97	.64	.69	.79	.81	.83	1.73	1.05	.64	.89	.69	.78	.84	.92	.81	*.75*		Relative P/E Ratio	*1.05*
8.1%	5.9%	8.2%	9.1%	8.4%	8.5%	8.5%	7.3%	6.7%	4.3%	5.2%	5.7%	6.2%	5.2%	5.9%	5.9%	4.9%		Avg Ann'l Div'd Yield	*4.1%*

CAPITAL STRUCTURE as of 5/31/96
Total Debt $392.1 mill. Due in 5 Yrs $121.0 mill.
LT Debt $336.8 mill. LT Interest $30.5 mill.
(total interest coverage: 4.5x)
(44% of Cap'l)

Pension Liability $42.3 in '95 vs. $48.6 in '94

Pfd Stock $9.0 mill. Pfd Div'd $.43 mill.
(1% of Cap'l)

Common Stock 27,218,343 shs. (55% of Cap'l)

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
736.8	587.0	571.4	618.3	668.0	689.5	677.1	789.1	792.4	949.9	*1185*	*1215*	Revenues ($mill) A	*1450*
19.1%	20.4%	22.1%	18.7%	16.8%	17.8%	19.3%	18.3%	18.0%	16.4%	*16.0%*	*16.0%*	Operating Margin	*16.5%*
36.5	42.1	48.3	31.2	34.3	38.2	46.8	48.0	50.9	50.4	*62.0*	*65.0*	Depreciation ($mill)	*80.0*
34.5	19.4	21.7	36.6	33.0	35.9	32.6	38.4	36.2	42.8	*55.0*	*56.0*	Net Profit ($mill)	*73.0*
46.8%	49.2%	13.9%	39.1%	38.0%	37.8%	36.7%	35.1%	36.8%	37.2%	*38.0%*	*38.0%*	Income Tax Rate	*38.0%*
4.7%	3.3%	3.8%	5.9%	4.9%	5.2%	4.8%	4.9%	4.6%	4.5%	*4.6%*	*4.6%*	Net Profit Margin	*5.0%*
73.0	66.5	d56.6	d56.9	d12.7	d6.8	56.5	42.4	20.8	20.1	*45.0*	*50.0*	Working Cap'l ($mill)	*65.0*
313.7	287.0	232.2	144.5	216.2	282.9	381.0	375.9	362.9	350.9	*340*	*360*	Long-Term Debt ($mill)	*450*
350.3	323.7	327.2	342.8	342.2	355.8	362.6	372.1	379.5	397.6	*425*	*445*	Net Worth ($mill)	*535*
8.1%	5.8%	6.9%	10.1%	7.9%	7.7%	6.6%	7.5%	7.1%	7.8%	*9.0%*	*9.0%*	% Earned Total Cap'l	*9.5%*
9.8%	6.0%	6.6%	10.7%	9.6%	10.1%	9.0%	10.3%	9.5%	10.8%	*13.0%*	*12.5%*	% Earned Net Worth	*13.5%*
NMF	NMF	1.0%	6.9%	3.8%	4.0%	1.9%	2.7%	1.7%	3.2%	*5.5%*	*5.0%*	% Retained to Com Eq	*5.5%*
103%	NMF	85%	38%	62%	62%	80%	75%	83%	71%	*59%*	*60%*	% All Div'ds to Net Prof	*56%*

CURRENT POSITION ($MILL.)	1994	1995	5/31/96
Cash Assets	4.5	12.5	36.0
Receivables	49.1	81.8	103.3
Inventory (Avg Cst)	94.5	82.1	63.9
Other	21.2	17.7	41.5
Current Assets	169.3	194.1	244.7
Accts Payable	44.2	58.2	91.7
Debt Due	64.1	68.2	55.3
Other	40.2	47.6	44.8
Current Liab.	148.5	174.0	191.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-3.0%	7.0%	*8.5%*
"Cash Flow"	.5%	6.0%	*8.5%*
Earnings	-0.5%	6.0%	*10.0%*
Dividends	-1.0%	12.0%	*4.5%*
Book Value	-0.5%	3.0%	*5.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Nov.30	Feb.28	May 31	Aug.31	Full Fiscal Year
1993	159.5	313.9	187.5	128.2	789.1
1994	177.2	295.4	190.5	129.3	792.4
1995	166.3	287.4	304.5	191.7	949.9
1996	238.5	464.7	289.7	*192.1*	*1185*
1997	*240*	*455*	*310*	*210*	*1215*

Fiscal Year Ends	EARNINGS PER SHARE A B Nov.30	Feb.28	May 31	Aug.31	Full Fiscal Year
1993	.22	1.17	.10	d.06	1.43
1994	.29	.98	.21	d.14	1.34
1995	.29	1.05	.33	d.09	1.58
1996	.31	1.42	.42	*d.15*	*2.00*
1997	*.34*	*1.38*	*.45*	*d.12*	*2.05*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.25	.25	.25	.25	1.00
1993	.27	.27	.27	.27	1.08
1994	.28	.28	.28	.28	1.12
1995	.28	.28	.28	.29	1.13
1996	.29	.30	.30		

BUSINESS: ONEOK Inc. engages in the transmission and distribution of natural gas (87% of assets, 86% of net operating income in 1995) to 724,000 customers in 294 communities in Oklahoma. Also produces oil and gas for its own account (est'd pretax present value of reserves 8/31/95: $64.2 million) and natural gas liquids. Utility revenue mix: residential and commercial, 67%; industrial, 19%; gas transportation service and other, 14%. Has five underground storage facilities. Est'd labor costs. 13% of revenues. Has 2,003 employees., 11,563 common shareholders. Officers and directors own 2% of the common shares; institutions, 12.5% (12/95 proxy). Chrmn. & C.E.O.: L.W. Brummett. Incorp.: Delaware. Address: 100 West Fifth St., Tulsa, OK 74103. Telephone: 918-588-7000.

More responsive regulation seems to have given ONEOK's utility an operating upgrade. The company likely lifted share earnings for fiscal 1996 (ended August 31st) off the long plateau they had been trending along since 1989. The change of pace was propelled by an improved rate design accorded the Oklahoma gas utility in June 1995. Lower tariffs for industrial users give the gas system a pricing advantage, enabling it to hold on to these high-volume customers and to sign up new ones in the face of competition from other gas marketers. ONEOK may recover its fixed investment in gas plant through an increase in residential tariffs. This increase, however, has been balanced by lower charges for gas supply, an adjustment on which the utility records no gain or loss. Regulators, in the most recent rate order, haven't stipulated an allowed return on shareholder capital. But state oversight will make certain that system earnings are fair to its captive customers.

Nonregulated activities have gained more profit potential. ONEOK has developed a marketing operation that gives it the opportunity to turn a profit as a non-utility dealer in gas supplies. The company buys gas from producers in the field and resells it to customers in local or interstate markets at a markup for profit. Prices are set by the marketplace in a competitive environment. In fiscal '96, earnings from gas marketing rose sharply, helped by a jump in prices at the wellhead. The volatility of field prices, often influenced by weather, fogs the outlook for gas marketing in fiscal 1997. Still, ONEOK is working to maximize its long-term earnings potential from this business by turning it into an integrated operation, that is, by acquiring gas reserves situated near its own pipeline system.

ONEOK's ambitions in the nonutility arena accord this stock, traditionally an income vehicle, some speculative appeal. The issue, now valued at a record high, is apt to perform as well as the year-ahead market. Its 3- to 5-year appreciation potential is hard to call. But with the utility serving as ONEOK's earnings mainstay, dividend growth should help to underpin the price of the shares, thus balancing the risk of holding the issue long term.

Gerald Holtzman *September 27, 1996*

(A) Fiscal year ends Aug. 31st. (B) Based on average shares outstanding. Excl. nonrecurring charge: '85, 10¢. Next earnings report due late Dec. (C) Next dividend meeting about Oct. 17. Goes ex about Oct. 23. Dividend payment dates: about the 15th of February, May, August, November. ■ Dividend reinvestment plan available. (D) Includes intangibles and deferred debits. In '95: $168.9 mill., $6.25/sh. (E) In millions adjusted for stock split.

Company's Financial Strength	B+
Stock's Price Stability	80
Price Growth Persistence	40
Earnings Predictability	70

PEOPLES ENERGY NYSE-PGL

RECENT PRICE 35 | P/E RATIO 13.2 (Trailing: 12.4 Median: 12.0) | RELATIVE P/E RATIO 0.88 | DIV'D YLD 5.4% | VALUE LINE 491

TIMELINESS 3 Average (Relative Price Performance Next 12 Mos.)
SAFETY 1 Highest (Scale: 1 Highest to 5 Lowest)
BETA .80 (1.00 = Market)

1999-01 PROJECTIONS	Price	Gain	Ann'l Total Return
High	40	(+15%)	8%
Low	35	(Nil)	5%

Insider Decisions

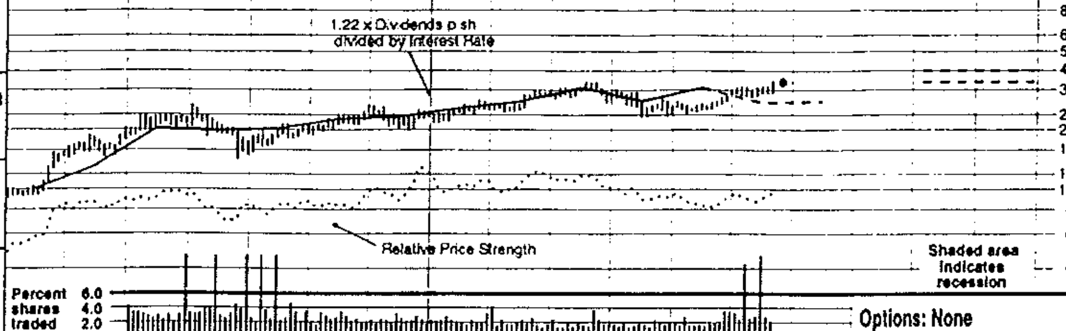
	N	O	J	F	M	A	M	J	J
to Buy	0	0	0	0	1	0	1	0	0
Options	0	0	0	5	0	0	0	0	0
to Sell	0	0	0	0	1	0	0	0	0

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	49	63	69
to Sell	57	54	54
Hld's(000)	11180	11439	12654

High:	20.4	23.8	26.8	21.5	26.8	26.5	28.3	31.6	35.0	32.1	32.0	36.1
Low:	14.5	18.6	14.3	15.4	18.9	20.0	21.8	24.5	27.5	23.4	24.3	29.6

Target Price Range 1999 | 2000 | 2001



1980	1981[F]	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
42.70	44.80	50.73	47.77	52.71	50.80	46.20	36.13	34.29	36.42	35.63	33.69	31.54	36.09	36.70	29.60	*34.35*	*36.30*	Revenues per sh A	*42.60*
2.48	2.97	2.87	2.62	3.37	3.71	3.65	3.04	3.75	3.92	3.74	3.73	3.67	3.85	3.99	3.68	*4.85*	*4.60*	"Cash Flow" per sh	*5.55*
1.23	1.66	1.54	1.25	2.07	2.34	2.27	1.66	2.31	2.39	2.07	2.05	2.06	2.11	2.13	1.78	*2.80*	*2.50*	Earnings per sh B	*3.20*
--	--	1.00	1.00	1.03	1.17	1.29	1.41	1.50	1.58	1.65	1.71	1.76	1.78	1.80	1.80	*1.82*	*1.88*	Div'ds Decl'd per sh C ■	*2.08*
1.96	1.92	2.20	2.14	2.11	2.33	2.78	2.83	2.66	4.15	3.15	3.10	3.40	3.77	2.50	2.75	*2.85*	*3.30*	Cap'l Spending per sh	*3.30*
10.08	10.30	10.71	10.93	11.88	13.07	14.02	14.27	15.09	16.20	16.61	16.95	17.72	18.02	18.39	18.38	*19.35*	*20.00*	Book Value per sh D	*23.05*
28.78	29.37	30.40	31.02	32.03	32.31	32.43	32.51	32.57	32.62	32.70	32.76	34.77	34.88	34.87	34.91	*34.95*	*35.00*	Common Shs Outst'g E	*35.05*
--	--	5.3	7.5	4.8	6.9	9.0	13.0	7.8	7.9	11.2	11.8	13.1	15.0	13.3	14.7	Bold figures are		Avg Ann'l P/E Ratio	*12.0*
--	--	.58	.63	.45	.56	.61	.87	.65	.60	.83	.75	.79	.89	.87	.98	Value Line		Relative P/E Ratio	*.90*
--	--	12.2%	10.7%	10.3%	7.3%	6.3%	6.5%	8.3%	8.4%	7.1%	7.0%	6.5%	5.6%	6.3%	6.9%	estimates		Avg Ann'l Div'd Yield	*5.4%*
						1498.1	1174.6	1116.8	1188.0	1165.2	1103.7	1096.8	1258.9	1279.5	1033.4	*1200*	*1270*	Revenues ($mill) A	*1500*
						77.8	56.8	78.0	80.5	69.7	68.5	71.6	74.1	74.4	62.2	*100*	*90.0*	Net Profit ($mill)	*115*
						48.7%	45.8%	37.5%	34.0%	34.9%	33.8%	31.9%	33.6%	30.1%	34.4%	*34.0%*	*34.0%*	Income Tax Rate	*34.0%*
						5.2%	4.8%	7.0%	6.8%	6.0%	6.2%	6.5%	5.9%	5.8%	6.0%	*8.3%*	*7.1%*	Net Profit Margin	*7.7%*
						41.9%	45.2%	46.9%	45.0%	47.1%	46.3%	43.8%	45.7%	49.4%	49.2%	*51.0%*	*51.0%*	Long-Term Debt Ratio	*51.0%*
						53.9%	51.2%	50.1%	52.5%	51.0%	52.1%	55.1%	54.3%	50.6%	50.8%	*49.0%*	*49.0%*	Common Equity Ratio	*49.0%*
						844.2	906.6	960.9	1007.0	1066.1	1065.0	1118.7	1156.5	1267.5	1263.6	*1380*	*1435*	Total Capital ($mill)	*1645*
						913.3	960.2	1000.0	1085.1	1134.0	1181.2	1243.6	1318.0	1341.9	1373.1	*1405*	*1455*	Net Plant ($mill)	*1580*
						10.9%	8.0%	9.8%	9.9%	8.5%	8.5%	8.4%	8.1%	7.8%	7.0%	*9.5%*	*8.5%*	% Earned Total Cap'l	*9.0%*
						15.9%	11.4%	15.0%	14.5%	12.4%	12.0%	11.4%	11.8%	11.6%	9.7%	*15.0%*	*13.0%*	% Earned Net Worth	*14.0%*
						16.2%	11.6%	15.3%	14.8%	12.4%	12.1%	11.4%	11.7%	11.6%	9.7%	*15.0%*	*13.0%*	% Earned Com Equity	*14.0%*
						7.0%	1.7%	5.5%	5.1%	2.6%	2.1%	1.9%	1.9%	1.9%	NMF	*5.5%*	*3.5%*	% Retained to Com Eq	*5.0%*
						59%	86%	65%	66%	80%	83%	84%	84%	84%	101%	*65%*	*75%*	% All Div'ds to Net Prof	*65%*

CAPITAL STRUCTURE as of 6/30/96

Total Debt $531.1 mill. Due in 5 Yrs $20.9 mill.

LT Debt $527.1 mill. LT Interest $48.0 mill.
(LT interest earned: 3.1x; total interest coverage: 3.0x)

Pension Liability None

Pfd Stock None

Common Stock 34,951,938 shs. as of 7/31/96

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	78.3	177.3	82.0
Other	318.9	205.6	276.4
Current Assets	397.2	382.9	358.4
Accts Payable	109.1	102.4	120.5
Debt Due	4.9	4.9	4.0
Other	154.0	176.7	179.0
Current Liab.	268.0	284.0	303.5
Fix. Chg. Cov.	279%	255%	260%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-4.0%	-1.0%	*4.0%*
"Cash Flow"	1.5%	--	*6.0%*
Earnings	.5%	-2.5%	*8.0%*
Dividends	5.5%	2.5%	*2.0%*
Book Value	4.5%	2.5%	*4.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	376.1	522.5	224.3	136.0	1258.9
1994	379.3	574.6	206.8	118.8	1279.5
1995	307.1	424.4	187.2	114.7	1033.4
1996	317.6	498.6	248.5	*135.3*	*1200*
1997	*340*	*540*	*250*	*140*	*1270*

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.89	1.45	.14	d.37	2.11
1994	1.12	1.39	.07	d.45	2.13
1995	.72	1.31	.13	d.38	1.78
1996	1.03	1.77	.41	*d.41*	*2.80*
1997	*1.05*	*1.60*	*.25*	*d.40*	*2.50*

Cal-endar	QUARTERLY DIVIDENDS PAID C ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.44	.44	.44	.44	1.76
1993	.44	.445	.445	.445	1.78
1994	.445	.45	.45	.45	1.80
1995	.45	.45	.45	.45	1.80
1996	.45	.46	.46		

BUSINESS: Peoples Energy Corporation distributes natural gas via its utility subsidiaries, Peoples Gas Light & Coke Co. (840,000 customers at 9/30/95) and North Shore Gas Co. (132,700), in Chicago and northeastern Illinois. Fiscal 1995 volume: 264.1 bill. cu. ft.: residential, 50%; commercial, 8%; industrial, 2%; transport, 40%. Main supplier is Natural Gas Pipeline Co. of America. Purchased gas costs and revenue taxes accounted for 63% of gas revenues in fiscal '95. 1995 depreciation rate: 3.2%. Est'd plant age: 10 yrs. Has 3,233 employees, 34,165 shareholders. Directors own 1% of common stock (1/96 Proxy). Chairman and C.E.O.: Richard E. Terry. Pres.: J. Bruce Hasch. Incorporated: Illinois. Address: 122 South Michigan Avenue, Chicago, IL 60603. Telephone: 312-431-4000.

Things have been going right for Peoples Energy in fiscal 1996 (ends September 30th). The utilities both won rate increases—3.3%, or $30.8% (annualized), for Peoples Gas and 3.7%, or $5.6 million, for the smaller North Shore Gas—which took effect last November. In addition, the utilities benefited from cold weather in their Chicago and adjacent service territories. Temperatures (in utility degree-days) were 26% colder than normal in the third quarter and 20% colder for the nine months. Consequently, systemwide gas volumes were up about 17%. And because the utilities' rates are not adjusted for weather, the increased margin flows through to the bottom line. Finally, the company benefited by 4¢ a share from the termination of certain gas-storage contracts. All told, Peoples Energy may have to try hard to avoid earning more than $2.80 a share for the year.

The company has key strengths. Peoples Gas' Chicago territory is strategically situated with access to five interstate pipelines. The utility, as well as North Shore, obtains gas at low cost. Hence, the utilities' prices are among the lowest in the industry, and they win the overwhelming share of residential and commercial heating business. Peoples Gas is also retaining its industrial business by offering gas transportation options. These favorable factors should enable Peoples Energy to earn $2.50 a share in the new fiscal year.

Peoples' growth rate, however, is low. Peoples Gas serves a mature market. And its huge market share means that it has little opportunity to gain business through conversions from other energy sources. North Shore Gas is enjoying growth in its suburban territory, but that barely counters declines in the much larger flagship utility. Peoples Energy is making some inroads outside its core utility businesses, but in related fields. For example, a subsidiary is offering energy-management services to large customers, and Peoples is also involved in marketing natural gas-powered vehicles.

This stock is a good choice for income-oriented accounts. It ranks Highest for Safety and offers a healthy, secure dividend yield.

Ben Sharav, CFA *September 27, 1996*

(A) Fiscal year ends Sept. 30th.
(B) Based on average shares outstanding. Excludes acct'g gain: '89, 30¢. Next earnings report due late October.
(C) Next dividend meeting about November 4. Goes ex about December 18. Dividend payment dates: about 15th of Jan., Apr., July, Oct. ■ Dividend reinvestment plan available.
(D) Includes deferred charges. In '95: $16.5 mill., 47¢/sh.
(E) In millions.
(F) Figures for 1980 and 1981 are pro forma.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	55
Earnings Predictability	65

PIEDMONT NAT'L. NYSE-PNY	RECENT PRICE 25	P/E RATIO 15.5 (Trailing: 13.6 / Median: 12.0)	RELATIVE P/E RATIO 1.03	DIV'D YLD 4.8%	VALUE LINE 492

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
High:	9.2	11.6	13.1	12.6	14.8	14.9	16.9	20.4	26.4	23.4	24.9	25.8
Low:	7.4	8.5	8.8	9.6	11.5	12.8	12.9	15.4	18.8	18.0	18.3	20.5

Target Price Range 1999 | 2000 | 2001

TIMELINESS 4 Below Average
(Relative Price Performance Next 12 Mos.)

SAFETY 2 Above Average
(Scale: 1 Highest to 5 Lowest)

BETA .65 (1.00 = Market)

1999-01 PROJECTIONS

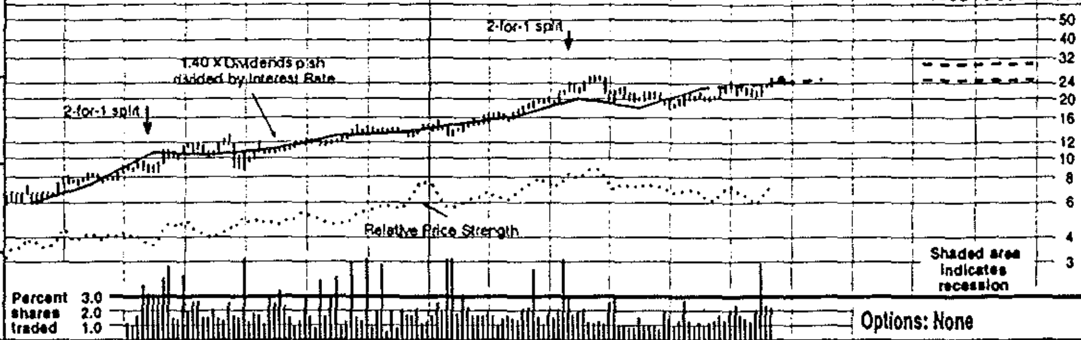
	Price	Gain	Ann'l Total Return
High	30	(+20%)	9%
Low	25	(Nil)	5%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	38	39	35
to Sell	27	33	30
Hld's(000)	5656	5883	5698



1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
18.43	25.27	24.89	25.93	27.04	28.15	24.01	23.04	19.62	20.25	18.84	16.64	17.83	21.14	21.65	17.52	*23.20*	*23.95*	Revenues per sh A	*24.35*
1.18	1.19	1.05	1.38	1.53	1.17	1.31	1.74	1.75	1.92	1.94	1.56	2.15	2.28	2.26	2.51	*2.75*	*2.90*	"Cash Flow" per sh	*3.20*
.83	.70	.58	.91	1.04	.60	.77	1.10	1.19	1.21	1.22	.89	1.40	1.45	1.35	1.45	*1.65*	*1.70*	Earnings per sh B	*1.90*
.39	.43	.46	.48	.54	.58	.60	.65	.72	.79	.83	.87	.91	.95	1.01	1.09	*1.16*	*1.22*	Div'ds Decl'd per sh C■	*1.36*
1.45	2.02	1.57	1.18	1.44	2.13	2.39	2.85	3.74	3.11	3.24	2.75	2.81	3.16	3.90	3.44	*3.40*	*3.45*	Cap'l Spending per sh	*3.45*
4.74	5.70	5.42	5.80	6.30	6.41	6.99	7.49	8.25	8.73	9.15	9.65	10.27	10.90	11.36	12.31	*13.20*	*14.10*	Book Value per sh D	*16.35*
12.05	12.16	12.69	13.36	13.96	14.37	17.40	17.87	20.33	20.78	21.43	24.73	25.80	26.15	26.58	28.84	*29.50*	*30.25*	Common Shs Outst'g E	*33.50*
5.7	7.4	7.4	5.7	6.3	13.2	12.1	10.2	9.1	10.3	11.3	16.3	12.3	15.4	15.7	13.8	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*14.0*
.76	.90	.82	.48	.59	1.07	.82	.68	.76	.78	.84	1.04	.75	.91	1.03	.94			Relative P/E Ratio	*1.10*
8.3%	8.3%	10.8%	9.4%	8.2%	7.4%	6.4%	5.8%	6.7%	6.3%	6.0%	6.0%	5.3%	4.3%	4.8%	5.4%			Avg Ann'l Div'd Yield	*5.1%*

CAPITAL STRUCTURE as of 7/31/96
Total Debt $397.0 mill. Due in 5 Yrs $77.0 mill.
LT Debt $357.0 mill. LT Interest $26.8 mill.
(Total interest coverage: 3.6x)

Pension Liability None

Pfd Stock None

Common Stock 29,421,010 shs. as of 9/4/96

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
417.9	411.7	399.0	420.8	403.8	411.6	459.9	552.8	575.4	505.2	*685*	*725*	Revenues ($mill) A	*815*
12.2	19.3	22.4	24.9	25.7	20.6	35.3	37.5	35.5	40.3	*48.0*	*51.0*	Net Profit ($mill)	*63.0*
46.3%	42.7%	34.2%	33.7%	33.2%	32.2%	35.0%	38.4%	37.6%	38.7%	*38.5%*	*38.5%*	Income Tax Rate	*38.5%*
2.9%	4.7%	5.6%	5.9%	6.4%	5.0%	7.7%	6.8%	6.2%	8.0%	*7.0%*	*7.0%*	Net Profit Margin	*7.7%*
51.0%	45.2%	45.8%	50.7%	47.0%	48.0%	46.6%	49.4%	50.9%	50.4%	*51.5%*	*51.0%*	Long-Term Debt Ratio	*50.0%*
49.0%	54.8%	54.2%	49.3%	53.0%	52.0%	53.4%	50.6%	49.1%	49.6%	*48.5%*	*49.0%*	Common Equity Ratio	*50.0%*
247.9	244.2	309.7	367.7	369.8	459.3	496.2	563.0	615.0	716.0	*805*	*870*	Total Capital ($mill)	*1095*
285.2	323.8	403.1	452.4	507.9	537.9	592.8	654.5	734.9	801.3	*865*	*935*	Net Plant ($mill)	*1100*
7.1%	10.3%	9.4%	9.5%	10.0%	6.8%	9.1%	8.6%	7.7%	7.5%	*8.0%*	*8.0%*	% Earned Total Cap'l	*7.5%*
10.0%	14.4%	13.4%	13.7%	13.1%	8.6%	13.3%	13.2%	11.8%	11.4%	*12.5%*	*12.0%*	% Earned Net Worth	*11.5%*
10.0%	14.4%	13.4%	13.7%	13.1%	8.6%	13.3%	13.2%	11.8%	11.4%	*12.5%*	*12.0%*	% Earned Com Equity	*11.5%*
2.3%	5.9%	5.2%	4.8%	4.2%	2%	4.6%	4.4%	2.8%	2.7%	*3.5%*	*3.5%*	% Retained to Com Eq	*3.0%*
77%	59%	61%	65%	68%	98%	66%	67%	76%	76%	*70%*	*72%*	% All Div'ds to Net Prof	*72%*

CURRENT POSITION ($MILL.)	1994	1995	7/31/96
Cash Assets	6.5	5.8	5.9
Other	110.9	111.5	110.1
Current Assets	117.4	117.3	116.0
Accts Payable	35.9	38.3	55.8
Debt Due	68.5	20.5	40.0
Other	59.6	64.9	19.4
Current Liab.	164.0	123.7	115.2
Fix. Chg. Cov.	292%	287%	343%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-3.0%	0.5%	*3.0%*
"Cash Flow"	5.5%	4.5%	*5.5%*
Earnings	5.5%	3.5%	*5.0%*
Dividends	6.5%	5.5%	*5.0%*
Book Value	6.5%	6.0%	*6.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Jan. 31	Apr.30	Jul.31	Oct.31	Full Fiscal Year
1993	202.5	205.2	74.7	70.4	552.8
1994	233.1	204.9	70.6	66.8	575.4
1995	202.5	179.4	61.6	61.7	505.2
1996	239.2	259.5	95.7	*90.6*	*685*
1997	*255*	*275*	*100*	*95.0*	*725*

Fiscal Year Ends	EARNINGS PER SHARE AB Jan.31	Apr.30	Jul.31	Oct.31	Full Fiscal Year
1993	1.05	.87	d.20	d.27	1.45
1994	1.06	.87	d.27	d.31	1.35
1995	1.13	.87	d.31	d.18	F 1.45
1996	1.18	1.12	d.28	*d.37*	*1.65*
1997	*1.22*	*1.06*	*d.25*	*d.33*	*1.70*

Calendar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.22	.23	.23	.23	.91
1993	.23	.245	.245	.245	.97
1994	.245	.26	.26	.26	1.03
1995	.26	.275	.275	.275	1.09
1996	.275	.29	.29		

BUSINESS: Piedmont Natural Gas Company is primarily a regulated natural gas distributor, serving over 540,000 customers in North Carolina, South Carolina, and Tennessee. 1995 revenue mix: residential (45%), commercial (27%), industrial (26%), other (2%). Principal suppliers: Transco and Tennessee Pipeline. Gas costs: 49.0% of revenues. '95 depreciation rate: 3.0%. Estimated plant age: 10 years. Non-regulated operations: sale of gas-powered heating equipment; natural gas brokering; propane sales. Share earnings contribution: '95, 14¢; '94, 15¢; '93, 10¢. Has about 1,980 employees, 12,440 shareholders. Chmn., Pres. & C.E.O.: John H. Maxheim. Incorporated: North Carolina. Address: 1915 Rexford Road, Charlotte, North Carolina 28211. Telephone: 704-364-3120.

Piedmont's stock price has risen nearly 22% from its May, 1996 lows. We attribute this climb to continued strength in the company's gas distribution business and increased speculation on mergers between gas and electric utilities. However, due in good part to this recent price movement and a probable rise in long-term interest rates, we envision below-average 3- to 5-year total return potential. Hence . . .

This issue is best suited for conservative, income-oriented investors. In the past, the company had exhibited steady dividend growth, a trend that we expect to continue through late decade. The yield currently holds at about twice the *Value Line* median. Risk is limited due to regulation of the distribution business and weather-normalization of rates, which allow for better predictability of earnings.

We expect a solid rise in fiscal 1996 share net. (Year ends October 31st.) The fiscal fourth quarter, typically a loss period, ought to provide little bottom-line surprise. The anticipated full-year gains would be primarily the result of a strong first half, stemming from colder-than-normal temperatures in Piedmont's service areas. The company is also benefiting from a favorable South Carolina regulatory ruling, which provided a $7.8 million-a-year rate increase effective November, 1995. Favorable economic conditions in the Southeast should allow for sustained customer growth in the 5% to 6% range. These meter additions will likely account for a significant portion of the increase in net income.

Earnings growth should continue in fiscal 1997 and beyond, albeit at a slower, more normal pace. Last winter heating season's unusually cold weather may well lead to reduced volumes of gas sold in the first half of fiscal 1997. Aside from the aforementioned customer additions, much of next year's bottom-line gains will likely come from relief in pending utility rate cases. In North Carolina, a rate increase of $9.9 million annually and return on equity of 13%, versus 11.9%, currently is sought. In Tennessee, Piedmont has requested increases in rates of $9.3 million and in return on equity to 13%, from today's 11.8%. We expect a good portion of these requests to be granted.

Oscar L. Vidal *September 27, 1996*

(A) Fiscal year ends October 31.
(B) Fully diluted earnings. Excluding extraordinary. item: '85, 11¢. Next egs. report due late November.
(C) Next div'd mtg. about Dec. 5. Goes ex about Dec. 20. Approx. dividend pmnt. dates: 15th of Jan., April, July, Oct.
■ Div'd reinvest. plan available; 5% discount.
(D) Incl. def'd chrgs. In '95: $3.1 mill., 11¢/sh.
(E) In mill., adj. for stk. splits.
(F) Qtrs. don't add due to change in shs. out'g.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	85
Earnings Predictability	65

SOUTH JERSEY INDS. NYSE-SJI

RECENT PRICE	P/E RATIO	(Trailing: 13.9 / Median: 13.0)	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
23	13.9	Trailing: 13.9; Median: 13.0	0.93	6.3%	494

TIMELINESS (Relative Price Performance Next 12 Mos.) **4** Below Average

SAFETY **2** Above Average

(Scale: 1 Highest to 5 Lowest)

BETA .55 (1.00 = Market)

High:	15.0	21.0	22.4	18.7	22.9	20.6	20.3	23.2	27.5	24.0	23.5	23.9
Low:	12.6	13.9	15.7	16.3	17.6	16.4	17.4	19.1	21.8	16.6	17.9	20.1

Target Price Range 1999 | 2000 | 2001

1999-01 PROJECTIONS

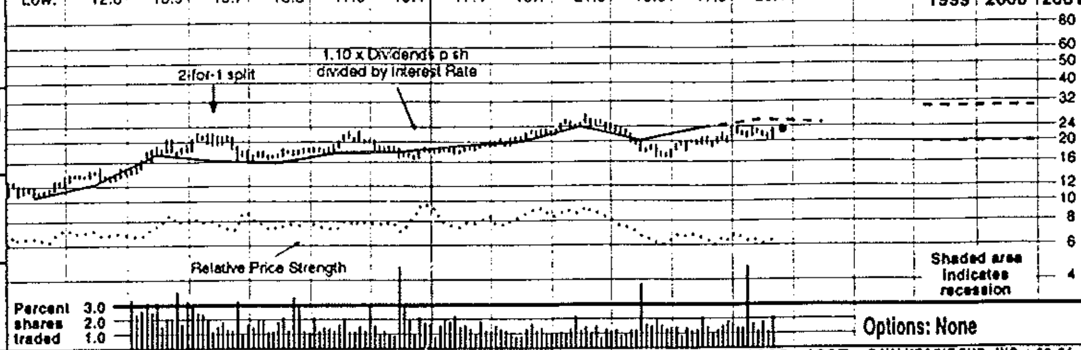
	Price	Gain	Ann'l Total Return
High	30	(+30%)	12%
Low	20	(-15%)	3%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	14	8	16
to Sell	13	11	10
Hld's(000)	1453	1522	1454



1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
42.18	51.69	51.54	55.32	44.50	33.56	32.66	32.59	29.66	30.54	28.80	30.19	33.33	34.06	34.90	33.00	*35.35*	*35.80*	Revenues per sh	*36.00*
3.26	3.15	2.66	2.95	2.68	2.33	2.55	2.79	3.03	3.00	2.68	2.75	3.12	3.08	2.70	3.30	*3.15*	*3.40*	"Cash Flow" per sh	*3.80*
1.94	1.68	1.17	1.41	1.41	1.19	1.28	1.57	1.88	1.66	1.33	1.27	1.61	1.55	1.21	1.65	*1.65*	*1.80*	Earnings per sh A	*2.10*
.91	.98	1.08	1.14	1.20	1.22	1.24	1.26	1.29	1.36	1.40	1.41	1.41	1.43	1.44	1.44	*1.44*	*1.44*	Div'ds Decl'd per sh B ■	*1.55*
3.79	3.90	2.97	2.42	2.94	3.74	4.26	4.25	4.41	4.55	4.21	4.34	3.39	3.74	3.86	4.16	*4.60*	*4.60*	Cap'l Spending per sh	*4.20*
10.84	11.53	11.55	11.72	11.60	11.74	12.02	12.42	13.24	13.49	13.58	13.53	13.90	14.33	14.46	14.67	*14.90*	*15.85*	Book Value per sh C	*17.25*
5.20	5.21	5.33	5.65	7.22	7.69	7.71	7.84	8.47	8.48	9.03	9.24	9.50	9.80	10.72	10.72	*10.75*	*10.75*	Common Shs Outst'g D	*12.50*
5.6	5.5	7.9	7.7	8.4	11.5	13.5	12.7	9.3	11.9	13.6	14.5	13.2	15.8	16.1	12.2	*Bold figures are*		Avg Ann'l P/E Ratio	*12.5*
.74	.67	.87	.65	.78	.93	.92	.85	.77	.90	1.01	.93	.80	.93	1.06	.83	*Value Line*		Relative P/E Ratio	*.95*
8.4%	10.7%	11.6%	10.4%	10.1%	8.9%	7.1%	6.3%	7.4%	6.9%	7.7%	7.6%	6.6%	5.9%	7.4%	7.2%	*estimates*		Avg Ann'l Div'd Yield	*6.0%*

CAPITAL STRUCTURE as of 6/30/96

Total Debt $263.8 mill. **Due in 5 Yrs** $160.0 mill.
LT Debt $150.7 mill. **LT Interest** $13.0 mill.
(LT interest earned: 3.2x; total interest coverage: 2.3x)

Pension Liability $2.1 mill. in '95 vs. $1.5 mill. in '94

Pfd Stock $2.3 mill. **Pfd Div'd** $.17 mill.
3,900 shs 4.7% cum. ($100 par) callable 101.5;
19,242 shs. 8.0% cum. ($100 par) callable 106.7.

Common Stock 10,730,832 shs.

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
251.7	255.4	251.3	259.0	260.0	278.9	316.7	333.9	374.0	353.8	*380*	*385*	Revenues ($mill)	*450*
10.2	12.4	15.6	14.2	11.8	11.9	15.3	15.2	12.6	17.8	*18.0*	*19.5*	Net Profit ($mill)	*26.0*
22.9%	35.1%	24.3%	26.5%	30.0%	31.4%	31.6%	31.8%	35.1%	34.4%	*35.0%*	*35.0%*	Income Tax Rate	*34.0%*
4.0%	4.9%	6.2%	5.5%	4.6%	4.3%	4.8%	4.5%	3.4%	5.0%	*4.7%*	*5.1%*	Net Profit Margin	*5.8%*
44.2%	35.8%	38.9%	36.3%	47.0%	45.5%	46.9%	50.2%	49.3%	51.4%	*48.0%*	*51.0%*	Long-Term Debt Ratio	*48.5%*
53.5%	61.9%	59.2%	62.0%	51.7%	53.3%	52.1%	48.9%	49.9%	47.9%	*51.0%*	*48.0%*	Common Equity Ratio	*51.0%*
173.2	157.4	189.3	184.6	237.2	234.4	253.6	287.4	310.6	328.4	*315*	*340*	Total Capital ($mill)	*420*
221.2	244.6	270.0	301.1	325.3	351.1	354.8	375.4	402.1	422.7	*420*	*445*	Net Plant ($mill)	*515*
8.3%	10.4%	10.2%	9.8%	7.2%	7.4%	8.3%	7.4%	6.1%	7.8%	*8.0%*	*8.0%*	% Earned Total Cap'l	*8.0%*
10.5%	12.3%	13.5%	12.1%	9.4%	9.3%	11.4%	10.6%	8.0%	11.2%	*11.0%*	*11.5%*	% Earned Net Worth	*12.0%*
10.7%	12.5%	13.7%	12.2%	9.5%	9.4%	11.5%	10.5%	8.0%	11.2%	*11.0%*	*12.0%*	% Earned Com Equity	*12.0%*
.4%	2.5%	4.3%	2.2%	NMF	NMF	1.4%	.6%	NMF	1.4%	*1.5%*	*2.5%*	% Retained to Com Eq	*3.0%*
96%	81%	69%	82%	105%	110%	88%	94%	119%	88%	*87%*	*80%*	% All Div'ds to Net Prof	*75%*

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	14.2	5.6	2.2
Other	83.4	98.3	103.3
Current Assets	97.6	103.9	105.5
Accts Payable	35.2	44.5	25.5
Debt Due	89.7	90.8	113.1
Other	23.3	24.2	24.5
Current Liab.	148.2	159.5	163.1
Fix. Chg. Cov.	230%	244%	228%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-2.5%	3.0%	*1.0%*
"Cash Flow"	1.5%	1.0%	*4.0%*
Earnings	1.0%	-2.0%	*6.0%*
Dividends	2.0%	1.0%	*1.5%*
Book Value	2.0%	1.5%	*3.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	113.4	65.2	60.5	94.8	333.9
1994	138.9	67.3	68.1	99.7	374.0
1995	110.5	68.8	60.3	114.2	353.8
1996	153.1	63.3	*60.0*	*103.6*	*380*
1997	*145*	*65.0*	*65.0*	*110*	*385*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	1.06	--	d.08	.57	1.55
1994	.99	.05	d.15	.32	1.21
1995	1.23	d.01	d.27	.70	1.65
1996	1.47	d.18	*d.27*	*.63*	*1.65*
1997	*1.48*	*d.11*	*d.25*	*.68*	*1.80*

Calendar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.706	.353	.353	--	1.41
1993	.706	.36	.36	--	1.43
1994	.72	.36	.36	--	1.44
1995	.72	.36	.36	--	1.44
1996	.72	.36	.36		

BUSINESS: South Jersey Industries, Inc. is a holding company. Its subsidiary, South Jersey Gas Co., distributes natural gas to 248,022 customers in 112 municipalities, including Atlantic City, in New Jersey's southern counties. Service area covers 2,500 sq. miles. Principal suppliers: Transco, ARCO, and Amerada Hess. Gas revs.: resident., 54%; comm'l and ind., 25%; transport., 6%; off-system, 8%, cogen and other, 7%. Nonutility revs. (sand mining & processing, utility construction contracting, and nonregulated gas-supply marketing), 25%; oper. egs., 11%. Has 1005 empls., 12,900 shrhldrs. Directors cntrl. 2% of com. shs.; CoreStates Bank, 14% (3/96 proxy). Pres. & C.E.O.: W.F. Ryan. Inc.: NJ. Address: 1 South Jersey Plaza, Route 54, Folsom, NJ 08037. Tel.: 609-561-9000.

South Jersey Industries has the financial incentives to run its businesses more aggressively. The parent company is responding to new regulatory policies that encourage competition in the energy field. The new rules let the gas utility and other subsidiaries market gas as a nonregulated broker/dealer and sell associated services separately from the traditional utility business. The utility itself may market gas in locales far from its franchised market. While there is no state-ordered cap on off-system profits, competition from other marketers is the equalizer, and some of the profits above a certain limit will have to be paid to customers on the utility system as billing credits. But the gas company hasn't yet reached the sharing threshold and is keeping all of the off-system earnings it generates. In all, incentive profits covered by New Jersey's sharing formula may be 15¢-25¢ a share.

The business plan includes partnerships. SJI has reorganized its South Jersey Fuel subsidiary to serve as a nonregulated middleman to provide large-volume users with gas-storage services and transport capacity on the major pipeline systems. To further this marketing effort, SJ Fuel has partnered up with Union Pacific Fuels, which is contributing compatible know-how in energy management services. Separately, SJI has joined with Brooklyn Union to sell other energy-management services, including gas-equipment maintenance, to large regional users, especially the Atlantic City casinos. Earnings from these nonregulated activities should develop gradually.

This untimely utility stock may be held for its generous yield. SJI is selling its sand mining and construction subsidiaries. It will use the proceeds (which may top $30 million) as equity capital for the utility in lieu of a stock offering. Regulators in the coming weeks are apt to allow the gas company a full return (perhaps 11.0%-11.5%) on its expanded equity base. The dividend should thus get better coverage, though it may not be raised until the payout ratio falls below 75%. The static payout, secured by an ample cash flow, is balanced by the stock's lofty yield. And the developing shareholder-risk ventures don't impair this stock's investment quality.

Gerald Holtzman *September 27, 1996*

(A) Based on average shares outstanding. Excludes nonrecurring profits (losses): '85, 9¢; '86, 22¢; '88, (4¢); '89, (5¢). Excludes gain due to acct'g change: '93, 4¢. Next earnings report due late Oct. (B) Next dividend meeting about Nov. 22. Goes ex about Dec. 1. Dividend payment dates: Jan. 2, Mar. 29, June 28, Sept. 30. Plus stock: '93, 2%. ■ Div'd reinvestment plan available (discount is 3%). (C) Incl. deferred charges. In '95: 74.6 mill., $6.96/sh. (D) In millions, adjusted for stock split and dividend.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	25
Earnings Predictability	75

WASHINGTON GAS NYSE-WGL

RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
22	13.5 (Trailing: 11.1 Median: 12.0)	0.90	5.3%	498

TIMELINESS 3 Average (Relative Price Performance Next 12 Mos.)
SAFETY 1 Highest (Scale: 1 Highest to 5 Lowest)
BETA .70 (1.00 = Market)

High:	11.8	15.2	14.4	13.3	15.9	16.3	17.3	19.6	22.9	21.3	22.4	22.9
Low:	8.6	10.1	9.8	10.6	11.8	13.3	13.7	15.6	18.1	16.0	16.1	19.1

Target Price Range 1999 2000 2001

1999-01 PROJECTIONS

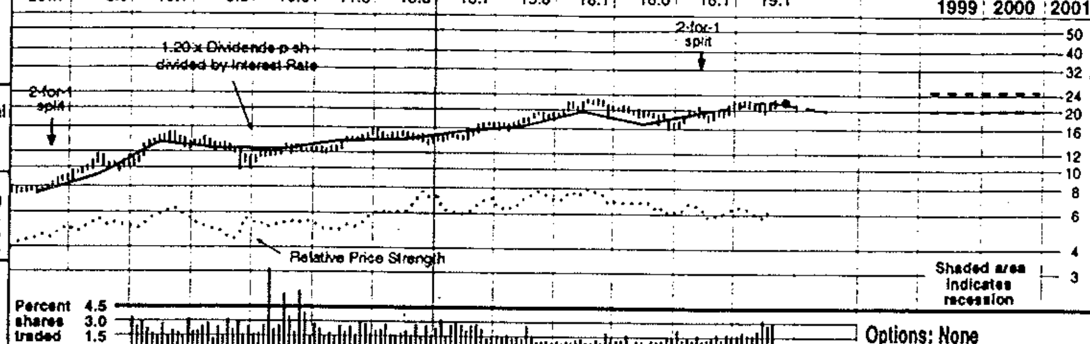
	Price	Gain	Ann'l Total Return
High	25	(+15%)	8%
Low	20	(-10%)	3%

Insider Decisions

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

Institutional Decisions

	4Q'95	1Q'96	2Q'96
to Buy	50	45	51
to Sell	34	39	41
Hld's(000)	9535	9908	9784



Options: None

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
26.36	25.51	25.94	25.81	24.80	23.20	21.62	20.17	18.17	19.52	18.75	17.50	18.37	21.55	21.69	19.30	*22.15*	*21.25*	Revenues per sh A	*24.20*
1.86	1.63	1.52	1.76	1.92	1.94	1.97	2.03	1.90	2.03	2.17	2.04	2.17	2.25	2.43	2.51	*2.95*	*2.80*	"Cash Flow" per sh	*3.00*
.88	.84	.85	1.07	1.23	1.23	1.15	1.14	1.26	1.22	1.26	1.14	1.27	1.31	1.42	1.45	*1.85*	*1.65*	Earnings per sh B	*1.85*
.63	.66	.69	.72	.78	.83	.88	.90	.94	.97	1.01	1.05	1.07	1.09	1.11	1.12	*1.14*	*1.16*	Div'ds Decl'd per sh C■	*1.25*
3.23	3.22	1.88	1.05	1.26	1.54	1.77	2.32	2.79	3.00	2.38	2.05	2.17	2.43	2.84	2.63	*2.25*	*2.75*	Cap'l Spending per sh	*3.00*
8.21	8.14	7.97	8.11	8.55	8.96	9.12	9.40	9.96	9.86	10.17	9.63	10.66	11.04	11.51	11.95	*12.35*	*13.00*	Book Value per sh D	*15.00*
17.60	21.87	26.32	31.60	32.30	32.94	33.39	33.91	38.42	38.70	39.23	39.89	40.62	41.50	42.19	42.93	*43.75*	*44.50*	Common Shs Outst'g E	*46.50*
6.4	9.6	8.0	6.5	6.6	8.3	11.5	11.0	9.6	10.6	11.7	12.8	13.6	15.6	14.0	12.7	*Bold figures are*		Avg Ann'l P/E Ratio	*12.5*
.85	1.17	.88	.55	.61	.67	.78	.74	.80	.80	.87	.82	.82	.92	.92	.87	*Value Line*		Relative P/E Ratio	*.95*
11.2%	8.2%	10.1%	10.3%	9.6%	8.1%	6.7%	7.2%	7.8%	7.5%	6.9%	7.2%	6.2%	5.3%	5.6%	6.1%	*estimates*		Avg Ann'l Div'd Yield	*5.3%*

CAPITAL STRUCTURE as of 6/30/96
Total Debt 361.9 mill. Due in 5 Yrs 151.0 mill.
LT Debt $353.9 mill. LT Interest $25.0 mill.
(total interest coverage: 5.6x)

Pension Liability None

Pfd Stock $28.5 mill. Pfd Div'd $1.3 mill.
Includes 635 shs. $4.60 cum. (callable at 100), ea. conv. into 7.4 common shs.; 2,348 shs. $4.36 cum. (callable at 100), ea. conv. into 5.6 common shs.

Common Stock 43,572,858 shs.

1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997		99-01
722.1	683.9	698.0	755.6	735.5	697.9	746.2	894.3	914.9	828.7	*970*	*945*	Revenues ($mill) A	*1125*
39.3	39.5	45.1	47.3	50.2	46.4	52.2	55.1	60.5	62.9	*80.0*	*74.0*	Net Profit ($mill)	*86.0*
44.3%	40.9%	36.0%	36.2%	36.9%	36.7%	37.6%	38.6%	38.1%	37.4%	*38.0%*	*38.0%*	Income Tax Rate	*38.0%*
5.4%	5.8%	6.5%	6.3%	6.8%	6.6%	7.0%	6.2%	6.6%	7.6%	*8.2%*	*7.8%*	Net Profit Margin	*7.6%*
40.0%	39.5%	38.0%	42.0%	39.5%	38.9%	38.9%	41.7%	40.0%	37.8%	*38.0%*	*38.5%*	Long-Term Debt Ratio	*39.5%*
54.8%	55.5%	57.6%	54.0%	56.4%	56.9%	57.3%	54.9%	56.7%	58.9%	*58.5%*	*58.0%*	Common Equity Ratio	*59.0%*
555.7	574.4	663.7	706.9	707.0	675.8	756.1	834.3	856.3	870.6	*920*	*1000*	Total Capital ($mill)	*1185*
553.9	600.2	676.2	729.0	783.3	821.1	864.5	921.1	995.0	1056.1	*1120*	*1200*	Net Plant ($mill)	*1350*
8.7%	8.4%	8.2%	8.5%	8.8%	8.5%	8.6%	8.1%	8.7%	8.7%	*10.0%*	*9.0%*	% Earned Total Cap'l	*8.0%*
11.8%	11.4%	11.0%	11.5%	11.7%	11.2%	11.3%	11.3%	11.8%	11.6%	*14.0%*	*12.0%*	% Earned Net Worth	*11.5%*
12.5%	12.0%	11.4%	12.0%	12.3%	11.7%	11.7%	11.7%	12.2%	12.0%	*14.5%*	*12.5%*	% Earned Com Equity	*12.0%*
2.9%	2.4%	2.8%	2.6%	2.5%	1.1%	1.9%	2.2%	2.6%	2.8%	*5.5%*	*4.0%*	% Retained to Com Eq	[illegible]
78%	80%	76%	79%	80%	91%	84%	81%	79%	77%	*63%*	*71%*	% All Div'ds to Net Prof	[illegible]

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	3.5	13.9	12.1
Other	172.0	145.1	172.5
Current Assets	175.5	159.0	184.6
Accts Payable	85.0	80.5	107.9
Debt Due	61.5	52.5	8.0
Other	54.4	89.4	69.2
Current Liab.	200.9	222.4	185.1
Fix. Chg. Cov.	372%	375%	514%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-1.5%	2.0%	*2.5%*
"Cash Flow"	2.5%	3.5%	*4.5%*
Earnings	1.5%	2.5%	*5.0%*
Dividends	3.5%	2.5%	*2.0%*
Book Value	3.0%	3.0%	*5.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	273.1	383.8	139.8	97.6	894.3
1994	271.2	410.2	130.9	102.6	914.9
1995	242.9	353.7	131.9	100.2	828.7
1996	274.3	431.8	157.8	*106.1*	*970*
1997	*275*	*415*	*145*	*110*	*945*

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
1993	.68	1.20	d.16	d.41	1.31
1994	.72	1.31	d.25	d.36	1.42
1995	.65	1.25	d.14	d.31	1.45
1996	.88	1.54	d.13	*d.44*	*1.85*
1997	*.77*	*1.43*	*d.16*	*d.39*	*1.65*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.263	.268	.268	.268	1.07
1993	.268	.273	.273	.273	1.09
1994	.273	.278	.278	.278	1.11
1995	.278	.28	.28	.28	1.12
1996	.28	.285	.285		

BUSINESS: Washington Gas Light Company is a retail distributor of natural gas in Washington, D.C. and adjacent areas of Virginia and Maryland, and in Martinsburg, W. Va. (768,000 meters). Gas revenue mix: residential, 55%; commercial and industrial, 45%. Principal suppliers: various independent producers; Columbia Gas System is the company's principal gas transporter. Hampshire Gas Co., a federally regulated subsidiary, operates an underground gas storage facility in W. Va. Est'd. labor costs, 21% of revenues. Has 2,405 employees, 21,501 shareholders. Officers and directors own less than 1% of the common stock (1/96 proxy). Chmn. & C.E.O.: P.J. Maher Incorp.: District of Columbia and Virginia. Address: 1100 H St., N.W., Washington, D.C. 20080. Telephone: 202-624-6410.

Washington Gas Light's earnings in fiscal 1996 (ends September 30th) were primed by colder weather. This gas distributor's customer rolls have been growing by 2.5%-3.0% a year, compared to the industry average of 1.5%-2.0%. WGL more than compensates for the lag in new business in the urban setting of the District of Columbia by its easier marketing effort in the adjacent counties of Virginia and Maryland. Building activity in these suburban areas is running at a high level, with WGL attaching its mains to most of the new construction. The company is also getting new space-heating business by converting existing homes and businesses from electric heat pumps to gas-fired furnaces. Since conversions often don't require major outlays for gas plant, WGL is able to earn its allowed return more easily. The utility in fiscal 1996 has likely exceeded its allowed return by a wide margin because, on top of the new meter additions, it got the benefit of unusually cold weather throughout the heating season.

But don't count on a big jump in the dividend. With no promise of long spells of cold temperatures this winter, the company is apt to keep the dividend growing at a slow pace. It may rise by less than 2% in fiscal 1997 so that WGL can maintain a prudent payout ratio in order to continue attracting low-cost borrowings. In addition, with the company gearing up to operate in a much more competitive marketplace than it has been accustomed to, management is following a cautious dividend policy, which helps to reinforce this stock's top quality. Given the low investment risk, this equity offers income accounts a satisfactory year-ahead return.

WGL is putting emphasis on marketing customized services. Under new regulatory ground rules, the utility is unbundling its package of traditional services. It is moving to sell services to ratepayers that are tailored to their specific needs, such as gas storage, delivery, and equipment maintenance. This marketing activity gives the company a better chance of earning its allowed return. Competition could snare some customers, but WGL will still have the right to turn a profit on the delivery of gas supplies to all users on its system.

Gerald Holtzman *September 27, 1996*

(A) Beginning 1989, fiscal years end September 30th. (B) Based on average shares. Next earnings report due late Oct. (C) Next dividend meeting about Dec. 11. Goes ex about Jan. 2. Approximate dividend payment dates: February 1, May 1, August 1, November 1. ■ Dividend reinvestment plan available. (D) Includes deferred charges and intangibles. In '95: $145.0 million, $3.38/sh. (E) In millions, adjusted for stock splits.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	70

WICOR, INC. NYSE-WIC

RECENT PRICE	36	P/E RATIO	13.7 (Trailing: 13.3; Median: 13.0)	RELATIVE P/E RATIO	0.91	DIV'D YLD	4.7%	VALUE LINE	499

TIMELINESS 3 Average (Relative Price Performance Next 12 Mos.)
SAFETY 2 Above Average (Scale: 1 Highest to 5 Lowest)
BETA .60 (1.00 = Market)

1999-01 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+55%)	15%
Low	40	(+10%)	8%

Insider Decisions

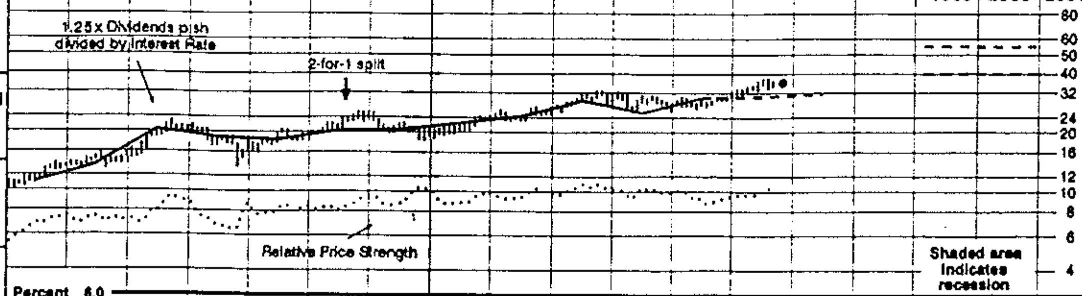
	N	D	J	F	M	A	M	J	J
to Buy	0	0	0	0	0	0	0	0	0
Options	1	1	2	0	0	0	0	1	0
to Sell	0	0	0	0	0	0	0	1	0

Institutional Decisions

	4Q95	1Q96	2Q96
to Buy	44	38	39
to Sell	25	31	32
Hld's(000)	5473	5803	5927

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
High:	15.8	23.0	21.9	20.9	25.5	25.3	24.5	27.4	32.9	32.6	32.9	37.8
Low:	13.0	14.7	13.4	15.7	19.4	18.3	18.6	22.9	25.6	25.5	26.6	30.1

Target Price Range 1999 | 2000 | 2001



Percent shares traded 6.0 4.0 2.0

Options: None

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	© VALUE LINE PUB., INC.	99-01
55.09	65.06	58.52	69.29	71.03	70.61	56.30	50.96	55.69	51.92	47.71	47.13	47.56	51.78	51.29	47.19	*52.70*	*55.60*	Revenues per sh	*67.50*
3.42	3.48	2.52	3.49	4.30	4.58	3.68	3.75	4.70	4.78	3.55	3.97	4.03	4.45	4.84	4.78	*5.50*	*5.80*	"Cash Flow" per sh	*6.65*
1.40	1.35	1.01	1.49	2.06	2.07	1.59	1.43	2.46	2.40	1.04	1.54	1.40	1.82	2.09	2.27	*2.65*	*2.80*	Earnings per sh A	*3.35*
1.02	1.05	1.07	1.07	1.11	1.18	1.28	1.30	1.32	1.37	1.42	1.46	1.50	1.54	1.58	1.62	*1.66*	*1.72*	Div'ds Decl'd per sh B ■	*2.30*
3.30	3.07	2.17	2.01	2.72	2.72	2.69	2.51	3.52	2.90	2.64	3.02	4.77	3.16	3.25	3.08	*3.20*	*3.90*	Cap'l Spending per sh	*6.00*
13.55	13.88	12.28	12.60	13.52	14.38	15.11	15.23	16.34	17.39	16.64	16.28	15.91	16.47	17.23	18.93	*20.20*	*21.45*	Book Value per sh C	*25.75*
8.17	8.17	11.10	11.40	11.58	11.78	13.15	13.30	13.54	13.69	13.83	14.46	14.82	16.41	16.92	18.24	*18.50*	*18.80*	Common Shs Outst'g D	*20.00*
6.9	7.3	8.9	7.0	5.8	6.8	12.0	12.9	7.6	9.2	20.2	14.1	17.7	16.3	13.9	12.8	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*14.0*
.92	.89	.98	.59	.54	.55	.81	.86	.63	.70	1.50	.90	1.07	.96	.91	.87			Relative P/E Ratio	*1.10*
10.5%	10.6%	12.0%	10.3%	9.3%	8.3%	6.7%	7.1%	7.1%	6.2%	6.8%	6.7%	6.1%	5.2%	5.5%	5.6%			Avg Ann'l Div'd Yield	*4.8%*
						740.1	677.6	754.2	710.6	659.8	681.7	704.9	849.5	867.8	860.6	*975*	*1045*	Revenues ($mill)	*1350*
						21.1	20.5	33.8	32.7	14.3	21.5	20.5	29.3	34.8	38.7	*49.0*	*52.5*	Net Profit ($mill)	*65.0*
						44.1%	44.9%	38.0%	39.1%	40.2%	36.1%	37.2%	37.4%	34.5%	36.3%	*36.5%*	*36.5%*	Income Tax Rate	*36.5%*
						2.9%	3.0%	4.5%	4.6%	2.2%	3.2%	2.9%	3.5%	4.0%	4.5%	*5.0%*	*5.0%*	Net Profit Margin	*4.9%*
						40.2%	37.5%	37.4%	34.0%	35.7%	41.7%	41.0%	37.9%	35.7%	33.6%	*33.5%*	*33.5%*	Long-Term Debt Ratio	*33.5%*
						55.8%	60.1%	62.6%	66.0%	64.3%	58.3%	59.0%	62.1%	64.3%	66.4%	*66.5%*	*66.5%*	Common Equity Ratio	*66.5%*
						356.2	337.0	353.5	360.5	357.9	403.6	399.8	435.5	453.1	520.0	*565*	*610*	Total Capital ($mill)	*775*
						276.6	285.0	301.1	306.5	336.2	347.8	388.2	400.7	415.6	436.0	*445*	*465*	Net Plant ($mill)	*590*
						7.7%	7.8%	11.3%	11.0%	5.8%	7.0%	6.6%	7.8%	8.8%	8.6%	*10.0%*	*10.0%*	% Earned Total Cap'l	*10.0%*
						9.9%	9.8%	15.2%	13.7%	6.2%	9.1%	8.7%	10.8%	12.0%	11.2%	*13.0%*	*13.0%*	% Earned Net Worth	*13.0%*
						9.6%	9.3%	14.9%	13.7%	6.2%	9.1%	8.7%	10.8%	12.0%	11.2%	*13.0%*	*13.0%*	% Earned Com Equity	*13.0%*
						1.9%	.8%	6.9%	5.9%	NMF	.5%	.4%	2.9%	4.0%	3.3%	*5.0%*	*5.0%*	% Retained to Com Eq	*4.0%*
						82%	92%	55%	57%	NMF	94%	95%	73%	67%	71%	*63%*	*61%*	% All Div'ds to Net Prof	*69%*

CAPITAL STRUCTURE as of 6/30/96

Total Debt $239.8 mill. Due in 5 Yrs $170 mill.

LT Debt $182.9 mill. LT Interest $16.0 mill.

(LT interest earned: 6.2x; total interest coverage: 4.2x)

Pension Liability None

Pfd Stock None

Common Stock 18,389,279 shares as of 7/15/96

CURRENT POSITION ($MILL.)	1994	1995	6/30/96
Cash Assets	35.1	20.4	51.8
Other	277.2	308.6	283.2
Current Assets	312.3	329.0	335.0
Accts Payable	65.6	63.9	60.6
Debt Due	116.5	113.2	56.9
Other	57.3	77.3	107.1
Current Liab.	239.4	254.4	224.6
Fix. Chg. Cov.	399%	410%	492%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '93-'95 to '99-'01
Revenues	-3.5%	-.5%	*5.0%*
"Cash Flow"	.5%	- -	*8.0%*
Earnings	1.0%	1.0%	*8.5%*
Dividends	3.5%	3.0%	*7.0%*
Book Value	2.5%	1.0%	*6.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	272.7	190.2	152.8	233.8	849.5
1994	320.6	186.1	151.1	210.0	867.8
1995	269.3	179.2	162.7	249.4	860.6
1996	328.7	227.6	*174.7*	*244*	*975*
1997	*345*	*230*	*190*	*280*	*1045*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1993	1.49	.04	d.53	.82	1.82
1994	1.80	.06	d.48	.71	2.09
1995	1.41	.16	d.29	.99	2.27
1996	1.69	.31	*d.28*	*.93*	*2.65*
1997	*1.67*	*.30*	*d.22*	*1.05*	*2.80*

Calendar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
1992	.37	.37	.38	.38	1.50
1993	.38	.38	.39	.39	1.54
1994	.39	.39	.40	.40	1.58
1995	.40	.40	.41	.41	1.62
1996	.41	.41	.42		

BUSINESS: WICOR, Inc. is a holding company. Its Wisconsin Gas Co. subsidiary distributes natural gas to over 500,000 residential, commercial, & industrial customers. Sta-Rite Industries manufactures pumps & water process equipment worldwide. Shurflo Pump Mfg. Co. serves beverage, recreation vehicle, marine, & purification markets. Hypro Corp., acquired 7/95, makes pumps for agricultural, pressure cleaning, marine, & fire protection mkts. Purchased gas costs: 62% of utility revenue; labor: est'd 15% of revs. '95 deprec. rate: 5.5%. Est'd plant age: 10 yrs. Has 3,360 employees, 27,380 shareholders. Officers/Dirs. own 3% of stk. (3/96 proxy). President & C.E.O.: G.E. Wardeberg. Incorp.: Wisconsin. Address: 626 East Wisconsin Ave., Milwaukee, WI 53201. Tel.: 414-291-7026.

The best 1996 news for WICOR is probably already out. Following an excellent March quarter, earnings of 31¢ a share nearly doubled the 1995 June-period result. The manufacturing and energy segments both contributed to the impressive year-to-year increase. For the current quarter, a loss is customary due to minimal gas deliveries and the seasonal falloff for pump and water control products.

The gas utility division escaped its usual June-quarter loss. Uncommonly large heating requirements enabled Wisconsin Gas to more than cover second-quarter expenses this year. Temperatures in the period were 28% colder than normal and provided an 11% increase in firm customer volume. Holding costs and expenses down brought an upswing to net utility income of $39,000, from a year-earlier $570,000 loss.

Weakening foreign markets currently provide less lift to pump-related sales. Much of the 73% June-quarter gain in pump business results came from overseas sales that rose 19%. Recent indications, however, are that a broadening slowdown in European markets is having an adverse effect on foreign demand. Apart from the seasonal decline in domestic sales of pool and spa water systems, some profit pressure is due from a consolidation at Hypro. The Detroit plant of this subsidiary is being closed and its operations are being assumed at a Minneapolis facility.

A winter no colder than normal would adversely affect utility comparisons. On that assumption, we estimate something less than the 99¢ a share netted in 1995's fourth quarter. Even so, the strong first-half result supports hopes for a record 1996 outcome of possibly $2.65 a share.

The stock offers income plus an opportunity for 3- to 5-year gains. The dividend, which is nudged upward yearly, provides a decent return. Additionally, better-than-typical utility earnings growth is in prospect as a result of the consistent expansion of manufacturing operations via reinvestment and acquisitions.

Edmund B Swort, CFA September 27, 1996

Restated Sales (and Operating Margins after Depreciation)

	1994	1995	1996	1997
Gas Distribution	556.6 (8.0%)	522.8 (11.3%)	*570 (11.6%)*	*596 (11.1%)*
Manufacturing	311.2 (7.1%)	337.8 (6.0%)	*406 (7.5%)*	*450 (7.8%)*
Company Total	867.8 (7.7%)	860.6 (9.2%)	*975 (9.9%)*	*1045 (9.8%)*

(A) Based on average shares outstanding. Quarterly amounts adjusted to sum to annual figures. Next earnings report due late October. Excludes nonrecurring gain (losses): '90, (40¢); '92, (54¢); '94 Q1, (10¢); '95 Q1, 5¢. (B) Next dividend meeting about Oct. 24. Goes ex about Nov. 8. Approximate dividend payment dates: February 28, May 31, August 30, November 30. ■ Dividend reinvestment plan available. (C) Includes intangibles. In '95: $90.0 million, $4.93/share. (D) In millions, adjusted for stock split.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	70
Earnings Predictability	55

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Two-Stage Growth Discounted Cash Flow Model
Summary of Conclusion

	Proxy Group of Seven Gas Distribution Companies	Proxy Group of Twenty Value Line Gas Distribution Companies
Using I/B/E/S Projected Five-Year Growth in Earnings per Share and Annual Growth in Gross Domestic Product		
1. Dividend Yield (1)	5.6 %	5.1 %
2. Dividend Growth Component (2)	0.1	0.1
3. Yield	5.7	5.2
4. Growth Rate	4.9 (3)	5.1 (3)
5. Indicated Return Rate	10.6 %	10.3 %
Using I/B/E/S Projected Five-Year Growth in Earnings per Share and Annual Gas Distribution Industry Revenue Growth		
6. Dividend Yield (1)	5.6 %	5.1 %
7. Dividend Growth Component (2)	0.1	0.1
8. Yield	5.7	5.2
9. Growth Rate	4.0 (4)	4.1 (4)
10. Indicated Return Rate	9.7 %	9.3 %
11. Average Indicated Return Rate (5)	10.2 %	9.8 %

Notes:
(1) From Exhibit FJH-10.
(2) This reflects a growth rate component equal to one-half the conclusion of growth rate (from pages 4 and 10 of this Exhibit) x Line No. 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, 5.6% x (1 / 2 x 4.9%) = 0.1%.
(3) Conclusion of growth from page 4 of this Exhibit.
(4) Conclusion of growth from page 10 of this Exhibit.
(5) Average of Line No. 5 and Line No. 10.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Two-Stage Growth Discounted Cash Flow Model Using I/B/E/S Projected Five-Year Growth
in Earnings Per Share and Annual Growth in Gross Domestic Product

Proxy Group of Twenty Value Line Gas Companies

	Year		AGL Resources, Inc.	Atmos Energy Corp.	Bay State Gas Company	Brooklyn Union Gas Company	Cascade Natural Gas Company	Connecticut Energy Corp.	Connecticut Natural Gas Corp.
Indicated Annual Dividend per Share at November 30, 1996			$1.080	$1.000	$1.540	$1.420	$0.960	$1.320	$1.520
Dividends per Share	1996	(1)	1.084	1.008	1.546	1.427	0.964	1.326	1.525
	1997		1.137	1.101	1.616	1.505	1.015	1.392	1.586
	1998		1.193	1.202	1.689	1.588	1.069	1.462	1.649
	1999		1.251	1.313	1.765	1.675	1.126	1.535	1.715
	2000		1.312	1.434	1.844	1.767	1.186	1.612	1.784
	2001		1.376	1.566	1.927	1.864	1.249	1.693	1.855
	2002	(2)	1.445	1.644	2.023	1.957	1.311	1.778	1.948
	2003		1.516	1.725	2.122	2.053	1.375	1.865	2.043
	2004		1.590	1.810	2.226	2.154	1.442	1.956	2.143
	2005		1.668	1.899	2.335	2.260	1.513	2.052	2.248
	2006		1.748	1.990	2.447	2.368	1.586	2.150	2.356
	2007		1.834	2.088	2.567	2.484	1.664	2.255	2.471
	2008		1.922	2.188	2.690	2.603	1.744	2.363	2.590
	2009		2.014	2.293	2.819	2.728	1.828	2.476	2.714
	2010		2.113	2.405	2.957	2.862	1.918	2.597	2.847
	2011		2.217	2.523	3.102	3.002	2.012	2.724	2.987
	2012		2.326	2.647	3.254	3.149	2.111	2.857	3.133
	2013		2.440	2.777	3.413	3.303	2.214	2.997	3.287
	2014		2.560	2.913	3.580	3.465	2.322	3.144	3.448
	2015		2.685	3.056	3.755	3.635	2.436	3.298	3.617
	2016		2.817	3.206	3.939	3.813	2.555	3.460	3.794
Average Annual Growth Rate (3)			4.9%	6.0%	4.8%	5.0%	5.0%	4.9%	4.7%

Notes: (1) Dividends per share for the years 1996-2001 are developed using I/B/E/S projected five-year growth in earnings per share as shown on page 5 of this Exhibit.
(2) Dividends per share for the years 2002-2016 are developed using the annual growth in Gross Domestic Product as shown on page 5 of this Exhibit.
(3) Average annual growth rate is the compound annual growth rate from the indicated annual dividend per share at November 30, 1996 to the projected dividend per share for the year 2016. For example, AGL Resources, Inc.'s average annual growth rate of 4.9% is derived as follows: 4.9% = (($2.817 / $1.080) ^ (1 / 20.083) -1).

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II
I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Two-Stage Growth Discounted Cash Flow Model Using I/B/E/S Projected Five-Year Growth
In Earnings Per Share and Annual Growth in Gross Domestic Product

Proxy Group of Twenty Value Line Gas Companies

	Year		Energen Corp.	Indiana Energy, Inc.	Laclede Gas Company	MCN Corp.	New Jersey Resources Corp.	NICOR, Inc.	Northwest Natural Gas Company
Indicated Annual Dividend per Share at November 30, 1996			$1.200	$1.140	$1.260	$0.970	$1.560	$1.320	$1.200
Dividends per Share	1996	(1)	1.208	1.144	1.264	0.977	1.567	1.326	1.205
	1997		1.305	1.198	1.312	1.062	1.647	1.395	1.264
	1998		1.409	1.254	1.362	1.154	1.731	1.468	1.328
	1999		1.522	1.313	1.414	1.254	1.819	1.544	1.391
	2000		1.644	1.375	1.468	1.363	1.912	1.624	1.459
	2001		1.776	1.440	1.524	1.482	2.010	1.708	1.530
	2002	(2)	1.865	1.512	1.600	1.556	2.111	1.793	1.607
	2003		1.956	1.586	1.678	1.632	2.214	1.881	1.686
	2004		2.052	1.664	1.760	1.712	2.322	1.973	1.769
	2005		2.153	1.748	1.846	1.796	2.436	2.070	1.856
	2006		2.256	1.830	1.935	1.882	2.553	2.169	1.945
	2007		2.367	1.920	2.030	1.974	2.678	2.275	2.040
	2008		2.481	2.012	2.127	2.069	2.807	2.384	2.138
	2009		2.600	2.109	2.229	2.168	2.942	2.498	2.241
	2010		2.727	2.212	2.338	2.274	3.086	2.620	2.351
	2011		2.861	2.320	2.453	2.385	3.237	2.748	2.466
	2012		3.001	2.434	2.573	2.502	3.396	2.883	2.587
	2013		3.148	2.553	2.699	2.625	3.562	3.024	2.714
	2014		3.302	2.678	2.831	2.754	3.737	3.172	2.847
	2015		3.464	2.809	2.970	2.889	3.920	3.327	2.987
	2016		3.634	2.947	3.116	3.031	4.112	3.490	3.133
Average Annual Growth Rate (3)			5.7%	4.8%	4.6%	5.8%	4.9%	5.0%	4.9%

Notes: (1) Dividends per share for the years 1996-2001 are developed using I/B/E/S projected five-year growth in earnings per share as shown on page 6 of this Exhibit.
(2) Dividends per share for the years 2002-2016 are developed using the annual growth in Gross Domestic Product as shown on page 6 of this Exhibit.
(3) Average annual growth rate is the compound annual growth rate from the indicated annual dividend per share at November 30, 1996 to the projected dividend per share for the year 2016. For example, Energen Corp.'s average annual growth rate of 5.7% is derived as follows: 5.7% = (($3.634 / $1.200) ^ (1 / 20.083) -1).

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II
I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Two-Stage Growth Discounted Cash Flow Model Using I/B/E/S Projected Five-Year Growth
In Earnings Per Share and Annual Growth in Gross Domestic Product

	Year		ONEOK, Inc.	Peoples Energy Corp.	Piedmont Natural Gas Company	South Jersey Industries, Inc.	Washington Gas Light Company	WICOR Inc.	Average for the Proxy Group of Seven Gas Distribution Companies	Average for the Proxy Group of Twenty Value Line Gas Distribution Companies
			Proxy Group of Twenty Value Line Gas Companies							
Indicated Annual Dividend per Share at November 30, 1996			$1.200	$1.840	$1.160	$1.440	$1.140	$1.680		
Dividends per Share	1996	(1)	1.207	1.846	1.166	1.444	1.144	1.693		
	1997		1.285	1.914	1.241	1.495	1.191	1.849		
	1998		1.369	1.985	1.320	1.547	1.240	2.019		
	1999		1.458	2.058	1.404	1.601	1.291	2.205		
	2000		1.553	2.134	1.494	1.657	1.344	2.408		
	2001		1.654	2.213	1.590	1.715	1.399	2.630		
	2002	(2)	1.737	2.324	1.670	1.801	1.469	2.762		
	2003		1.822	2.438	1.752	1.889	1.541	2.897		
	2004		1.911	2.557	1.838	1.982	1.617	3.039		
	2005		2.005	2.682	1.928	2.079	1.696	3.188		
	2006		2.101	2.811	2.021	2.179	1.777	3.341		
	2007		2.204	2.949	2.120	2.286	1.864	3.505		
	2008		2.310	3.091	2.222	2.396	1.953	3.673		
	2009		2.421	3.239	2.329	2.511	2.047	3.849		
	2010		2.540	3.398	2.443	2.634	2.147	4.038		
	2011		2.664	3.565	2.563	2.763	2.252	4.236		
	2012		2.795	3.740	2.689	2.898	2.362	4.444		
	2013		2.932	3.923	2.821	3.040	2.478	4.662		
	2014		3.076	4.115	2.959	3.189	2.599	4.890		
	2015		3.227	4.317	3.104	3.345	2.726	5.130		
	2016		3.385	4.529	3.256	3.509	2.860	5.381		
Average Annual Growth Rate (3)			5.3%	4.6%	5.3%	4.5%	4.7%	6.0%	4.9%	5.1%

Notes: (1) Dividends per share for the years 1996-2001 are developed using I/B/E/S projected five-year growth in earnings per share as shown on page 7 of this Exhibit.
(2) Dividends per share for the years 2002-2016 are developed using the annual growth in Gross Domestic Product as shown on page 7 of this Exhibit.
(3) Average annual growth rate is the compound annual growth rate from the indicated annual dividend per share at November 30, 1996 to the projected dividend per share for the year 2016. For example, ONEOK, Inc.'s average annual growth rate of 5.3% is derived as follows: 5.3% = (($3.385 / $1.200) ^ (1 / 20.083) -1).

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II
I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Development of Growth Rates Based on I/B/E/S Projected Five-Year Growth in Earnings per Share
and Annual Growth in Gross Domestic Product for Use in the Two-Stage Growth Discounted Cash Flow Model

Proxy Group of Twenty Value Line Gas Companies

Year		AGL Resources, Inc.	Atmos Energy Corp.	Bay State Gas Company	Brooklyn Union Gas Company	Cascade Natural Gas Company	Connecticut Energy Corp.	Connecticut Natural Gas Corp.
1996	(1)	4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
1997		4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
1998		4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
1999		4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
2000		4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
2001		4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
2002	(2)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
2003		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2004		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2005		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2006		4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
2007		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2008		4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
2009		4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
2010		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2011		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2012		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2013		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2014		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2015		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2016	(3)	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%

Notes: (1) I/B/E/S Projected Five-Year Growth in Earnings per Share.
(2) Projected Annual Growth in Gross Domestic Product from The WEFA Group.
(3) Growth rate for the year 2016 assumed to be equal to growth rate for the year 2015.

Source of Information: I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Development of Growth Rates Based on I/B/E/S Projected Five-Year Growth in Earnings per Share
and Annual Growth in Gross Domestic Product for Use in the Two-Stage Growth Discounted Cash Flow Model

Proxy Group of Twenty Value Line Gas Companies

Year		Energen Corp.	Indiana Energy, Inc.	Laclede Gas Company	MCN Corp.	New Jersey Resources Corp.	NICOR, Inc.	Northwest Natural Gas Company
1996	(1)	8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
1997		8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
1998		8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
1999		8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
2000		8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
2001		8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
2002	(2)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
2003		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2004		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2005		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2006		4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
2007		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2008		4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
2009		4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
2010		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2011		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2012		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2013		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2014		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2015		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2016	(3)	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%

Notes: (1) I/B/E/S Projected Five-Year Growth in Earnings per Share.
(2) Projected Annual Growth in Gross Domestic Product from The WEFA Group.
(3) Growth rate for the year 2016 assumed to be equal to growth rate for the year 2015.

Source of Information: I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Development of Growth Rates Based on I/B/E/S Projected Five-Year Growth in Earnings per Share
and Annual Growth in Gross Domestic Product for Use in the Two-Stage Growth Discounted Cash Flow Model

Proxy Group of Twenty Value Line Gas Companies

Year		ONEOK, Inc.	Peoples Energy Corp.	Piedmont Natural Gas Company	South Jersey Industries, Inc.	Washington Gas Light Company	WICOR Inc.
1996	(1)	6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
1997		6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
1998		6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
1999		6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
2000		6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
2001		6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
2002	(2)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
2003		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2004		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2005		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2006		4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
2007		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2008		4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
2009		4.8%	4.8%	4.8%	4.8%	4.8%	4.8%
2010		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2011		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2012		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2013		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2014		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2015		4.9%	4.9%	4.9%	4.9%	4.9%	4.9%
2016	(3)	4.9%	4.9%	4.9%	4.9%	4.9%	4.9%

Notes: (1) I/B/E/S Projected Five-Year Growth in Earnings per Share.
(2) Projected Annual Growth in Gross Domestic Product from The WEFA Group.
(3) Growth rate for the year 2016 assumed to be equal to growth rate for the year 2015.

Source of Information: I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Two-Stage Growth Discounted Cash Flow Model Using I/B/E/S Projected Five-Year Growth
in Earnings Per Share and Annual Growth in Natural Gas Revenues

Proxy Group of Twenty Value Line Gas Companies

	Year		AGL Resources, Inc.	Atmos Energy Corp.	Bay State Gas Company	Brooklyn Union Gas Company	Cascade Natural Gas Company	Connecticut Energy Corp.	Connecticut Natural Gas Corp.
Indicated Annual Dividend per Share at November 30, 1996			$1.080	$1.000	$1.540	$1.420	$0.960	$1.320	$1.520
Dividends per Share	1996	(1)	1.084	1.008	1.546	1.427	0.964	1.326	1.525
	1997		1.137	1.101	1.616	1.505	1.015	1.392	1.586
	1998		1.193	1.202	1.689	1.588	1.069	1.462	1.649
	1999		1.251	1.313	1.765	1.675	1.126	1.535	1.715
	2000		1.312	1.434	1.844	1.767	1.186	1.612	1.784
	2001		1.376	1.566	1.927	1.864	1.249	1.693	1.855
	2002	(2)	1.437	1.635	2.012	1.946	1.304	1.767	1.937
	2003		1.502	1.709	2.103	2.034	1.363	1.847	2.024
	2004		1.571	1.788	2.200	2.128	1.426	1.932	2.117
	2005		1.640	1.867	2.297	2.222	1.489	2.017	2.210
	2006		1.701	1.936	2.382	2.304	1.544	2.092	2.292
	2007		1.762	2.006	2.468	2.387	1.600	2.167	2.375
	2008		1.824	2.076	2.554	2.471	1.656	2.243	2.458
	2009		1.886	2.147	2.641	2.555	1.712	2.319	2.542
	2010		1.941	2.209	2.718	2.629	1.762	2.386	2.616
	2011		2.005	2.282	2.808	2.716	1.820	2.465	2.702
	2012		2.067	2.353	2.895	2.800	1.876	2.541	2.786
	2013		2.135	2.431	2.991	2.892	1.938	2.625	2.878
	2014		2.203	2.509	3.087	2.985	2.000	2.709	2.970
	2015		2.273	2.589	3.186	3.081	2.064	2.796	3.065
	2016		2.346	2.672	3.288	3.180	2.130	2.885	3.163
Average Annual Growth Rate (3)			3.9%	5.0%	3.8%	4.1%	4.0%	4.0%	3.7%

Notes: (1) Dividends per share for the years 1996-2001 are developed using I/B/E/S projected five-year growth in earnings per share as shown on page 11 of this Exhibit.
(2) Dividends per share for the years 2002-2016 are developed using the annual growth in natural gas revenues as shown on page 11 of this Exhibit.
(3) Average annual growth rate is the compound annual growth rate from the indicated annual dividend per share at November 30, 1996 to the projected dividend per share for the year 2016. For example, AGL Resources, Inc.'s average annual growth rate of 3.9% is derived as follows: 3.9% = (($2.346 / $1.080) ^ (1 / 20.083) -1).

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II
I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Two-Stage Growth Discounted Cash Flow Model Using I/B/E/S Projected Five-Year Growth
In Earnings Per Share and Annual Growth in Natural Gas Revenues

Proxy Group of Twenty Value Line Gas Companies

	Year		Energen Corp.	Indiana Energy, Inc.	Laclede Gas Company	MCN Corp.	New Jersey Resources Corp.	NICOR, Inc.	Northwest Natural Gas Company
Indicated Annual Dividend per Share at November 30, 1996			$1.200	$1.140	$1.260	$0.970	$1.560	$1.320	$1.200
Dividends per Share	1996	(1)	1.208	1.144	1.264	0.977	1.567	1.326	1.205
	1997		1.305	1.198	1.312	1.062	1.647	1.395	1.264
	1998		1.409	1.254	1.362	1.154	1.731	1.468	1.326
	1999		1.522	1.313	1.414	1.254	1.819	1.544	1.391
	2000		1.644	1.375	1.468	1.363	1.912	1.624	1.459
	2001		1.776	1.440	1.524	1.482	2.010	1.708	1.530
	2002	(2)	1.854	1.503	1.591	1.547	2.098	1.783	1.597
	2003		1.937	1.571	1.663	1.617	2.192	1.863	1.669
	2004		2.026	1.643	1.739	1.691	2.293	1.949	1.746
	2005		2.115	1.715	1.816	1.765	2.394	2.035	1.823
	2006		2.193	1.778	1.883	1.830	2.483	2.110	1.890
	2007		2.272	1.842	1.951	1.896	2.572	2.186	1.958
	2008		2.352	1.906	2.019	1.962	2.662	2.263	2.027
	2009		2.432	1.971	2.088	2.029	2.753	2.340	2.096
	2010		2.503	2.028	2.149	2.088	2.833	2.408	2.157
	2011		2.586	2.095	2.220	2.157	2.926	2.487	2.228
	2012		2.666	2.160	2.289	2.224	3.017	2.564	2.297
	2013		2.754	2.231	2.365	2.297	3.117	2.649	2.373
	2014		2.842	2.302	2.441	2.371	3.217	2.734	2.449
	2015		2.933	2.376	2.519	2.447	3.320	2.821	2.527
	2016		3.027	2.452	2.600	2.525	3.426	2.911	2.608
Average Annual Growth Rate (3)			4.7%	3.9%	3.7%	4.9%	4.0%	4.0%	3.9%

Notes: (1) Dividends per share for the years 1996-2001 are developed using I/B/E/S projected five-year growth in earnings per share as shown on page 12 of this Exhibit.
(2) Dividends per share for the years 2002-2016 are developed using the annual growth in natural gas revenues as shown on page 12 of this Exhibit.
(3) Average annual growth rate is the compound annual growth rate from the indicated annual dividend per share at November 30, 1996 to the projected dividend per share for the year 2016. For example, Energen Corp.'s average annual growth rate of 4.7% is derived as follows: 4.7% = (($3.027 / $1.200) ^ (1 / 20.083) -1).

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II
I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Two-Stage Growth Discounted Cash Flow Model Using I/B/E/S Projected Five-Year Growth
In Earnings Per Share and Annual Growth in Natural Gas Revenues

	Year		ONEOK, Inc.	Peoples Energy Corp.	Piedmont Natural Gas Company	South Jersey Industries, Inc.	Washington Gas Light Company	WICOR Inc.	Average for the Proxy Group of Seven Gas Distribution Companies	Average for the Proxy Group of Twenty Value Line Gas Distribution Companies
			Proxy Group of Twenty Value Line Gas Companies							
Indicated Annual Dividend per Share at November 30, 1996			$1.200	$1.840	$1.160	$1.440	$1.140	$1.680		
Dividends per Share	1996	(1)	1.207	1.846	1.166	1.444	1.144	1.693		
	1997		1.285	1.914	1.241	1.495	1.191	1.849		
	1998		1.369	1.985	1.320	1.547	1.240	2.019		
	1999		1.458	2.058	1.404	1.601	1.291	2.205		
	2000		1.553	2.134	1.494	1.657	1.344	2.408		
	2001		1.654	2.213	1.590	1.715	1.399	2.630		
	2002	(2)	1.727	2.310	1.660	1.790	1.461	2.746		
	2003		1.805	2.414	1.735	1.871	1.527	2.870		
	2004		1.888	2.525	1.815	1.957	1.597	3.002		
	2005		1.971	2.636	1.895	2.043	1.667	3.134		
	2006		2.044	2.734	1.965	2.119	1.729	3.250		
	2007		2.118	2.832	2.036	2.195	1.791	3.367		
	2008		2.192	2.931	2.107	2.272	1.854	3.485		
	2009		2.267	3.031	2.179	2.349	1.917	3.603		
	2010		2.333	3.119	2.242	2.417	1.973	3.707		
	2011		2.410	3.222	2.316	2.497	2.038	3.829		
	2012		2.485	3.322	2.388	2.574	2.101	3.948		
	2013		2.567	3.432	2.467	2.659	2.170	4.078		
	2014		2.649	3.542	2.546	2.744	2.239	4.208		
	2015		2.734	3.655	2.627	2.832	2.311	4.343		
	2016		2.821	3.772	2.711	2.923	2.385	4.482		
Average Annual Growth Rate (3)			4.3%	3.6%	4.3%	3.6%	3.7%	5.0%	4.0%	4.1%

Notes: (1) Dividends per share for the years 1996-2001 are developed using I/B/E/S projected five-year growth in earnings per share as shown on page 13 of this Exhibit.
(2) Dividends per share for the years 2002-2016 are developed using the annual growth in natural gas revenues as shown on page 13 of this Exhibit.
(3) Average annual growth rate is the compound annual growth rate from the indicated annual dividend per share at November 30, 1996 to the projected dividend per share for the year 2016. For example, ONEOK, Inc.'s average annual growth rate of 4.3% is derived as follows: 4.3% = (($2.821 / $1.200) ^ (1 / 20.083) - 1).

Source of Information: Standard & Poor's Compustat Services, Inc., Utility Compustat II
I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Development of Growth Rates Based on I/B/E/S Projected Five-Year Growth in Earnings per Share
and Annual Growth in Natural Gas Revenues for Use in the Two-Stage Growth Discounted Cash Flow Model

Proxy Group of Twenty Value Line Gas Companies

Year		AGL Resources, Inc.	Atmos Energy Corp.	Bay State Gas Company	Brooklyn Union Gas Company	Cascade Natural Gas Company	Connecticut Energy Corp.	Connecticut Natural Gas Corp.
1996	(1)	4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
1997		4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
1998		4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
1999		4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
2000		4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
2001		4.9%	9.2%	4.5%	5.5%	5.3%	5.0%	4.0%
2002	(2)	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
2003		4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
2004		4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
2005		4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
2006		3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
2007		3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%
2008		3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
2009		3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%
2010		2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
2011		3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
2012		3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
2013		3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
2014		3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
2015		3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
2016	(3)	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%

Notes: (1) I/B/E/S Projected Five-Year Growth in Earnings per Share.
(2) From page 14 of this Exhibit.
(3) Growth rate for the year 2016 assumed to be equal to growth rate for the year 2015.

Source of Information: I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Development of Growth Rates Based on I/B/E/S Projected Five-Year Growth in Earnings per Share
and Annual Growth in Natural Gas Revenues for Use in the Two-Stage Growth Discounted Cash Flow Model

Proxy Group of Twenty Value Line Gas Companies

Year		Energen Corp.	Indiana Energy, Inc.	Laclede Gas Company	MCN Corp.	New Jersey Resources Corp.	NICOR, Inc.	Northwest Gas Company
1996	(1)	8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
1997		8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
1998		8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
1999		8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
2000		8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
2001		8.0%	4.7%	3.8%	8.7%	5.1%	5.2%	4.9%
2002	(2)	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
2003		4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
2004		4.6%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
2005		4.4%	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
2006		3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
2007		3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%
2008		3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
2009		3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%
2010		2.9%	2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
2011		3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
2012		3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
2013		3.3%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
2014		3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
2015		3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
2016	(3)	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%

Notes: (1) I/B/E/S Projected Five-Year Growth in Earnings per Share.
(2) From page 14 of this Exhibit.
(3) Growth rate for the year 2016 assumed to be equal to growth rate for the year 2015.

Source of Information: I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Development of Growth Rates Based on I/B/E/S Projected Five-Year Growth in Earnings per Share
and Annual Growth in Natural Gas Revenues for Use in the Two-Stage Growth Discounted Cash Flow Model

Proxy Group of Twenty Value Line Gas Companies

Year		ONEOK, Inc.	Peoples Energy Corp.	Piedmont Natural Gas Company	South Jersey Industries, Inc.	Washington Gas Light Company	WICOR Inc.
1996	(1)	6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
1997		6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
1998		6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
1999		6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
2000		6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
2001		6.5%	3.7%	6.4%	3.5%	4.1%	9.2%
2002	(2)	4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
2003		4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
2004		4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
2005		4.4%	4.4%	4.4%	4.4%	4.4%	4.4%
2006		3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
2007		3.6%	3.6%	3.6%	3.6%	3.6%	3.6%
2008		3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
2009		3.4%	3.4%	3.4%	3.4%	3.4%	3.4%
2010		2.9%	2.9%	2.9%	2.9%	2.9%	2.9%
2011		3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
2012		3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
2013		3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
2014		3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
2015		3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
2016	(3)	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%

Notes: (1) I/B/E/S Projected Five-Year Growth in Earnings per Share.
(2) From page 14 of this Exhibit.
(3) Growth rate for the year 2016 assumed to be equal to growth rate for the year 2015.

Source of Information: I/B/E/S Custom Report, November 14, 1996
The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Development of Annual Growth in Natural Gas Revenues
for Use in the Two-Stage Growth Discounted Cash Flow Model

	1	2	3	4
Years	Domestic Gas Consumption (TCF)	Price of Natural Gas to Endusers ($ per MCF)	Total Industry Revenue (1) (Billions of Dollars)	Growth Rate (2)
2001	24.14	$5.07	$122.39	
2002	24.53	5.21	127.80	4.4%
2003	24.88	5.37	133.61	4.5%
2004	25.33	5.52	139.82	4.6%
2005	25.70	5.68	145.98	4.4%
2006	25.88	5.85	151.40	3.7%
2007	25.97	6.04	156.86	3.6%
2008	26.09	6.22	162.28	3.5%
2009	26.22	6.40	167.81	3.4%
2010	26.13	6.61	172.72	2.9%
2011	26.16	6.82	178.41	3.3%
2012	26.10	7.05	184.01	3.1%
2013	26.08	7.29	190.12	3.3%
2014	26.05	7.53	196.16	3.2%
2015	26.01	7.78	202.36	3.2%
2016	NA	NA	NA	3.2% (2)

Notes: (1) Column 1 * Column 2.
(2) Growth rate for the year 2016 assumed to be equal to growth rate for the year 2015.

Source of Information: The WEFA Group

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model

Line No.		Proxy Group of Seven Gas Distribution Companies	Proxy Group of Twenty Value Line Gas Distribution Companies
1.	Prospective Yield on A Rated Public Utility Bonds (1)	7.6 %	7.6 %
2.	Adjustment to Reflect Bond Rating Difference	0.0 (3)	0.0 (2)
3.	Adjusted Prospective Yield	7.6 %	7.6 %
4.	Equity Risk Premium (4)	4.2	4.3
5.	Risk Premium Derived Common Equity Cost Rate	11.8 %	11.9 %

Notes: (1) Average forecast based upon five quarterly estimates of A rated seasoned public utility bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated December 1, 1996. The estimates are detailed below.

Fourth Quarter 1996	7.7 %
First Quarter 1997	7.7
Second Quarter 1997	7.6
Third Quarter 1997	7.6
Fourth Quarter 1997	7.5
Average	7.6 %

(2) No adjustment necessary since the proxy group's average bond rating by Moody's is A2.
(3) One-sixth of the average yield spread of A over Aa public utility bonds of 0.18% (from page 5 of this Schedule) (1 / 6 x 0.18% = 0.030%, rounded to 0.0%) in order to reflect the average A1/A2 Moody's bond rating of the proxy group.
(4) From page 8 of this Schedule.

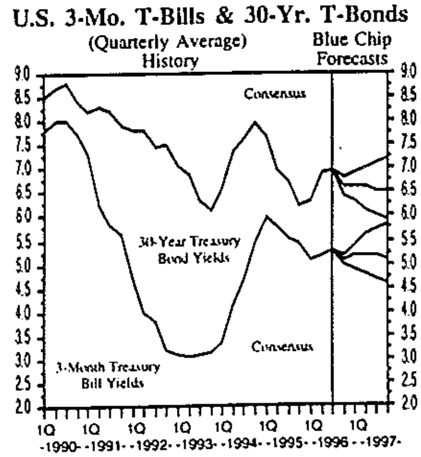
Consensus Forecasts Of U.S. Interest Rates And Key Assumptions[1]

	History								Consensus Forecasts - Quarterly Avg.				
	Week Ending				Month			Latest Q	4Q	1Q	2Q	3Q	4Q
Interest Rates	Nov.22	Nov.15	Nov.8	Nov.1	Oct.	Sep.	Aug.	3Q 1996	1996	1997	1997	1997	1997
Federal Funds Rate	5.41	5.21	5.32	5.27	5.24	5.30	5.22	5.31	5.3	5.3	5.3	5.3	5.3
Prime Rate	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.25	8.3	8.3	8.3	8.3	8.2
LIBOR, 3-mo.	5.50	5.50	5.53	5.53	5.54	5.54	5.52	5.52	5.5	5.6	5.6	5.5	5.5
Commercial Paper, 1-Mo.	5.40	5.39	5.38	5.37	5.37	5.46	5.39	5.43	5.4	5.4	5.5	5.4	5.4
Treasury Bill Yield, 3-Mo.	5.18	5.17	5.17	5.18	5.12	5.24	5.19	5.24	5.1	5.2	5.2	5.2	5.1
Treasury Bill Yield, 6-Mo.	5.26	5.28	5.28	5.31	5.32	5.45	5.34	5.44	5.3	5.3	5.3	5.3	5.3
Treasury Bill Yield, 1-Yr.	5.42	5.41	5.44	5.48	5.65	5.83	5.67	5.78	5.5	5.6	5.6	5.5	5.5
Treasury Note Yield, 2-Yr.	5.68	5.70	5.76	5.81	5.91	6.23	6.03	6.18	5.8	5.8	5.8	5.8	5.7
Treasury Note Yield, 3-Yr.	5.79	5.81	5.89	5.97	6.08	6.41	6.21	6.36	5.9	5.9	5.9	5.9	5.8
Treasury Note Yield, 5-Yr.	5.94	5.97	6.05	6.15	6.27	6.60	6.39	6.54	6.1	6.1	6.1	6.1	6.0
Treasury Note Yield, 10-Yr.	6.16	6.18	6.30	6.42	6.53	6.83	6.64	6.78	6.3	6.3	6.3	6.3	6.3
Treasury Bond Yield, 30-Yr.	6.43	6.45	6.57	6.71	6.81	7.03	6.84	6.97	6.6	6.6	6.6	6.5	6.5
Corporate Aaa Bond Yield	7.05	7.08	7.18	7.28	7.39	7.66	7.46	7.59	7.3	7.3	7.3	7.3	7.2
A Utility Bond Yield	7.48	7.52	7.59	7.73	7.83	8.06	7.87	8.00	7.7	7.7	7.6	7.6	7.5
Home Mortgage Rate	7.53	7.59	7.67	7.78	7.92	8.23	8.00	8.16	7.8	7.7	7.7	7.7	7.5

	History								Consensus Forecasts - Quarterly Avg.				
	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Key Assumptions	1994	1995	1995	1995	1995	1996	1996	1996	1996	1997	1997	1997	1997
Fed's Trade-Weighted $ Index	88.9	86.4	82.5	84.1	84.4	86.4	87.5	87.1	88.0	88.5	88.9	89.0	88.9
Real Gross Domestic Product	3.0	0.4	0.7	3.8	0.3	2.0	4.7	2.0	2.1	2.1	2.0	2.0	2.2
GDP Price Index	2.3	3.4	2.4	2.1	2.1	2.3	2.2	1.9	2.3	2.5	2.5	2.4	2.4
Consumer Price Index	2.4	2.7	3.5	2.1	2.4	3.2	3.9	2.3	3.0	3.1	3.0	2.9	2.9

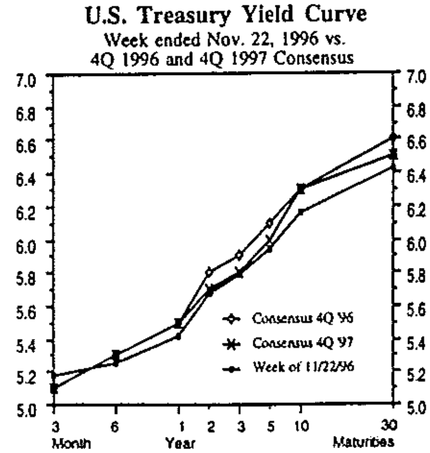
[1]Panel members' forecasts are on pages 4 through 8. Historical data for interest rates (except LIBOR) is from Federal Reserve Statistical Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal* and Telerate. Definitions of interest rates reported here are same as those in FRSR H.15. All Treasury yields are reported on a constant maturity basis. Historical data for Trade-weighted U.S. $ Index is from FRSR G.5 and Fed Bulletin. Historical data for real chain-weighted GDP and GDP chained price index are from Bureau of Economic Analysis (BEA). Consumer Price Index history from "Survey of Current Business," U.S. Department of Commerce.

U.S. 3-Mo. T-Bills & 30-Yr. T-Bonds

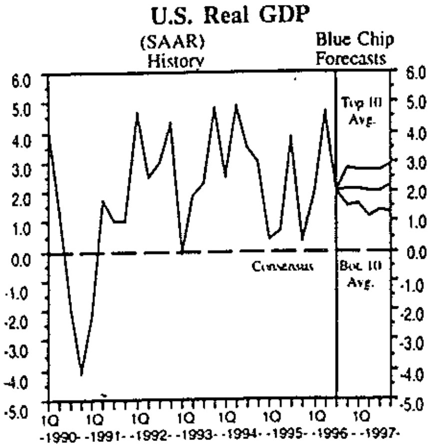


U.S. Treasury Yield Curve

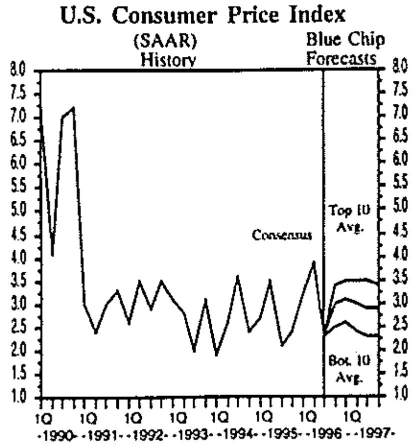
Week ended Nov. 22, 1996 vs. 4Q 1996 and 4Q 1997 Consensus



U.S. Real GDP



U.S. Consumer Price Index



BLUE CHIP FINANCIAL FORECASTS

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Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Comparison of Bond Ratings and Business Position for
the Proxy Group of Seven Gas Distribution Companies and the
Proxy Group of Twenty Value Line Gas Distribution Companies

	November 1996 Moody's Bond Rating		November 1996 Standard & Poor's Bond Rating		Standard & Poor's Business Position (2)	
	Bond Rating	Numerical Weighting (1)	Bond Rating	Numerical Weighting (1)		
Proxy Group of Seven Gas Distribution Companies						
Bay State Gas Company	A2	6.0	A	6.0	Average	1.0
Cascade Natural Gas Company	Baa1	8.0	BBB	9.0	Low Average	0.8
Connecticut Energy Corp. (3)	A3	7.0	A-	7.0	Average	1.0
Connecticut Natural Gas Corp.	A3	7.0	A-	7.0	Average	1.0
Energen Corporation (4)	A1	5.0	NR	--	Average	1.0
Indiana Energy, Inc. (5)	Aa3	4.0	AA-	4.0	High Average	1.2
Laclede Gas Company	Aa3	4.0	AA-	4.0	Average	1.0
Average	A2	6.0	A	6.2	Average	1.0
Proxy Group of Twenty Value Line Gas Distribution Companies						
AGL Resources Inc.	A2	6.0	A-	7.0	Low Average	0.8
Atmos Energy Corp.	NR	--	NR	--	Not Rated	--
Bay State Gas Company	A2	6.0	A	6.0	Average	1.0
Brooklyn Union Gas Company	A1	5.0	A	6.0	Somewhat Above Average	1.4
Cascade Natural Gas Company	Baa1	8.0	BBB	9.0	Low Average	0.8
Connecticut Energy Corp. (3)	A3	7.0	A-	7.0	Average	1.0
Connecticut Natural Gas Corp.	A3	7.0	A-	7.0	Average	1.0
Energen Corporation (4)	A1	5.0	NR	--	Average	1.0
Indiana Energy, Inc. (5)	Aa3	4.0	AA-	4.0	High Average	1.2
Laclede Gas Company	Aa3	4.0	AA-	4.0	Average	1.0
MCN Corporation (6)	A2	6.0	A	6.0	Average	1.0
New Jersey Resources Corp. (7)	A2	6.0	A	6.0	High Average	1.2
NICOR, Inc. (8)	Aa1	2.0	AA	3.0	Above Average	1.6
Northwest Natural Gas Company	A2	6.0	A	6.0	High Average	1.2
ONEOK Inc.	A3	7.0	A-	7.0	Average	1.0
Peoples Energy Corp. (9)	Aa3	4.0	AA-	4.0	High Average/ Average	1.1
Piedmont Natural Gas Company	A2	6.0	A	6.0	Average	1.0
South Jersey Industries, Inc. (10)	Baa1	8.0	BBB+	8.0	High Average	1.2
Washington Gas Light Company	Aa2	3.0	AA-	4.0	High Average	1.2
WICOR, Inc. (11)	Aa3	4.0	AA-	4.0	High Average	1.2
Average	A1/A2	5.5	A	5.8	High Average/ Average	1.1

Notes:
(1) From page 4 of this Schedule.
(2) From page 19 of SCHEDULE FJH-2.
(3) Ratings and business position are those of Southern Connecticut Gas Company.
(4) Ratings and business position are those of Alabama Gas Corporation.
(5) Ratings and business position are those of Indiana Gas Company Inc.
(6) Ratings and business position are those of Michigan Consolidated Gas Company.
(7) Ratings and business position are those of New Jersey Natural Gas Company.
(8) Ratings and business position are those of Northern Illinois Gas Company.
(9) Ratings and business position are a composite of those of North Shore Gas Company and Peoples Gas Light & Coke Company.
(10) Ratings and business position are those of South Jersey Gas Company.
(11) Ratings and business position are those of Wisconsin Gas Company.

Source of Information: Moody's Bond Survey
Standard & Poor's Bond Guide

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings and
Standard & Poor's Business Position

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

Numerical Weighting	Standard & Poor's Business Position
1.6	Above Average
1.4	Somewhat Above Average
1.2	High Average
1.0	Average
0.8	Low Average
0.6	Somewhat Below Average
0.4	Below Average

Moody's
Comparison of Interest Rate Trends
for Investor-Owned Public Utility Companies
for the Twelve Months Ending November 1996 (1)

Years	Aaa Rated Public Utilities	Aa Rated Public Utilities	A Rated Public Utilities	Baa Rated Public Utilities	Spread on Public Utility Bonds: A over Aa	Spread on Public Utility Bonds: Baa over A
Nov. 1995	7.13 %	7.22 %	7.43 %	7.81 %		
Dec. 1995	6.94	7.03	7.23	7.63		
Jan. 1996	6.92	7.02	7.22	7.64		
Feb. 1996	7.11	7.70	7.37	7.78		
Mar. 1996	7.45	7.55	7.73	8.15		
Apr. 1996	7.60	7.70	7.89	8.32		
May 1996	7.73	7.79	7.98	8.45		
Jun. 1996	7.83	7.87	8.06	8.51		
Jul. 1996	7.78	7.83	8.02	8.44		
Aug. 1996	7.59	7.66	7.84	8.25		
Sep. 1996	7.76	7.84	8.01	8.41		
Oct. 1996	7.50	7.60	7.77	8.15		
Spot 11/21/96	7.13 %	7.24 %	7.41 %	7.80 %	0.17 %	0.39 %
Average of Last 3 Months	7.62 %	7.70 %	7.87 %	8.27 %	0.17 %	0.40 %
Average of Last 6 Months	7.70 %	7.77 %	7.95 %	8.37 %	0.18 %	0.42 %
Average of Last 12 Months	7.45 %	7.57 %	7.71 %	8.13 %	0.14 %	0.42 %
Average Spread (2)					0.17 %	0.41 %

Notes: (1) All yields are distributed yields.
(2) Equal weight has been given to the 12-month average, 6-month average, 3-month average and spot yield spread. This provides recognition of current conditions, but does not place undue emphasis thereon.

Source of Information: Moody's Credit Perspectives

Moody's Long-Term Corporate Bond Yield Averages

Bonds Included

INDUSTRIALS

Aaa

Bristol-Myers Squibb Co.	7.15	06/15/23	Aaa
Johnson & Johnson	6.73	11/15/23	Aaa
Johnson & Johnson	8.72	11/01/24	Aaa
Merck & Co.	6.30	01/01/26	Aaa
United Parcel Service of America, Inc.	8.375	04/01/20	Aaa

Aa

American Telephone & Telegraph Co.	8.125	07/15/24	Aa3
du Pont (E.I.) de Nemours & Co.	7.50	03/01/33	Aa3
du Pont (E.I.) de Nemours & Co.	7.95	01/15/23	Aa3
Eli Lilly & Co.	7.125	06/01/25	Aa3
Kimberly-Clark Corp.	7.875	02/01/23	Aa2
McDonald's Corp.	7.375	07/15/33	Aa2
McDonald's Corp.	7.05	07/15/23	Aa2
Mobil Corp.	8.625	08/15/21	Aa2
Motorola Inc.	7.50	05/15/25	Aa3
Procter & Gamble Co.	7.375	03/01/23	Aa2
Toys 'R' Us	8.75	09/01/21	Aa3
Wal-Mart Stores Inc.	6.75	10/15/23	Aa2
Wal-Mart Stores Inc.	8.50	9/15/24	Aa2

A

American Home Products Corp.	7.25	03/01/23	A2
Anheuser Busch Companies, Inc.	7.375	07/01/23	A1
Atlantic Richfield Co.	8.75	03/01/32	A2
Boeing Co.	8.75	08/15/21	A1
Caterpillar Inc.	8.00	02/15/23	A2
Coca-Cola Enterprises Inc.	6.75	09/15/23	A3
Dow Chemical Co.	7.375	03/01/23	A1
Eastman Chemical Co.	8.75	01/15/24	A3
Ford Motor Co.	7.125	11/15/25	A1
General Motors Corp.	7.375	09/01/25	A3
GTE Corp.	8.75	11/01/21	A3
International Business Machines Corp.	7.00	10/30/25	A1
International Paper Co.	6.875	11/01/23	A3
Lockhead MArtin Corp.	7.75	05/01/26	A3
MCI Communications Corp.	7.75	03/23/25	A2
New York Times	8.25	03/15/25	A1
Penney (J.C.) Inc.	7.125	11/15/23	A1
Seagram Ltd.	8.35	01/15/22	A2
Texaco Capital Inc.	6.875	08/15/23	A1
United Technologies Corp.	8.75	03/01/21	A2

PUBLIC UTILITIES

Aaa

BellSouth Telecommunications, Inc.	6.75	10/15/33	Aaa
Chesapeake & Potomac Tel. of Virginia	7.00	07/15/25	Aaa
Chesapeake & Potomac Tel. of Virginia	7.875	01/15/22	Aaa
New Jersey Bell Telephone Co.	7.25	03/01/23	Aaa
New Jersey Bell Telephone Co.	6.80	12/15/24	Aaa
Ohio Bell Telephone Co.	7.85	12/15/22	Aaa
Wisconsin Bell Telephone Co.	6.75	08/15/24	Aaa

Aa

Bell Telephone Co. of Pennsylvania	7.375	03/15/33	Aa1
Citizens Utilities Co.	7.68	10/01/34	Aa3
Dayton Power & Light Co.	7.875	02/15/24	Aa3
Duke Power Co.	7.375	03/01/23	Aa2
Illinois Bell Telephone Co.	7.25	03/15/24	Aa1
Michigan Bell Telephone Co.	7.50	02/15/23	Aa1
New England Tel. & Tel. Co.	7.875	09/01/22	Aa2
Pacific Bell	7.125	03/15/26	Aa3
Pacific Bell	6.625	10/15/34	Aa3
US West Communications Inc.	6.875	09/15/33	Aa3
Wisconsin Electric Power Co.	7.75	01/15/23	Aa2

A

Alabama PowerCo.	7.45	07/01/23	A1
Baltimore Gas & Electric Co.	7.50	03/01/23	A1
Carolina Power & Light Co.	7.50	03/01/23	A2
Consolidated Edison Co. of N.Y., Inc.	8.05	12/15/27	A1
Florida Power & Light Co.	7.625	06/01/24	A1
Georgia Power Co.	7.75	04/01/23	A1
Houston Lighting &Power Co.	7.75	03/15/23	A2
New York Telephone Co.	7.625	02/01/23	A2
Northern States Power Co.	7.125	07/01/25	A1
Pacific Gas & Electric Co.	7.25	03/01/26	A2
Pennsylvania Power & Light Co.	7.875	02/01/23	A3
Public Service Electric & Gas Co.	7.50	03/01/23	A3
Southern California Edison Co.	7.125	07/15/25	A2
Southern California Gas Co.	6.875	11/01/25	A2
Southwestern Bell Telephone Co.	7.625	03/01/23	A1
Union Electric Co.	8.25	10/15/22	A1
Virginia Electric & Power Co.	6.75	10/01/23	A2
West Penn Power Co.	7.875	09/01/22	A1

Moody's Long-Term Corporate Bond Yield Averages

Bonds Included (continued)

INDUSTRIALS

Baa

Apache Corp.	7.95	04/15/26	Baa3
Burlington Northern Inc.	7.50	07/15/23	Baa2
Cox Communications Inc.	7.625	06/15/25	Baa2
Dayton Hudson Corp.	7.875	06/15/23	Baa1
Fruit of the Loom	7.375	11/15/23	Baa3
Georgia-Pacific Corp.	8.25	03/01/23	Baa3
James River Corp.	7.75	11/15/23	Baa3
Litton Industries Inc.	7.75	03/15/26	Baa3
Northrop Grumman Corp	9.375	10/15/24	Baa3
Ralston Purina Co.	8.125	02/01/23	Baa1
Phillips Petroleum Co.	8.49	01/01/23	Baa1
Union Carbide Corp.	8.75	08/01/22	Baa2

PUBLIC UTILITIES

Baa

Arizona Public Service Co.	8.00	02/01/25	Baa1
Arkansas Power & Light Co.	7.00	10/01/23	Baa2
Boston Edison Co.	7.80	03/15/23	Baa2
Commonwealth Edison Co.	7.75	07/15/23	Baa2
Connecticut Light & Power Co.	7.50	07/01/23	Baa1
Gulf States Utilities Co.	8.70	04/01/24	Baa3
Illinois Power Co.	8.00	02/15/23	Baa2
Pacific Gas Transmission Co.	7.875	06/01/25	Baa1
Philadelphia Electric Co.	7.75	03/01/23	Baa1
Texas Utilities Electric Co.	7.875	03/01/23	Baa2
UtiliCorp United Inc.	8.00	03/01/23	Baa3

Moody's Long-Term Corporate Bond Yield Averages

Profile

	Average Coupon (%)	Average Remaining Maturity (Years)	Average Duration (Years)
Industrials			
Aaa	7.45	27.25	11.75
Aa	7.70	29.00	11.67
A	7.79	27.00	11.32
Baa	8.15	27.50	11.00
Utilities			
Aaa	7.65	28.75	11.96
Aa	7.73	31.08	12.03
A	7.93	27.50	11.37
Baa	8.31	27.25	11.07
Composite			
Aaa	7.55	28.00	11.86
Aa	7.72	30.04	11.85
A	7.86	27.25	11.35
Baa	8.23	27.38	11.04

As of July, 1996

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Judgment of Equity Risk Premium for the
Proxy Group of Seven Gas Distribution Companies
and the Proxy Group of Twenty Value Line Gas Distribution Companies

Line No.		Proxy Group of Seven Gas Distribution Companies	Proxy Group of Twenty Value Line Gas Distribution Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1)	3.6 %	3.9 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	4.7	4.7
3.	Average equity risk premium	4.2 %	4.3 %

Notes: (1) From page 9 of this Schedule.
(2) From page 10 of this Schedule.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the Proxy Group of Seven Gas Distribution Companies
and the Proxy Group of Twenty Value Line Gas Distribution Companies

Line No.		Proxy Group of Seven Gas Distribution Companies	Proxy Group of Twenty Value Line Gas Distribution Companies
1.	Arithmetic mean total return rate on the Standard & Poor's 500 Composite Index - 1926-1995 (1)	12.5 %	12.5 %
2.	Arithmetic mean total return rate on the Salomon Brothers Long-Term High-Grade Corporate Bond Index 1926-1995 (1)	(6.0)	(6.0)
3.	Historical Equity Risk Premium	6.5 %	6.5 %
4.	Forecasted 3-5 year Total Annual Market Return (2)	12.9 %	12.9 %
5.	Prospective Yield an Aaa Rated Corporate Bonds (3)	(7.3)	(7.3)
6.	Forecasted Equity Risk Premium	5.6 %	5.6 %
7.	Average of Historical and Forecasted Equity Risk Premium (4)	6.1 %	6.1 %
8.	Adjusted Value Line Beta (5)	0.59	0.64
9.	Beta Adjusted Equity Risk Premium	3.6 %	3.9 %

Notes:
(1) From Stocks, Bonds, Bills and Inflation - 1996 Yearbook - Market Results for 1926-1995, Ibbotson Associates, Inc., Chicago, IL 1995.

(2) From note 1, page 4 of SCHEDULE FJH-15 .

(3) Average forecast based upon five quarterly estimates of Aaa rated corporate bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated December 1, 1996 (see page 2 of this Schedule). The estimates are detailed below.

Fourth Quarter 1996	7.3 %
First Quarter 1997	7.3
Second Quarter 1997	7.3
Third Quarter 1997	7.3
Fourth Quarter 1997	7.2
Average	7.3 %

(4) Average of the Historical Equity Risk Premium of 6.5% from Line No. 3 and the Forecasted Equity Risk Premium of 5.6% from Line No. 6 ((6.5% + 5.6%) / 2 = 6.05%, rounded to 6.1%).

(5) From page 11 of this Schedule.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Derivation of Mean Equity Risk Premium Based on a Study
Using Holding Period Returns of Public Utilities

Line No.		Over A Rated Public Utility Bonds AUS Consultants - Utility Services Study (1) 1
Time Period		1928-1995
1.	Arithmetic Mean Holding Period Returns (2): Standard & Poor's Public Utility Index	11.2 %
2.	Salomon Brothers Long-Term High-Grade Corporate Bond Index	(6.0)
3.	Equity Risk Premium	5.2
4.	Adjustment to reflect yield spread between A rated public utility bonds and bonds used in the study	(0.5) (3)
5.	Adjusted Equity Risk Premium	4.7 %

Notes: (1) S&P Public Utility Index and Long-Term Corporate Bonds (Salomon Brothers Long-Term High-Grade Corporate Bond Index year-by-year total returns 1928-1995, AUS Consultants - Utility Services, 1996.
(2) Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.
(3) Spread calculated as the difference in the arithmetic mean yields on A rated public utility bonds of 6.52% and Aaa and Aa rated corporate bonds as a proxy for the Salomon Brothers Long-Term High-Grade Corporate Bond Index of 6.05% for the years 1928-1995, inclusive, 0.47%, rounded to 0.5%.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Value Line Adjusted Betas for the
Proxy Group of Seven Gas Distribution Companies
and the Proxy Group of Twenty Value Line Gas Distribution Companies

	Value Line Adjusted Beta
Proxy Group of Seven Gas Distribution Companies	
Bay State Gas Company	0.55
Cascade Natural Gas Company	0.55
Connecticut Energy Corp.	0.65
Connecticut Natural Gas Corp.	0.55
Energen Corporation	0.65
Indiana Energy, Inc.	0.65
Laclede Gas Company	0.55
Average	0.59
Proxy Group of Twenty Value Line Gas Distribution Companies	
AGL Resources, Inc.	0.75
Atmos Energy Corp.	0.65
Bay State Gas Company	0.55
Brooklyn Union Gas Company	0.60
Cascade Natural Gas Company	0.55
Connecticut Energy Corp.	0.65
Connecticut Natural Gas Corp.	0.55
Energen Corporation	0.65
Indiana Energy, Inc.	0.65
Laclede Gas Company	0.55
MCN Corporation	0.70
New Jersey Resources Corp.	0.65
NICOR, Inc.	0.70
Northwest Natural Gas Company	0.45
ONEOK Inc.	0.80
Peoples Energy Corp.	0.80
Piedmont Natural Gas Company	0.65
South Jersey Industries, Inc.	0.55
Washington Gas Light Company	0.70
WICOR, Inc.	0.60
Average	0.64

Source of Information: Value Line Investment Survey, September 27, 1996

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Indicated Common Equity Cost Rate Through Use
of the Capital Asset Pricing Model for the
Proxy Group of Seven Gas Distribution Companies and the
Proxy Group of Twenty Value Line Gas Distribution Companies

Line No.		Proxy Group of Seven Gas Distribution Companies	Proxy Group of Twenty Value Line Gas Distribution Companies
	Traditional Capital Asset Pricing Model		
1.	Risk-Free Rate (1)	6.6 %	6.6 %
2.	Average Company-Specific Market Premium (2)	4.0	4.3
3.	Capital Asset Pricing Model Derived Company Equity Cost Rate	10.6 %	10.9 %
	Empirical Capital Asset Pricing Model		
4.	Risk-Free Rate (1)	6.6 %	6.6 %
5.	Average Company-Specific Market Premium (3)	4.7	5.0
6.	Capital Asset Pricing Model Derived Company Equity Cost Rate	11.3 %	11.6 %

Notes: (1) Developed in note 2 of page 4 of this Exhibit.
(2) Developed on page 2 of this Exhibit.
(3) Developed on page 3 of this Exhibit.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Indicated Common Equity Cost Rate Through Use
of the Capital Asset Pricing Model

	Value Line Adjusted Beta	Company-Specific Risk Premium Based on Market Premium of 6.8% (1)	CAPM Result Including Risk-Free Rate of 6.6% (2)
Traditional Capital Asset Pricing Model (3)			
Proxy Group of Seven Gas Distribution Companies			
Bay State Gas Company	0.55	3.7 %	10.3 %
Cascade Natural Gas Company	0.55	3.7	10.3
Connecticut Energy Corp.	0.65	4.4	11.0
Connecticut Natural Gas Corp.	0.55	3.7	10.3
Energen Corporation	0.65	4.4	11.0
Indiana Energy, Inc.	0.65	4.4	11.0
Laclede Gas Company	0.55	3.7	10.3
Average	0.59	4.0 %	10.6 %
Proxy Group of Twenty Value Line Gas Distribution Companies			
AGL Resources, Inc.	0.75	5.1 %	11.7 %
Atmos Energy Corp.	0.65	4.4	11.0
Bay State Gas Company	0.55	3.7	10.3
Brooklyn Union Gas Company	0.60	4.1	10.7
Cascade Natural Gas Company	0.55	3.7	10.3
Connecticut Energy Corp.	0.65	4.4	11.0
Connecticut Natural Gas Corp.	0.55	3.7	10.3
Energen Corporation	0.65	4.4	11.0
Indiana Energy, Inc.	0.65	4.4	11.0
Laclede Gas Company	0.55	3.7	10.3
MCN Corporation	0.70	4.8	11.4
New Jersey Resources Corp.	0.65	4.4	11.0
NICOR, Inc.	0.70	4.8	11.4
Northwest Natural Gas Company	0.45	3.1	9.7
ONEOK Inc.	0.80	5.4	12.0
Peoples Energy Corp.	0.80	5.4	12.0
Piedmont Natural Gas Company	0.65	4.4	11.0
South Jersey Industries, Inc.	0.55	3.7	10.3
Washington Gas Light Company	0.70	4.8	11.4
WICOR, Inc.	0.60	4.1	10.7
Average	0.64	4.3 %	10.9 %

See page 4 for notes.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Indicated Common Equity Cost Rate Through Use
of the Capital Asset Pricing Model

	Value Line Adjusted Beta	Company-Specific Risk Premium Based on Market Premium of 6.8% (1)	CAPM Result Including Risk-Free Rate of 6.6% (2)
Empirical Capital Asset Pricing Model (4)			
Proxy Group of Seven Gas Distribution Companies			
Bay State Gas Company	0.55	4.5 %	11.1 %
Cascade Natural Gas Company	0.55	4.5	11.1
Connecticut Energy Corp.	0.65	5.0	11.6 %
Connecticut Natural Gas Corp.	0.55	4.5	11.1
Energen Corporation	0.65	5.0	11.6
Indiana Energy, Inc.	0.65	5.0	11.6
Laclede Gas Company	0.55	4.5	11.1
Average	0.59	4.7 %	11.3 %
Proxy Group of Twenty Value Line Gas Distribution Companies			
AGL Resources, Inc.	0.75	5.5 %	12.1 %
Atmos Energy Corp.	0.65	5.0	11.6
Bay State Gas Company	0.55	4.5	11.1
Brooklyn Union Gas Company	0.60	4.8	11.4
Cascade Natural Gas Company	0.55	4.5	11.1
Connecticut Energy Corp.	0.65	5.0	11.6
Connecticut Natural Gas Corp.	0.55	4.5	11.1
Energen Corporation	0.65	5.0	11.6
Indiana Energy, Inc.	0.65	5.0	11.6
Laclede Gas Company	0.55	4.5	11.1
MCN Corporation	0.70	5.3	11.9
New Jersey Resources Corp.	0.65	5.0	11.6
NICOR, Inc.	0.70	5.3	11.9
Northwest Natural Gas Company	0.45	4.0	10.6
ONEOK Inc.	0.80	5.8	12.4
Peoples Energy Corp.	0.80	5.8	12.4
Piedmont Natural Gas Company	0.65	5.0	11.6
South Jersey Industries, Inc.	0.55	4.5	11.1
Washington Gas Light Company	0.70	5.3	11.9
WICOR, Inc.	0.60	4.8	11.4
Average	0.64	5.0 %	11.6 %

See page 4 for notes.

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Development of the Market-Required Rate of Return on Common Equity Using
the Capital Asset Pricing Model for
the Proxy Group of Seven Gas Distribution Companies and the
Proxy Group of Twenty Value Line Gas Distribution Companies
Adjusted to Reflect a Forecasted Risk-Free Rate and Market Return

Notes:

(1) From the twelve previous month-end (Nov. '95 - Oct. '96), as well as a recently available (Nov. 29, 1996), Value Line Summary & Index, a forecasted 3-5 year total annual market return of 12.9% can be derived by averaging the 12-month, 6-month, 3-month and spot forecasted total 3-5 year total appreciation, converting it into an annual market appreciation and adding the Value Line average forecasted annual dividend yield.

The 3-5 year average total market appreciation of 50%, produces a four-year average annual return of 10.67% $((1.50^{.25}) - 1)$. When the average annual forecasted dividend yield of 2.23% is added, a total average market return of 12.90%, (2.23% + 10.67%) is derived.

The 12-month, 6-month, 3-month and spot forecasted total market return of 12.9% minus the risk-free rate of 6.6% (developed in Note 2) is 6.3% (12.9% - 6.6%). The Ibbotson Associates calculated market premium of 7.3% for the period 1926-1995 results from a total market return of 12.5% less the average income return on long-term U.S. Government Securities of 5.2% (12.5% - 5.2% = 7.3%). This is then averaged with the 6.3% Value Line market premium resulting in a 6.8% market premium. The 6.8% market premium is then multiplied by the beta in column 1 of pages 2 and 3 of this Schedule.

(2) Average forecast based upon five quarterly estimates of 30-year Treasury Bond yields per the consensus of nearly 50 economists reported in the Blue Chip Financial Forecasts dated December 1, 1996 (see page 2 of SCHEDULE FJH -14). The estimates are detailed below:

	Treasury Bond Yield 30-Year
Fourth Quarter 1996	6.6%
First Quarter 1997	6.6
Second Quarter 1997	6.6
Third Quarter 1997	6.5
Fourth Quarter 1997	6.5
Average	6.6%

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

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

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

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

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

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

Source of Information: Value Line Summary & Index
Blue Chip Financial Forecasts, December 1, 1996
Value Line Investment Survey, September 27, 1996
Stocks, Bonds, Bills and Inflation - 1996 Yearbook Market Results for 1926-1995 Ibbotson Associates, Inc., Chicago, IL

Associated Natural Gas Company
A Division of Arkansas Western Gas Company
Analysis of Variability in Key Interest Rate Benchmarks
Between November 1991 and October 1996

	Discount Rate	90-Day T-Bill	5-Yr T-Note	10-Yr T-Bond	30-Yr T-Bond	Moody's A Rated Utility
Nov-91	4.58 %	4.56 %	6.62 %	7.42 %	7.92 %	9.05 %
Dec-91	4.11	4.07	6.19	7.09	7.70	8.88
Jan-92	3.50	3.80	6.24	7.03	7.58	8.84
Feb-92	3.50	3.84	6.58	7.34	7.85	8.93
Mar-92	3.50	4.04	6.95	7.54	7.97	8.97
Apr-92	3.50	3.75	6.78	7.48	7.96	8.93
May-92	3.50	3.63	6.69	7.39	7.89	8.87
Jun-92	3.50	3.66	6.48	7.26	7.84	8.78
Jul-92	3.02	3.21	5.84	6.84	7.60	8.57
Aug-92	3.00	3.13	5.60	6.59	7.39	8.44
Sep-92	3.00	2.91	5.38	6.42	7.34	8.40
Oct-92	3.00	2.86	5.60	6.59	7.53	8.54
Nov-92	3.00	3.13	6.04	6.87	7.61	8.63
Dec-92	3.00	3.22	6.08	6.77	7.44	8.43
Jan-93	3.00	3.00	5.83	6.60	7.34	8.27
Feb-93	3.00	2.93	5.43	6.26	7.09	8.04
Mar-93	3.00	2.95	5.19	5.98	6.82	7.90
Apr-93	3.00	2.87	5.13	5.97	6.85	7.81
May-93	3.00	2.96	5.20	6.04	6.92	7.86
Jun-93	3.00	3.07	5.22	5.96	6.81	7.75
Jul-93	3.00	3.04	5.09	5.81	6.63	7.54
Aug-93	3.00	3.02	5.03	5.68	6.32	7.25
Sep-93	3.00	2.95	4.73	5.36	6.00	7.04
Oct-93	3.00	3.02	4.71	5.33	5.94	7.03
Nov-93	3.00	3.10	5.06	5.72	6.21	7.30
Dec-93	3.00	3.06	5.15	5.77	6.25	7.34
Jan-94	3.00	2.98	5.09	5.75	6.29	7.33
Feb-94	3.00	3.25	5.40	5.97	6.49	7.47
Mar-94	3.00	3.50	5.94	6.48	6.91	7.85
Apr-94	3.00	3.68	6.52	6.97	7.27	8.22
May-94	3.24	4.14	6.78	7.18	7.41	8.33
Jun-94	3.50	4.14	6.70	7.10	7.40	8.31
Jul-94	3.50	4.33	6.91	7.30	7.58	8.47
Aug-94	3.76	4.48	6.88	7.24	7.49	8.41
Sep-94	4.00	4.62	7.08	7.46	7.71	8.64
Oct-94	4.00	4.95	7.40	7.74	7.94	8.86
Nov-94	4.40	5.29	7.72	7.96	8.08	8.98
Dec-94	4.75	5.60	7.78	7.81	7.87	8.76
Jan-95	4.75	5.71	7.76	7.78	7.85	8.73
Feb-95	5.25	5.77	7.37	7.47	7.61	8.52
Mar-95	5.25	5.73	7.05	7.20	7.45	8.37
Apr-95	5.25	5.65	6.86	7.06	7.36	8.27
May-95	5.25	5.67	6.41	6.63	6.95	7.91
Jun-95	5.25	5.47	5.93	6.17	6.57	7.60
Jul-95	5.25	5.50	6.01	6.28	6.72	7.70
Aug-95	5.25	5.40	6.24	6.49	6.86	7.83
Sep-95	5.25	5.28	6.00	6.20	6.55	7.62
Oct-95	5.25	5.28	5.86	6.04	6.37	7.46
Nov-95	5.25	5.36	5.69	5.93	6.26	7.43
Dec-95	5.25	5.14	5.51	5.71	6.06	7.23
Jan-96	5.24	5.00	5.36	5.65	6.05	7.22
Feb-96	5.00	4.83	5.38	5.81	6.24	7.37
Mar-96	5.00	4.96	5.97	6.27	6.60	7.73
Apr-96	5.00	4.95	6.30	6.51	6.79	7.89
May-96	5.00	5.02	6.48	6.74	6.93	7.98
Jun-96	5.00	5.09	6.69	6.91	7.06	8.06
Jul-96	5.00	5.15	6.64	6.87	7.03	8.02
Aug-96	5.00	5.05	6.39	6.64	6.84	7.85
Sep-96	5.00	5.09	6.60	6.83	7.03	8.01
Oct-96	5.00	4.99	6.27	6.53	6.81	7.77

Absolute Change in % from 11/91 to 10/96	0.42 %	0.43 %	(0.35) %	(0.89) %	(1.11) %	(1.28) %
% Change in Cost from 11/91 to 10/96	9.17 %	9.43 %	(5.29) %	(11.99) %	(14.02) %	(14.14) %
Standard Deviation	0.9563	1.0155	0.7792	0.6758	0.6032	0.5722

Source of information: Federal Reserve Statistical Release
Moody's Bond Survey

A Division of Arkansas Western Gas Company
Comparable Earnings Analysis
for a Non-Utility Group Comparable to the
Proxy Group of Seven Gas Distribution Companies

Non-Utility Group Comparable to the Proxy Group of Seven Gas Distribution Companies (1)	Adj. Beta	Unadj. Beta	Residual Standard Error	Rate of Return on Net Worth 1991	1992	1993	1994	1995	3-Year Average (2)	4-Year Average (2)	5-Year Average (2)	5-Year Projected (3)
Ameron Int'l	0.80	0.68	2.7712	5.3 %	5.0 %	6.2 %	7.2 %	9.3 %	4.5 %	4.0 %	3.7 %	12.5 %
Amoco Corp.	0.70	0.53	2.2146	8.6	11.1	12.8	12.4	12.5	12.6	12.2	11.5	16.0
Angelica Corp.	0.80	0.65	2.8081	11.9	7.3	5.8	6.7	5.2	5.9	6.3	7.4	10.5
Atlantic Richfield	0.70	0.51	2.2030	14.7	15.7	13.3	14.0	19.7	15.7	15.7	15.5	18.5
Bandag, Inc.	0.80	0.63	2.4312	26.8	24.8	19.1	21.7	24.3	21.7	22.5	23.3	19.0
Barnes Group	0.65	0.46	2.1825	11.5	5.9	4.8	19.0	21.3	15.0	12.8	12.5	21.5
Brown-Forman 'B'	0.70	0.53	2.5784	19.9	19.1	32.3	27.2	25.2	28.2	28.2	26.0	23.5
Buckeye Partners L.P	0.55	0.30	2.3619	12.1	15.3	17.8	19.6	19.0	18.8	17.9	16.8	16.5
Carpenter Technology	0.75	0.61	2.6555	10.7	6.7	12.1	16.0	18.0	15.4	13.2	12.7	20.0
Cedar Fair L.P.	0.70	0.49	2.3324	65.2	52.8	50.3	52.8	43.6	48.9	49.9	52.9	31.0
Cen. Newspapers 'A'	0.65	0.43	2.5747	8.9	8.7	11.4	14.2	15.6	13.7	12.5	11.8	15.0
Chemed Corp.	0.80	0.66	2.4230	7.9	10.7	12.5	8.4	10.0	10.3	10.4	9.9	15.5
Chevron Corp.	0.75	0.59	2.3394	8.8	11.6	13.0	11.6	13.7	12.8	12.5	11.7	17.0
Cincinnati Financial	0.65	0.40	2.5235	7.1	7.1	7.6	7.2	5.9	6.9	7.0	7.0	7.5
Commerce Bancshs.	0.80	0.62	2.3443	11.8	11.9	12.2	13.2	12.2	12.5	12.4	12.3	12.0
Commercial Metals	0.75	0.58	2.6705	5.9	5.9	9.2	10.8	13.5	11.2	9.9	9.1	12.5
Curtiss-Wright	0.60	0.37	2.2545	14.2	12.8	9.8	12.3	10.6	10.9	11.4	11.9	11.0
Donaldson Co.	0.65	0.46	2.8113	17.3	16.1	16.2	16.8	17.4	16.8	16.6	16.8	16.5
Excel Realty Trust	0.80	0.67	2.5909	0.3	6.5	11.7	14.1	10.3	12.0	10.7	8.6	15.0
Federal Rlty. Inv. T	0.65	0.41	2.6684	3.1	3.7	6.2	6.6	7.0	6.6	5.9	5.3	10.5
Florida Rock	0.75	0.55	2.7532	1.2	2.3	3.5	9.0	11.3	7.9	6.5	5.5	10.5
FMC Corp.	0.80	0.68	2.5370	NMF	NMF	NMF	41.6	33.0	37.3	37.3	37.3	19.0
Giant Food 'A'	0.80	0.64	2.7874	14.0	12.3	12.8	12.5	12.4	12.7	12.5	12.9	13.5
Harland (John H.)	0.80	0.68	2.5178	20.1	22.1	28.6	25.2	20.7	26.9	25.3	24.0	27.0
Harsco Corp.	0.75	0.58	2.7018	16.0	18.0	13.3	13.9	16.9	13.6	15.1	15.3	17.5
Int'l Aluminum	0.70	0.47	2.7001	6.1	0.9	3.6	7.1	11.9	7.5	5.9	5.9	11.5
JSB Financial	0.55	0.29	2.4910	4.7	7.9	6.3	7.2	6.5	6.7	7.0	6.5	8.5
Lee Enterprises	0.80	0.66	2.4744	17.2	18.9	18.5	21.0	18.8	19.4	19.3	18.9	18.0
Longs Drug Stores	0.80	0.62	2.3210	13.1	11.6	10.0	9.3	10.4	9.9	10.3	10.9	12.0
MGI Properties	0.55	0.30	2.6126	4.2	5.0	4.7	5.7	6.2	5.5	5.4	5.2	7.5
Mobil Corp.	0.70	0.50	2.2668	11.0	7.9	12.1	11.2	13.2	12.2	11.1	11.1	17.0
Murphy Oil Corp.	0.80	0.63	2.4331	4.8	4.6	6.3	6.8	2.7	5.3	5.1	5.0	10.0
National Service Ind	0.75	0.59	2.3829	10.9	10.9	10.7	11.4	12.6	11.6	11.4	11.3	13.0
NCH Corp.	0.80	0.63	2.2800	14.4	13.1	10.6	11.3	12.1	11.3	11.8	12.3	11.0
New Plan R'lty Trust	0.65	0.46	2.4413	12.0	10.7	8.6	9.8	11.0	9.8	10.0	10.4	11.0
Old Kent Financial	0.80	0.62	2.5818	13.8	15.3	15.7	15.8	14.0	15.2	15.2	14.9	14.0

A Division of Arkansas Western Gas Company
Comparable Earnings Analysis
for a Non-Utility Group Comparable to the
Proxy Group of Seven Gas Distribution Companies

Non-Utility Group Comparable to the Proxy Group of Seven Gas Distribution Companies (1)	Adj. Beta	Unadj. Beta	Residual Standard Error	Rate of Return on Net Worth: 1991	1992	1993	1994	1995	3-Year Average (2)	4-Year Average (2)	5-Year Average (2)	5-Year Projected (3)
Pennzoil Company	0.70	0.52	2.6483	2.5	1.5	5.2	NMF	NMF	5.2	3.4	3.1	16.0
Penn. R.E.I.T.	0.60	0.34	2.3908	20.6	17.4	21.7	15.7	21.0	19.5	19.0	19.3	33.5
Santa Fe Pac. Pipeli	0.55	0.25	2.2434	20.5	23.0	25.8	25.5	27.5	26.3	26.3	25.5	28.0
ServiceMaster L.P.	0.75	0.60	2.6106	65.7	45.1	40.0	45.5	23.0	36.2	38.4	43.9	22.0
Tootsie Roll Ind.	0.70	0.48	2.7359	17.4	17.6	16.7	15.8	14.8	15.8	16.2	16.5	12.5
Unitrin, Inc.	0.80	0.63	2.6933	7.3	8.4	4.5	8.4	9.9	7.6	7.8	7.7	10.5
Vulcan Materials	0.65	0.44	2.4298	7.7	13.0	12.6	13.4	20.9	15.6	15.0	13.5	17.0
West Co.	0.60	0.37	2.6945	8.4	11.7	12.0	12.0	11.3	11.8	11.8	11.1	11.5
Wilmington Trust	0.80	0.63	2.6213	20.8	20.9	20.9	20.4	19.6	20.3	20.5	20.5	19.5
Winn-Dixie Stores	0.80	0.64	2.7135	19.9	22.7	24.0	20.4	18.7	21.0	21.5	21.1	15.5
Average for the Non-Utility Group	0.72	0.53	2.5175									
Average for the Proxy Group of Seven Gas Distribution Companies	0.59	0.35 (4)	2.4854									
Median									12.7 %	12.5 %	12.1 %	15.3 %
Average of the Median Historical Returns										12.4 %		
Conclusion (5)												13.9 %

See page 5 for notes.

A Division of Arkansas Western Gas Company
Comparable Earnings Analysis
for a Non-Utility Group Comparable to the
Proxy Group of Twenty Value Line Gas Distribution Companies

Non-Utility Group Comparable to the Proxy Group of Twenty Value Line Gas Distribution Companies (6)	Adj. Beta	Unadj. Beta	Residual Standard Error	Rate of Return on Net Worth 1991	1992	1993	1994	1995	3-Year Average (2)	4-Year Average (2)	5-Year Average (2)	5-Year Projected (3)
Amoco Corp.	0.70	0.53	2.2146	8.6 %	11.1 %	12.8 %	12.4 %	12.5 %	7.5 %	7.0 %	6.4 %	16.0 %
ARCO Chemical	0.75	0.55	2.2333	11.1	15.5	13.6	17.4	25.8	18.9	18.1	16.7	22.0
Atlantic Richfield	0.70	0.51	2.2030	14.7	15.7	13.3	14.0	19.7	15.7	15.7	15.5	18.5
Bandag, Inc.	0.80	0.63	2.4312	26.8	24.8	19.1	21.7	24.3	21.7	22.5	23.3	19.0
Barnes Group	0.65	0.46	2.1825	11.5	5.9	4.8	19.0	21.3	15.0	12.8	12.5	21.5
Brown-Forman 'B'	0.70	0.53	2.5784	19.9	19.1	32.3	27.2	25.2	28.2	28.2	26.0	23.5
Buckeye Partners L.P	0.55	0.30	2.3619	12.1	15.3	17.8	19.6	19.0	18.8	17.9	16.8	16.5
Carpenter Technology	0.75	0.61	2.6555	10.7	6.7	12.1	16.0	18.0	15.4	13.2	12.7	20.0
Cedar Fair L.P.	0.70	0.49	2.3324	65.2	52.8	50.3	52.8	43.6	48.9	49.9	52.9	31.0
Cen. Newspapers 'A'	0.65	0.43	2.5747	8.9	8.7	11.4	14.2	15.6	13.7	12.5	11.8	15.0
Chemed Corp.	0.80	0.66	2.4230	7.9	10.7	12.5	8.4	10.0	10.3	10.4	9.9	15.5
Chevron Corp.	0.75	0.59	2.3394	8.8	11.6	13.0	11.6	13.7	12.8	12.5	11.7	17.0
Cincinnati Financial	0.65	0.40	2.5235	7.1	7.1	7.6	7.2	5.9	6.9	7.0	7.0	7.5
Commerce Bancshs.	0.80	0.62	2.3443	11.8	11.9	12.2	13.2	12.2	12.5	12.4	12.3	12.0
Commercial Metals	0.75	0.58	2.6705	5.9	5.9	9.2	10.8	13.5	11.2	9.9	9.1	12.5
Curtiss-Wright	0.60	0.37	2.2545	14.2	12.8	9.8	12.3	10.6	10.9	11.4	11.9	11.0
Excel Realty Trust	0.80	0.67	2.5909	0.3	6.5	11.7	14.1	10.3	12.0	10.7	8.6	15.0
Federal Rlty. Inv. T	0.65	0.41	2.6684	3.1	3.7	6.2	6.6	7.0	6.6	5.9	5.3	10.5
First Empire State	0.70	0.53	2.0760	12.5	15.6	14.1	16.3	15.5	15.3	15.4	14.8	12.5
FMC Corp.	0.80	0.68	2.5370	NMF	NMF	NMF	41.6	33.0	37.3	37.3	37.3	19.0
Harland (John H.)	0.80	0.68	2.5178	20.1	22.1	28.6	25.2	20.7	26.9	25.3	24.0	27.0
Hubbell Inc. 'B'	0.75	0.56	2.0939	17.5	17.4	11.9	17.5	18.3	15.9	16.3	16.5	18.5
Int'l Aluminum	0.70	0.47	2.7001	6.1	0.9	3.6	7.1	11.9	7.5	5.9	5.9	11.5
JSB Financial	0.55	0.29	2.4910	4.7	7.9	6.3	7.2	6.5	6.7	7.0	6.5	8.5
Kerr-McGee Corp.	0.85	0.71	2.6519	6.7	NMF	5.1	6.2	9.7	7.0	7.0	6.9	14.5
Kimco Realty	0.60	0.35	2.1259	- - -	12.3	9.4	12.8	11.9	11.4	11.6	11.6	13.5
Lee Enterprises	0.80	0.66	2.4744	17.2	18.9	18.5	21.0	18.8	19.4	19.3	18.9	18.0
Longs Drug Stores	0.80	0.62	2.3210	13.1	11.6	10.0	9.3	10.4	9.9	10.3	10.9	12.0
MGI Properties	0.55	0.30	2.6126	4.2	5.0	4.7	5.7	6.2	5.5	5.4	5.2	7.5
Mobil Corp.	0.70	0.50	2.2668	11.0	7.9	12.1	11.2	13.2	12.2	11.1	11.1	17.0
Murphy Oil Corp.	0.80	0.63	2.4331	4.8	4.6	6.3	6.8	2.7	5.3	5.1	5.0	10.0
National Service Ind	0.75	0.59	2.3829	10.9	10.9	10.7	11.4	12.6	11.6	11.4	11.3	13.0
NCH Corp.	0.80	0.63	2.2800	14.4	13.1	10.6	11.3	12.1	11.3	11.8	12.3	11.0
New Plan R'lty Trust	0.65	0.46	2.4413	12.0	10.7	8.6	9.8	11.0	9.8	10.0	10.4	11.0
Old Kent Financial	0.80	0.62	2.5818	13.8	15.3	15.7	15.8	14.0	15.2	15.2	14.9	14.0

A Division of Arkansas Western Gas Company
Comparable Earnings Analysis
for a Non-Utility Group Comparable to the
Proxy Group of Twenty Value Line Gas Distribution Companies

Non-Utility Group Comparable to the Proxy Group of Twenty Value Line Gas Distribution Companies (6)	Adj. Beta	Unadj. Beta	Residual Standard Error	Rate of Return on Net Worth 1991	1992	1993	1994	1995	3-Year Average (2)	4-Year Average (2)	5-Year Average (2)	5-Year Projected (3)
Pennzoil Company	0.70	0.52	2.6483	2.5	1.5	5.2	NMF	NMF	5.2	3.4	3.1	16.0
Penn. R.E.I.T.	0.60	0.34	2.3908	20.6	17.4	21.7	15.7	21.0	19.5	19.0	19.3	33.5
Santa Fe Pac. Pipeli	0.55	0.25	2.2434	20.5	23.0	25.8	25.5	27.5	26.3	26.3	25.5	28.0
ServiceMaster L.P.	0.75	0.60	2.6106	65.7	45.1	40.0	45.5	23.0	36.2	38.4	43.9	22.0
Simon Debartolo Grou	0.85	0.71	2.1736	--	--	--	NMF	NMF	NMF	NMF	NMF	NMF
St. Paul Cos.	0.85	0.70	2.4815	15.2	5.5	14.2	16.2	14.0	14.8	12.5	13.0	15.5
Unitrin, Inc.	0.80	0.63	2.6933	7.3	8.4	4.5	8.4	9.9	7.6	7.8	7.7	10.5
Vulcan Materials	0.65	0.44	2.4298	7.7	13.0	12.6	13.4	20.9	15.6	15.0	13.5	17.0
Weingarten Realty	0.60	0.33	2.1201	12.5	11.7	9.5	10.4	10.9	10.3	10.6	11.0	13.0
West Co.	0.60	0.37	2.6945	8.4	11.7	12.0	12.0	11.3	11.8	11.8	11.1	11.5
Wilmington Trust	0.80	0.63	2.6213	20.8	20.9	20.9	20.4	19.6	20.3	20.5	20.5	19.5
Average for the Non-Utility Group	0.72	0.52	2.4278									
Average for the Proxy Group of Twenty Value Line Gas Distribution Companies	0.64	0.41 (7)	2.3869									
Median									12.5 %	12.4 %	11.9 %	15.5 %
Average of the Median Historical Returns										12.3 %		
Conclusion (8)												13.9 %

See page 5 for notes.

Associated Natural Gas Company
A Dividion of Arkansas Western Gas Company
Comparable Earnings Analysis

Notes: (1) The criteria for selection of the non-utility group was that the non-utility companies be domestic and have a rate of return on net worth or partners' capital reported in Value Line Investment Survey. The non-utility group was selected based upon the proxy group of seven gas distribution companies' unadjusted beta range of 0.02 - 0.68 and residual standard error range of 2.1578 - 2.8130.

(2) Ending 1995.

(3) 1999-2001.

(4) The standard deviation of the proxy group of seven gas distribution companies' unadjusted beta is 0.1108

(5) Equal weight given to both the average of the 3, 4, and 5 year historical medians (12.4%) and 1999 - 2001 projected median rate of return on net worth (15.3%). Thus, 13.9% = ((12.4% + 15.3%) / 2).

(6) The criteria for selection of the non-utility group was that the non-utility companies be domestic and have a rate of return on net worth or partners' capital reported in Value Line Investment Survey. The non-utility group was selected based upon the proxy group of twenty Value Line gas distribution companies' unadjusted beta range of 0.09 - 0.73 and residual standard error range of 2.0722 - 2.7016.

(7) The standard deviation of the proxy group of twenty Value Line gas distribution companies' unadjusted beta is 0.1065.

(8) Equal weight given to both the average of the 3, 4, and 5 year historical medians (12.3%) and 1999 - 2001 projected median rate of return on net worth (15.5%). Thus, 13.9% = ((12.3% + 15.5%) / 2).

Source of Information: Value Line, Inc. September 15, 1996
Value Line Investment Survey