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INDIANA UTILITY
REGULATORY COMMISSION

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

VERIFIED PETITION OF WESTFIELD GAS, LLC, D/B/A CITIZENS GAS OF WESTFIELD FOR (1) AUTHORITY TO INCREASE RATES AND CHARGES FOR GAS UTILITY SERVICE AND APPROVAL OF A NEW SCHEDULE OF RATES AND CHARGES; (2) APPROVAL OF CERTAIN REVISIONS TO ITS TERMS AND CONDITIONS APPLICABLE TO GAS UTILITY SERVICE; AND (3) APPROVAL PURSUANT TO INDIANA CODE SECTION 8-1-2.5-6 OF AN ALTERNATIVE REGULATORY PLAN UNDER WHICH IT WOULD CONTINUE ITS ENERGY EFFICIENCY PROGRAM PORTFOLIO AND ENERGY EFFICIENCY RIDER	**))))))))))))))**	**CAUSE NO. 45761**

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR'S

PUBLIC'S EXHIBIT NO. 5: TESTIMONY OF OUCC WITNESS LEJA D. COURTER

December 2, 2022

Respectfully submitted,

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WESTFIELD GAS, LLC D/B/A CITIZENS GAS OF WESTFIELD
CAUSE NO. 45761
TESTIMONY OF OUCC WITNESS LEJA D. COURTER

I. INTRODUCTION

Q: Please state your name and business address.

A: My name is Leja D. Courter. My business address is 115 West Washington Street, Suite 1500 South, Indianapolis, IN 46204.

Q: By whom are you employed and in what capacity?

A: I am employed by the Indiana Office of Utility Consumer Counselor ("OUCC") as a Chief Technical Advisor. For a summary of my educational and professional experience, as well as my preparation for presenting testimony in this case, please see Appendix LDC-1 attached to my testimony. Appendix LDC-1 also includes the Discounted Cash Flow ("DCF") Model and Capital Asset Pricing Model ("CAPM") mechanics.

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to discuss the cost of equity, capital structure, fair value rate base, and fair return proposed by Westfield Gas, LLC d/b/a Citizens Gas of Westfield ("Westfield Gas" or "Petitioner"). My testimony addresses the OUCC's recommended cost of equity, capital structure, fair value rate base, fair return, and rate case expense.

Q: To the extent you do not address a specific item or adjustment, should that be construed to mean you agree with Petitioner's proposal?

A: No. Not addressing a specific item or adjustment Westfield Gas proposes does not indicate my agreement or approval. Rather, the scope of my testimony is limited to the specific items addressed herein.

Q: What are your recommendations in this Cause?

A: Based on the results of the Discounted Cash Flow ("DCF") model, Capital Asset Pricing Model ("CAPM") and macroeconomic analyses, I conclude a cost of equity of 9.40% is a reasonable and appropriate cost of equity for Westfield Gas. To further support the reasonableness of my proposed cost of equity, I address Petitioner's cost of equity methodologies and use of a Non-Utility proxy group. I accept Petitioner's proposed capital structure of 75% equity, 24.82% debt, and 0.18% customer deposits as reflected on Petitioner's Exhibit No. 5, Attachment SEK-1, page 1. I recommend a fair value rate base of $18,301,018 and fair cost of equity rate of 7.10%.

Q: What else are you addressing in your testimony?

A: Petitioner proposes rate case expenses of $425,500 and a 10% contingency of $42,550. OUCC witness LaCresha Vaulx describes why the 10% contingency should be disallowed. I recommend the remaining rate case expenses of $425,500 be equally shared between Westfield Gas' shareholder and Westfield Gas' customers.

Q: Please summarize your cost of equity testimony.

My estimate of Petitioner's cost of equity is 9.40%. I use both a DCF and a CAPM analyses to estimate Petitioner's cost of equity. My DCF and CAPM analyses indicate a cost of equity range of 9.0% to 9.4%. Given the current increase in interest rates, I am recommending a cost of equity at the high end of this range – 9.40%. A cost of common equity of 9.40% results in a weighted cost of capital of 7.94%. (Public's Exhibit No. 1, Attachment MHG-1, Schedule 8, sponsored by OUCC witness Mark Grosskopf.) This resulting overall cost of capital, if adopted by the Indiana Utility Regulatory Commission ("Commission"), will allow Westfield Gas to earn the prevailing opportunity cost of capital, maintain its financial integrity, and attract capital at reasonable terms.

II. WESTFIELD GAS' PROPOSED COST OF EQUITY

Q: What is Westfield Gas' current authorized cost of equity?

A: Westfield Gas' current fair rate of return is 7.11% as a result of a settlement agreement approved in the Commission's Order in Cause No. 44731. *In re Westfield Gas, LLC*, Cause No. 44731, Final Order p. 17 (Ind. Util. Regul. Comm'n Apr. 26, 2017.)

Q: What is Westfield Gas' proposed cost of equity?

A: Westfield Gas' witness McKenzie recommends a cost of equity of 10.9%. (Petitioner's Exhibit No. 3, page 8, line 2.)

Q: Why does your proposed cost of equity differ from Petitioner's proposed cost of equity?

A: My estimate of Westfield Gas' cost of equity is 150 basis points less than Petitioner's estimated cost of equity. Petitioner's use of

1) An excessive market return as result of using an inflated growth rate,

2) CAPM size adjustment,

3) inflated DCF results,

4) an Empirical CAPM ("ECAPM"),

5) a Risk Premium Method ("RPM") using the historical relationship between long-term utility yields and authorized returns on equity ("ROEs"), and

6) a non-utility proxy group,

produces unreasonably high cost of equity results, which for the reasons I discuss, should be disregarded.

Data on bond yields, dividend yields, inflation and economic growth do not support projections of a 10.9% rate of return. Moreover, regulated public utilities tend to be less risky than the market, and are not comparable to the companies in Petitioner's non-utility group.

As I further note in my testimony, Westfield Gas is the only Indiana gas utility, in the last decade, to request a return based on an inflated fair value rate base. I also note that Petitioner's proposed 10.9% rate of return would be higher than any cost of equity awarded to a natural gas utility in Indiana in more than a decade.

Q: Does Westfield Gas obtain capital financing under its own name or through its parent holding company, Westfield Utilities, LLC?

A: Westfield Gas obtains its capital financing through Westfield Utilities, LLC. (Attachment LDC-1, page 1; Petitioner's Response to OUCC Data Request ("DR") 9-24.) Westfield Utilities, LLC owns all the common stock of Westfield Gas. (*Id*., page 2; Petitioner's Response to OUCC DR 5-2.)

Q: Why is a 9.4% cost of equity reasonable?

A: I have reviewed Petitioner's proposed capital structure and overall cost of capital. I accepted Petitioner's proposed capital structure with 75% equity, 24.8% debt, and 0.18% customer deposits. This is a higher percentage of equity than companies in the gas proxy group ("Gas Group"), and since equity is inherently less risky than debt, Westfield Gas is less financially risky than the Gas Group.

To estimate the cost of equity for Petitioner, I applied the DCF Model and the CAPM to the same proxy Gas Group used by Mr. McKenzie. My DCF and CAPM analyses indicate a cost of equity range of 9.0% to 9.4%. Given the current increase in interest rates, I am recommending a COE at the high end of this range – 9.4%. Combined with Petitioner's capitalization percentages, my overall weighted cost of capital for Westfield Gas is 7.94% as indicated on Attachment LDC-2, page 1.

In my DCF analysis I used *Value Line's* historical and forecasted growth rates in earnings per share ("EPS"), dividends per share ("DPS"), and book value per share ("BVPS") for the Gas Group. (Attachment LDC-3, pages 1-8.) I also used analysts' projected earnings per share ("EPS") from Yahoo Finance, Zacks and S&P Cap IQ. I considered the Congressional Budget Office's ("CBO") long-term growth and inflation rates in the U.S. economy to produce a reasonable growth rate for Westfield Gas.

III. MACROECONOMIC TRENDS

Q: Do macroeconomic factors and trends influence the cost of equity?

A: Yes. The most noteworthy of these factors are interest rates, economic growth, and inflation.

Q: How do inflation and interest rates influence cost of equity estimates?

A: Anticipated inflation influences interest rates. Interest rates influence the cost of equity. Interest rates have been increasing and forecasted inflation is expected to increase over the short term.

Q: Please explain the increase in interest rates over the past two years.

A; Interest rates have increased for the past two years because of an improving economy and higher inflation. Real gross domestic product ("GDP") increased at an annual rate of 2.6% in the third quarter of 2022. Bureau of Economic Analysis, News Release, October 27, 2022. https://www.bea.gov/news/2022/gross-domestic-product-third-quarter-2022-advance-estimate. This economic recovery has led to greater business activity, higher levels of business and consumer spending, and increases in housing prices. The recovery of the economy puts upward pressure on interest rates by increasing the demand for capital.

Q: What has the Federal Reserve said about the current economic situation?

A: Inflation remains elevated, reflecting supply and demand imbalances related to the pandemic, higher food prices and energy prices, and broader price pressures. Russia's war against Ukraine is creating additional upward pressure on inflation and is weighing on global economic activity. (Attachment LDC-4, page 1; Federal Reserve Press Release, November 2, 2022.)

Q; Has the Federal Reserve attempted to control inflation?

A: Yes. The Federal Reserve has increased the discount rate multiple times in 2022 and increased the discount rate again on November 2. But the Federal Reserve's actions on the discount rate only impact short-term rates. Long-term rates are more a function of expected economic growth and expected inflation.

Q: Do you agree with Petitioner's assessment of forecasted inflation and long-term interest rates going forward?

A: No. I examined historical and projected rates of inflation from government sources, including the CBO. The CBO is not forecasting high inflation through 2032. The CBO's *The Budget and Economic Outlook: 2022 to 2032*, forecasts Core PCE

("Personal Consumption Expenditures") price inflation of 4.5% in 2022, 2.8% in 2023, 2.3% in 2024, and 2.1% or 2.0% between 2025 and 2032. (Attachment LDC-5, pages 6-7.) The full report may be viewed at: https://www.cbo.gov/publication/57950.

Q: Please discuss U.S. Treasury bond yields as an influencing factor on the cost of equity.

A: Bond yields are important factors influencing cost of equity. Yields on U.S. Treasury Bonds are commonly used to establish the risk-free rate of return in CAPM and other risk premium analyses. Changes in bond yields and interest rates affect investor expectations. Long-term Treasury bond yields have been in the 4.0% range recently. (Attachment LDC-6, page 2.)

Q: Have you reviewed information from the Federal Reserve regarding inflation?

A: Yes. The Federal Open Market Committee ("FOMC") held a meeting on September 20-21, 2022. The meeting participants submitted their projections of the mostly likely outcomes for gross domestic product ("GDP") and inflation for each year from 2022 to 2025. (https://www.federalreserve.gov/monetarypolicy/fomcprojtabl20220921.htm.) The median projections for Core PCE inflation were: 4.5% for 2022, 3.1% for 2023, 2.3% for 2024, and 2.1% for 2025. (*Id.*,Table 1.) On November 2, the FOMC raised the primary credit rate another 0.75 points. (Attachment LDC-4, page 3.)

Q: What conclusions have you reached regarding the macroeconomic trends that influence cost of equity?

A: Short-term inflation expectations are high and interest rates have been increasing. However, the FOMC seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. (*Id.*, page 1.)

Q: Have you considered these macroeconomic factors when deriving your cost of equity?

A: Yes. The growth rate of 6.0%, which I use in my Gas Group DCF analysis, is lower than the 9.3% nominal gross domestic product ("GDP") growth rate forecast by the CBO for 2022. (Attachment LDC-5, page 7.) However, Westfield Gas' new base rates will not go into effect until 2023. My 6.0% growth rate is higher than the 5.5% nominal GDP growth rate the CBO forecasts for 2023, and the 3.5% to 3.9% growth rate forecasts for 2024-2032. (*Id*.) The CBO's forecasted inflation, as measured by the Core PCE index, is 2.8% for 2023, and 2.3% or less through 2032. (*Id*.). Consequently, my recommended cost of equity of 9.40% is in line with current and projected economic conditions.

IV. PROXY GROUPS USED FOR THE OUCC'S COST OF EQUITY ANALYSES

Q: Can you apply the DCF model and CAPM directly to Westfield Gas?

A: No. Westfield Gas is not publicly traded. As a result, much of the data that would be available for publicly traded companies is not available for Westfield Gas. This fact makes it impractical to apply the DCF and CAPM directly to Westfield Gas. Therefore, I calculated Westfield Gas' cost of equity based on a proxy group of publicly traded utility companies.

Q: Please describe how you derived the proxy groups for your DCF and CAPM studies.

A: My Gas Group comprises the same companies as Petitioner's proxy group. Petitioner's testimony describes the Gas Group's selection criteria. (Petitioner's Exhibit No. 3, page 12, line 5 – page 13, line 12.) Petitioner also applied the DCF model to a Non-Utility Group. However, Mr. McKenzie states he did not rely on the Non-Utility Group analysis to arrive at Petitioner's recommended COE range of reasonableness. (Petitioner's Exhibit No. 3, page 65, lines 7-10.)

Q: Did you use the Non-Utility Group in your analysis?

A: No. Petitioner's Non-Utility Group comprises 56 publicly traded companies, including 3M Company, Coca-Cola, Comcast, McDonald's, Microsoft, PepsiCo, United Parcel Service, and Walmart. (Petitioner's Exhibit No. 3, Attachment AMM-10, pages 1-3.) These companies, and the rest of the companies in Petitioner's Non-Utility Group, face different risks than Westfield Gas and the companies in the regulated Gas Group. The utility industry has relatively low risk compared to the market. Petitioner's Non-Utility Group produces overstated cost of equity results, which the Commission should not consider.

Q: Please describe your approach to estimate Westfield Gas' cost of equity.

A: I relied on the DCF model and CAPM analysis to estimate Westfield Gas' cost of equity.

V. DISCOUNTED CASH FLOW ANALYSIS

Q: Please describe DCF Analysis.

A: DCF analysis helps investors determine the appropriate price to pay for particular assets, such as utility stocks. According to the DCF model, the current stock price is equal to the discounted value of all future dividends investors expect to receive from investment in the firm. Therefore, stockholders' returns result from current as well as future dividends. The model has been adapted for regulatory proceedings to determine the cost of utility equity capital. The DCF model is a model which maintains that the value (price) of any security or commodity is the discounted present value of all future cash flows. This discount rate equals the cost of capital with utility stocks and dividends as the relevant cash flows. A detailed description of the DCF mechanics is included in my Appendix LDC-1.

Q: Is the DCF model consistent with valuation techniques employed by investment firms?

A: Yes. Virtually all investment firms use some form of the DCF model as a valuation technique.

Q: What factors should be considered when applying the DCF methodology?

A: Current economic conditions and other information available to investors must be considered to accurately estimate investors' expectations. This information is used to estimate the dividend yield and expected growth rate.

Q: What dividend yields have you reviewed?

A: I calculated the dividend yields for the Gas Group companies using the most recent quarterly dividend listed on *Value Line*. I took the quarterly dividend times 4 to arrive at an annual dividend. I then divided the annual dividend by the 30-day, 90-day, and 180-day stock prices obtained from S&P Cap IQ. These dividend yields are provided on Attachment LDC-7, page 2. The median dividend yields range from 3.0% to 3.6%. The more recent dividend yields have trended higher, so I used a forward dividend yield of 3.4% for my Gas Group. (*Id*., page 1.) This forward dividend yield calculation applies the "half year method." (*Id*., page 2.)

Q: Please discuss the growth rate component of the DCF model.

A: This component is investors' expectation of the long-term dividend growth rate. Presumably, investors use some combination of historical and/or projected growth rates for earnings and dividends per share and for internal or book-value growth to access long-term growth potential.

Q: What growth data have you reviewed for the Gas Group?

A: I have reviewed *Value Line's* historical and projected growth rate estimates for EPS, DPS, and BVPS. I also used the average EPS growth-rate forecasts of Wall Street as provided by Yahoo, Zacks, and S&P Cap IQ. These services solicit five-year earnings growth-rate projections from securities analysts and publish the means and medians of these forecasts. I also analyzed prospective growth as measured by prospective earnings retention rates and earned returns on common equity.

Q: Please discuss historical growth in earnings and dividends.

A: Historical growth rates for EPS, DPS, and BVPS are readily available to investors, and are presumably important in forming expectations concerning future growth. However, past growth may not reflect future growth potential. According to the DCF model, the expected return on a security is equal to the sum of the dividend yield and the expected long-term growth in dividends. Therefore, to best estimate the cost of common equity capital using the DCF model, it is necessary to assess long-term growth rate expectations.

Q: Please discuss internal growth.

A: Internally generated growth is a function of the percentage of earnings retained with the firm (earnings retention rate) and the rate of return earned on those earnings (return on equity). The internal growth rate is computed as the retention rate times the return on equity. Internal growth is significant in determining long-run earnings and therefore, dividends.

Q: Why do you not rely exclusively on the EPS forecasts of Wall Street analysts in arriving at a DCF growth rate for the proxy group?

A: The appropriate growth in the DCF model is the *dividend* growth rate, not the EPS growth rate. However, over the long term, dividends and earnings will grow at a similar rate. Consequently, consideration must be given to the other indicators of growth, such as prospective dividend growth, internal growth, and projected earnings growth.

Q: Please discuss the historical growth of the companies in the proxy group, as provided by *Value Line*.

A: Attachment LDC-7, page 3, provides the 5- and 10-year historical growth rates for EPS, DPS, and BVPS for the proxy group companies, as published in *Value Line*. The median historical growth measures for EPS, DPS, and BVPS for the Gas Group range from 4.3% to 7.0%, with a 5.7% average.

Q; Please summarize *Value Line's* projected growth rates for the proxy group companies.

A: *Value Line's* projections of EPS, DPS, and BVPS growth are shown on Attachment LDC-7, page 3. The medians for projected growth range from 5.3% to 7.5%, with a mean average of the medians of 6.4%.

Q: Please discuss the sustainable growth rates.

A: The prospective sustainable growth rates for the proxy group companies are provided on Attachment LDC-7, page 3. These rates are measured by *Value Line's* average projected retention rate and return on shareholders' equity. (Attachment LDC-3, pages 1-8.) Sustainable growth is a primary driver of long-run earnings growth. The median prospective sustainable growth rate for the proxy group is 4.7%. (Attachment LDC-7, page 3.)

Q: Please assess growth rates for the proxy group as measured by analysts' forecasts of expected 5-year EPS growth.

A: Yahoo, Zacks, and S&P Cap IQ publish analysts' long-term EPS growth rate forecasts for the proxy group companies. These forecasts are provided on Attachment LDC-7, page 4. I have provided both the mean and median growth rates for the proxy group. There is overlap in analysts' coverage between the three services, and not all the companies have forecasts from the different services. Therefore, I have averaged the expected five-year EPS growth rates from the three services for each company to arrive at an expected EPS growth rate for each company. The mean/median of analysts' projected EPS growth rates for the proxy group are 6.0%/5.8%. (Attachment LDC-7, page 4.)

Q: Please summarize your analysis of the historical and prospective growth of the proxy group?

A: Attachment LDC-7, page 5 summarizes the DCF growth rate indicator for the proxy group. The historical growth rate for the proxy group is 5.7%. The average of the projected EPS, DPS, and BVPS growth rates from *Value Line* is 6.4%. *Value Line's* projected sustainable growth rate is 4.7%. The mean and median projected EPS growth rates of Wall Street analysts for the proxy group are 6.0% and 5.8%. Therefore, the range of projected growth rates is 4.7% to 6.4%. I use 6.0% as my DCF growth rate, which is in the upper end of the range of historic and projected growth rates for the proxy group.

Q: Please describe the results of your growth calculations.

A: My DCF-derived equity cost rates are summarized on Attachment LDC-7, page 1, and Table 1 below.

Table 1

DCF-Derived Cost of Equity

Forward Dividend Yield	3.4%
Growth Adjustment	6.0%
Cost of Equity	9.4%

VI. CAPITAL ASSET PRICING MODEL

Q: Please describe the CAPM.

A: The CAPM is another analysis frequently relied upon by this Commission to help determine a reasonable cost of equity capital. The CAPM is a risk premium approach to gauging a firm's cost of equity capital (K). According to the risk premium approach, the cost of equity capital is the sum of the interest rate on a risk-free bond (Rf) and a risk premium (RP). The CAPM's underlying assumption is the stock market compensates investors for risk that cannot be eliminated by means of a diversified stock portfolio. A detailed description of the CAPM mechanics is included in my Appendix LDC-1.

The yield on long-term U.S. Treasury securities is normally used as Rf. In the CAPM, two types of risk are associated with a stock: firm-specific risk or unsystematic risk, and market or systematic risk, which is measured by a firm's beta (β). The expected return on the stock market is represented by Rm. According to the CAPM, the expected return on a company's stock, which is also the equity cost rate (K), is equal to:

$$K = Rf + \beta * (Rm - Rf)$$

Q: Please discuss Attachment LDC-6.

A: Attachment LDC-6 provides the summary for my CAPM analysis. Page 1 shows the results, and the following pages contain the supporting data.

Q: Please discuss the risk-free interest rate (Rf).

A: The yield on long-term U.S. Treasury bonds is normally used as the risk-free rate of interest in the CAPM.

Q: What risk-free interest rate are you using in your CAPM?

A: I am using a risk-free interest rate of 4.0%. As shown of page 2 of Attachment LDC-6, the yield on 20-year U.S. Treasury bonds for the 13-week period indicated ranges from 3.53% to 4.50%. The mean during that period is 4.0%. Previously, I have used the normalized risk-free rate used by the investment advisory firm Kroll (formerly Duff & Phelps), which presently is 3.5%. (Attachment LDC-8, page 1.) Typically, U.S. Treasury securities are used as a proxy for the risk-free rate because the full faith and credit of the U.S. government backs them.

Q: Why did you use the yield on 20-year U.S. Treasury bonds in this Cause instead of the 3.5% normalized risk-free rate used by Kroll?

A: In June of this year, Kroll issued the following statement:

> Based on market conditions prevailing in mid-June 2022, Kroll is increasing the U.S. normalized risk-free rate from 3.0% to 3.5% but recommends using the spot 20-year U.S. Treasury yield, if it is higher than 3.5%, when developing USD-denominated discount rates as of June 16, 2022 and thereafter, until further guidance is issued. (Attachment LDC-8, page 1.)

As a result of this information, I used the mean of the yield on 20-year U.S. Treasury bonds as indicated on Attachment LDC-6, page 2.

Q: What betas are you using in your CAPM?

A: I used the betas from *Value Line* as indicated on Attachment LDC-6, page 3. The mean of the betas for the proxy group is 0.84.

Q: Please discuss the market risk premium.

A: The market risk premium is equal to the expected return on the stock market (Rm) minus the risk-free rate of interest (Rf). The market risk premium is the difference in the expected total return between investing in equities and investing in safe fixed-income assets, such as long-term government bonds.

Q: What market risk premium are you using in your CAPM?

A; I am using 6.0% as my market risk premium. Kroll recommends a market risk premium of 5.5%. (Attachment LDC-8, page 2.) KPMG recommends a market risk premium of 6.0%. (Attachment LDC-9, page 2.) I have used the more recent and higher market risk premium for my analysis.

Q: What cost of equity rate is indicated by your CAPM analysis?

A: The result of my CAPM analysis for the proxy group is summarized on Attachment LDC-6, page 1, and Table 2 below.

Table 2

CAPM Formula: K = Rf + β (Rm – Rf)

Risk-Free Rate (Rf)	**4.0%**
Beta (β)	**0.84**
Equity Risk Premium (Rm – Rf)	**6.0%**
Equity Cost Rate	**9.0%**

VII. OUCC'S ESTIMATED COST OF EQUITY

Q: Please summarize the results of your cost of equity analyses.

A: My DCF analysis indicates a 9.4% cost of equity for the proxy group. My CAPM analysis indicates an 9.0% cost of equity for the proxy group. Based on all the above, I recommend a 9.40% cost of equity.

Q: Given these results, what is your estimated cost of equity for the proxy group.

A: I conclude that the appropriate cost of equity rate is in the range of 9.0% to 9.4% for the companies in the proxy group. However, given the current increase in inflation and interest rates, I am using the high end of the range, 9.4%, for Westfield Gas. My recommended cost of equity is in line with the average authorized 9.42% cost of equity for natural gas rate cases decided from January through September 2022. (Attachment LDC-10, page 1.)

VIII. PETITIONER'S COST OF EQUITY ANALYSIS

Q: Please summarize Petitioner's cost of equity analysis.

A: Petitioner's estimated cost of equity is 10.9%. Petitioner's analysis uses a DCF model, a CAPM, a CAPM with size adjustment, an Empirical CAPM ("ECAPM"), risk premium and expected earning methods. Petitioner applies these models to the Gas Group and Non-Utility proxy groups. (Petitioner's Exhibit No. 3, page 7, lines 15-17.) Mr. McKenzie indicates he did not rely on his Non-Utility Group analysis to arrive at his recommended cost of equity range. (*Id*., page 65, lines 9-10.) Petitioner's cost of equity range is 9.6% to 10.9%. (*Id*., page 7, lines 24-25.)

Q: Do you agree with all the models Petitioner uses to determine Westfield Gas' return on equity?

A: No. I agree with the use of the CAPM and DCF models, without Petitioner's proposed adjustments to those models. For decades, the Commission has consistently and primarily used the DCF and CAPM models when setting the cost of equity. Cost of equity testimony filed by utilities, intervenors, and the OUCC includes the DCF and CAPM models. Other models are presented in testimony, but I am not aware of Commission decisions setting cost of equity rates of return outside the recommended DCF range. As explained later in my testimony, these methods, as presented by Petitioner, produce over-estimated costs of equity, and therefore, should not be used to determine Petitioner's reasonable cost of equity. As discussed below, there are several issues with the inputs, applications, and results of Petitioner's cost of equity models.

IX. PETITIONER'S DCF ANALYSIS

Q: What are the issues in Petitioner's DCF analysis.

A: Petitioner's DCF estimates in Petitioner's Exhibit No. 3, Attachment AMM-4, pages 2 and 3, are inflated because of Petitioner's exclusive reliance on projected EPS in its analysis. It is more appropriate, and consistent with the Commission's established cost of equity analysis, to rely on both historical and forecasted growth rates in EPS, DPS, and BVPS, as I have done in my DCF analysis. (Attachment LDC-7, page 3.)

Unlike the other analysts' services, *Value Line* also provides the DPS and BVPS along with the EPS. The median percentages for the projected EPS (7.5%) DPS (5.3%) and BVPS (6.5%) are shown on Attachment LDC-7, page 3. The average of these three *Value Line* projected growth rates is 6.4%. Using this projected growth rate of 6.4% along with Petitioner's dividend yield of 3.0% results in a DCF estimate of 9.4% - rather than Petitioner's *Value Line* proposal of 10.7%.

Q: What data should the Commission use to estimate growth (g) in a DCF analysis?

A: The Commission should follow its established practice, and review and give weight to *both* historical and forecasted data of growth rates in EPS, DPS, and BVPS.

Q: What other issues do you have with Petitioner's DCF analysis?

A: Petitioner uses an adjustment factor when calculating the sustainable growth rate on Petitioner's Exhibit No. 3, Attachment AMM-5, page 1. This adjustment factor has the effect of inflating the sustainable growth rate. However, as Petitioner notes, there are significant shortcomings with its sustainable growth rate and Petitioner gives less weight to those estimates. (Petitioner's Exhibit No. 3, page 46, lines 9-20.) Also, Table AMM-4 on Petitioner's Exhibit No. 3, page 48, apparently misstates the midpoint (median) of the growth rates. The percentages listed are the highest growth rates rather than the median.

Q: Please summarize your comments on Petitioner's DCF analysis.

A: The major reason for the difference between my DCF estimate and Petitioner's DCF estimate is Petitioner relied exclusively on projected EPS. Petitioner did not use historical data or projected DPS or BVPS consistent with the Commission's established cost of equity analysis. Consequently, Petitioner's proposed growth rate is inflated and unreasonable.

X. PETITIONER'S CAPM AND ECAPM ANALYSES

Q: Does the CAPM give a better indication of required returns than the DCF model?

A: Not necessarily. The CAPM is typically more controversial and less reliable than the DCF model. Eugene Brigham and Phillip Daves comment on the use of CAPM on pages 117-118 of their text Intermediate Financial Management (12nd Edition):

> When applied in practice, the CAPM appears to provide neat, precise answers to important questions about risk and required rates of return. However, the answers are less clear than they seem. **The simple truth is that we do not know precisely how to measure any of the inputs required to implement the CAPM.** These inputs should all be ex ante, yet only *ex-post* data is available. Furthermore, historical data on $r_{M,}$ and $r_{RF,}$ and betas vary greatly depending on the time period studied and the methods used to estimate them. **Thus, even though the CAPM appears to be precise, estimates of $\mathbf{r_i}$** found through its use are subject to potentially large errors. (**Emphasis** added, footnote omitted.)

Q: What are your issues with Petitioner's CAPM analysis?

A: Petitioner's market return (Rm) of 12.5% on Petitioner's Exhibit No. 3, Attachment AMM-6, pages 1 and 2, is overstated because of the inflated projected growth rates in column (b). According to footnote (b), Petitioner calculated the projected growth rate of 10.5% in column (b) by using earnings growth rates from IBES, *Value Line*, and Zacks *for dividend-paying stocks in the S&P 500*. (*Emphasis* added.) This information was confirmed in Petitioner's testimony, "To capture the expectations of today's investors in current capital markets, the expected market rate of return was estimated by conducting a DCF analysis on the dividend paying firms in the S&P 500." (Petitioner's Exhibit No. 3, page 50, lines 17-19.) If I am interpreting Petitioner's language correctly, it appears Petitioner has conducted a DCF analysis on hundreds of *non-utility* firms in various industries, with various risk profiles, and capital structures, and calculated a projected growth rate of 10.5%. This projected growth rate overstates by hundreds of basis points the median projected growth rates for the proxy group of natural gas utilities indicated on Attachment LDC-7, pages 3 and 4, ranging from 5.5% to 6.4%.

Q: What is the impact of using the inflated projected growth rate?

A: Petitioner's inflated projected growth rate impacts the cost of equity and the risk premium amount. For example, Atmos Energy is listed with a dividend yield of 2.0%, projected growth of 10.5%, a cost of equity of 12.5%, a risk-free rate of 3.3%, and a risk premium of 9.2%. (Petitioner's Exhibit No. 3, Attachment AMM-6, pages 1 and 2.) Using a reasonable 6.4% projected growth rate changes the cost of equity to 8.4%, and the risk premium changes from 9.2% to 5.1%, which is even lower than the 6.0% risk premium I recommended. (Attachment LDC-6, page 1.)

Q: Did Petitioner also propose a size adjustment to its CAPM?

A. Yes. I will address the size adjustment issue when I discuss the ECAPM next.

Q: Do you agree with Petitioner's ECAPM to estimate an appropriate cost of equity for Westfield Gas?

A: No. Petitioner's ECAPM suffers from the same projected growth rate issues I just discussed regarding Petitioner's CAPM analysis. (Petitioner's Exhibit No. 3, Attachment AMM-7, pages 1 and 2.)

Q: Has the Commission expressed an opinion on the use and results of an ECAPM approach?

A: Yes. The Commission has rejected the use of ECAPM in at least two previous Causes (Cause Nos. 40003 and 42359). In its Final Order in Cause No. 42359, the Commission affirmed its previous finding the ECAPM is unreliable for ratemaking purposes:

> With respect to the ECAPM analysis performed by Dr. Morin we note that the Commission rejected this model in Cause No. 40003, and found

> that: "the Empirical CAPM is not sufficiently reliable for ratemaking purposes." Cause No. 40003 at 32. We went on to conclude that the ECAPM ". . . would adjust, in essence, future expectations with regard to investor perceptions of relative risks for further change which may occur years hence." The Commission concluded that ". . . we do not believe exercises in approximating future cost of capital are conducive to such precise estimation as the Empirical CAPM would suggest." Id. We find that nothing presented in this Cause has changed our prior determination that ECAPM is not sufficiently reliable for ratemaking purposes and hereby reject the model in this proceeding.

In re PSI Energy, Cause No. 42359, Final Order, p. 56 (Ind. Util. Regulatory Comm'n May 18, 2004.)

Q: Do you agree with Petitioner's CAPM and ECAPM with size adjustment to estimate an appropriate cost of equity for Westfield Gas?

A: No. The applicability of a small size adjustment to regulated public utilities is questionable. Regulation reduces the financial risks faced by Petitioner. Annie Wong of Western Connecticut State University writes that business and financial risks are very similar among utilities regardless of size in *Utility Stock and the Size Effect: An Empirical Analysis:*

> The fact that the two samples show different, though weak, results indicates that utility and industrial stocks do not share the same characteristics. First, given firm size, utility stocks are consistently less risky than industrial stocks. Second, industrial betas tend to decrease with firm size, but utility betas do not. These findings may be attributed to the fact that all public utilities operate in an environment with regional monopolistic power and regulated financial structure. As a result, the business and financial risks are very similar among the utilities regardless of their size. Therefore, utility betas would not necessarily be related to firm size.
>
> The objective of this study is to examine if the size effect exists in the utility industry. After controlling for equity values, there is some weak evidence that firm size is a missing factor from the CAPM for industrial but not utility stocks. This implies that although the size phenomenon has been strongly documented for industrials, findings suggest that there is no need to adjust for the firm size in utility regulation. (Emphasis added.)

(Attachment LDC-11, page 4; Annie Wong, *"Utility Stock and the Size Effect: An Empirical Analysis,"* Journal of the Midwest Finance Association, 1993, page 98.)

Michael Paschall and George B. Hawkins, authors of *Do Smaller Companies Warrant a Higher Discount Rate for Risk?: The "Size Effect" Debate*, state that privately held companies should be analyzed individually to determine if a size premium is appropriate:

> A size premium does not automatically apply in every case. Each privately held company should be analyzed to determine if a size premium is appropriate in its particular case. There can be unusual circumstances where a small company has risk characteristics that make it far less risky than the average company, warranting the use of a very low risk premium. One possible example of this is a private water utility (monopoly situation, very low risk, near guarantee of payments).

Paschall and Hawkins, *Do Smaller Companies Warrant a Higher Discount Rate for Risk?: The "Size Effect" Debate*, CCH Business Valuation Alert, page 3, December 1999. (https://www.businessvalue.com/resources/Valuation-Articles/Small-Company-Cap-Rates.pdf)

Also, the Commission has found an application of Ibbotson's small company adjustment can ignore the fact that the risk of regulated utilities is not as great as small companies:

> We are familiar with the Ibbotson-derived 400 basis point small company risk premium used by Mr. Beatty. The rationale behind this approach is that, all other things being equal, the smaller the company, the greater the risk. However, to blindly apply this risk premium to Petitioner is to ignore the fact that Petitioner is a regulated utility. The risks from small size for a regulated water utility are not as great as those small companies facing competition in the open market.

In re South Haven Sewer, Cause No. 40398, Final Order, pp. 30-31 (Ind. Util. Regulatory Comm'n May 28, 1997.)

In an Indiana-American Water Co. rate case order in Cause No. 43680, the Commission stated that regulated utilities have different risks than other small companies:

> The Commission rejects Petitioner's equity size premium adjustment because it cannot be directly applied to regulated water utilities. Regulated water utilities do not experience the same risks as other small companies.

In re Indiana-American Water Co., Cause No. 43680, Final Order, p. 47 (Ind. Util. Regulatory Comm'n Apr. 30, 2010.)

The Commission can apply the same rationale for rejecting equity size adjustments to the natural gas companies it regulates.

XI. PETITIONER'S UTILITY RISK PREMIUM ANALYSIS

Q: Please discuss Petitioner's Utility Risk Premium ("URP") method.

A: Petitioner uses a URP method based on the long-term utility yields and authorized ROEs for gas utilities. (Petitioner's Exhibit No. 3, page 60, lines 7-10; Attachment AMM-8, pages 3-5.) This method measures commission behavior rather than estimate investor behavior.

Capital costs are determined through the financial decisions of investors. Those financial decisions are reflected in dividend yields, expected growth rates, interest rates, and investors' assessment of the risk and expected return of different investments. Conversely, regulatory commissions evaluate capital market data in setting ROEs. However, regulatory commissions also consider other utility and rate-case specific information in addition to capital costs when setting authorized ROEs. Furthermore, the authorized ROE data includes rate cases that are settled and not fully litigated.

Therefore, compromises are made that impact the ROE, which the commissions consider, but of which investors may not be aware.

XII. EXPECTED EARNINGS

Q: Please discuss Petitioner's Expected Earnings approach.

A: Petitioner's Expected Earnings approach is outlined on Petitioner's Exhibit No. 3, page 62, line 22 to page 65, line 3, and Attachment AMM-9. Petitioner's approach uses the expected ROE for the proxy group companies as estimated in Value Line.

Q: What issues do you have with this approach?

The first issue is these ROE results include the profits associated with the unregulated operations of the proxy group companies, inflating the results. Westfield Gas does not own any unregulated operations. The second issue is Petitioner has not evaluated the market-to-book (M:B) ratios for these companies, and therefore, cannot indicate whether the past and projected returns on common equity are above or below investors' requirements.

XIII. NON-UTILITY PROXY GROUP

Q: Please discuss the issues with Petitioner's non-utility proxy group.

A: Petitioner estimates a cost of equity rate using a proxy group of 56 non-utility companies. (Petitioner's Exhibit No. 3, page 65, line 7 to page 69, line 3; Attachment AMM-10, pages 1-3.) This non-utility proxy group includes Cisco, Johnson & Johnson, Kellogg, PepsiCo, and UPS. (Petitioner's Exhibit No. 3, Attachment AMM-10, pages 1-3.)

The DCF results for this non-utility proxy group should be disregarded. Many of these companies are large and successful. Importantly, their lines of business are different from the gas utility business, and these companies do not operate in a highly regulated environment – or at least their prices are not set by a regulatory commission. Also, as previously discussed, there is an upward bias in the EPS growth rate forecasts of Wall Street analysts, and therefore the DCF cost of equity estimates for this proxy group are overstated.

XIV. CAPITAL STRUCTURE

Q: Please describe Westfield Gas' proposed capital structure.

A: Westfield Gas proposes a capital structure of 75% common equity, 24.82% debt, and 0.18% customer deposits. (Petitioner's Exhibit No. 2, Attachment CLJ-1, lines 19-21.) Petitioner proposes a weighted average cost of capital ("WACC") of 9.066% with this capital structure. (*Id*., line 22.)

Q: Does this amount of debt in Westfield Gas' capital structure make Westfield Gas more, or less risky, than the companies in the utility proxy group.

A: Westfield Gas is less risky than the companies in the utility proxy group, which have a higher percentage of debt in their capital structures. The debt ratios of the utility proxy group companies range from 40% to 61%. (Attachment LDC-3, pages 1-8.) All else being equal, as the amount of debt in the capital structure decreases, financial risk decreases.

Q: Do you agree with Petitioner's proposed December 31, 2021 capital structure?

A: Yes. But equity capital is more expensive than debt. This is evident by looking at the cost of capital rates in Petitioner's capital structure. As the equity ratio increases, the utility's revenue requirement increases, and customers' rates increase – and become less affordable. Therefore, I recommend Westfield Gas consider adding lower cost debt to its capital structure when it needs a capital infusion.

Q: What long-term debt cost rate is Petitioner proposing?

A: Petitioner proposes a long-term debt cost rate of 3.59%. (Petitioner's Exhibit No. 2, Attachment CLJ-1, line 20.) I agree this is the appropriate debt cost rate.

Q: Petitioner's witness Craig Jackson states at page 23, lines 10-11 of his testimony: "Yes, I plan to update the line of credit interest rate used in this proceeding, pending further interest rate increases that are the result of actions from the Fed. Do you agree Petitioner should be allowed to update the line of credit during this proceeding?

A: No. The Commission's Docket Entry in this Cause established the procedural schedule with a test year ended December 31, 2021. *In re Westfield Gas*, Cause No. 45761, Docket Entry, p. 1 (Ind. Util. Regulatory Comm'n Sep 19, 2022). The Docket Entry allows for fixed, known, and measurable adjustments for operating revenues, expenses, and operating income that occur within 12 months following the end of the test year. (*Id*.) The Docket Entry does not allow changes to the capital structure, or the cost of capital rates associated with the capital structure.

XV. FAIR VALUE RATE BASE AND FAIR RETURN

Q: Please discuss Petitioner's fair value rate base proposal.

A: Petitioner proposes a fair value rate base of $22,073,595 and an original cost rate base of $13,877,485. (Petitioner's Exhibit No. 2, Attachment CLJ-1, lines 17-18.)

Q: Do you agree with Petitioner's fair value rate base proposal?

A: No. Westfield Gas is the only natural gas utility in Indiana in the last decade to request a return based on an inflated fair value rate base. Westfield Gas' fair value increment proposal and its 10.9% cost of equity request only seek to ensure its rates are less affordable for its customers.

Q: Has Westfield Gas calculated the difference between the return based on original cost and fair value rate bases?

A: Yes. The return on the original cost base, using Petitioner's proposed WACC, is $1,258,187. Petitioner's proposed return on Petitioner's proposed fair value rate base is $1,859,896. The difference between these returns is $601,709, which Petitioner characterizes as a fair value increment. (*Id*., lines 23-25.)

Q: Do you agree with Petitioner's proposed $601,709 return on its proposed fair value increment?

A: No. My testimony will show there is no fair value increment, and the return on the original cost rate base is higher than the return on Petitioner's fair value rate base.

Q: Who would pay for Petitioner's proposed return of an additional $601,709?

A: Westfield Gas' customers would pay the additional $601,709. Assuming Westfield Gas has about 7,000 customers, this additional return would add around $86 to each customer's bill on an *annual* basis. [$601,709 / 7,000 = $86]

This $86 amount does not include the inflated return Petitioner is trying to collect through its 10.9% cost of equity request. The difference between Petitioner's proposed 10.9% cost of equity and the OUCC's recommended 9.4% cost of equity is 150 basis points. This 150-basis points difference equates to an additional $156,176 in Net Operating Income ("NOI"). (Public's Exhibit No. 1, Attachment MHG-1, page 1.) A 10.9% cost of equity adds $22 annually to each customer's bill compared to the OUCC's 9.4% cost of equity. [$156,176 / 7,000 = $22]

Q: Why is Petitioner requesting a fair value increment return of $601,709?

A: The OUCC asked Petitioner a similar question. Petitioner replied by referring to Mr. Jackson's testimony, which cites Indiana Code § 8-1-2-6. Petitioner then stated, "Westfield Gas' property must be valued, for ratemaking purposes, at its fair value." (Attachment LDC-12, page 2; Petitioner's Response to OUCC DR No. 6.1.i.)

Q: Do you agree it is necessary for Westfield Gas to try to recover an extra $601,709 from its customers?

A: No. Indiana's other natural gas utilities have fair value rate bases which also are their original cost rate bases. Indiana's other natural gas utilities have fair returns based on their original cost rate bases.

Q: You referenced Indiana Code § 8-1-2-6. What it the language of that statute?

A: Indiana Code § 8-1-2-6(a) states in part:

> The Commission shall value all property of every public utility actually used and useful for the convenience of the public at its fair value, giving consideration as it deems appropriate in each case to all bases of valuation which may be presented or which the commission is authorized to consider by the following provisions of this section.

Also, Indiana Code § 8-1-2-6(b) states in part: "As an element in determining value the commission may also take into account reproduction costs at current prices, *less depreciation*, based on the items set forth in the last sentence hereof and shall not include good will, going value, or natural resources." (*Emphasis* added.) I will explain later in my testimony why I emphasized *less depreciation*.

Q: What is the standard used to determine Petitioner's fair value rate base?

A: Citing the Indiana Supreme Court, the Commission stated at page 20 of its order in Indiana American Water Co., Cause No. 43680:

> [T]he courts will not limit the Commission to any one or more methods of valuation, be it prudent investment, original cost, present value, or cost of reproduction. This court has held that the cost of reproduction

> depreciated is a proper item to be considered under the statute in arriving at a fair value figure.

Pub. Serv. Comm'n v. City of Indianapolis, 131 N.E.2d 308,318 (Ind. 1956).

The Commission also stated on page 2 of its order in South Haven Sewer Works, Inc., Cause No. 41903:

> More recently the Indiana Court of Appeals in Indianapolis Water Company v. Public Service Commission, 484 N.E. 2d 635 (1985) indicated the following:
>
> In our determination of fair value, this is not an either/or situation regarding the use of original cost or reproduction costs new less depreciation. But rather fair value is a conclusion or final figure drawn from all the various factors offered in evidence. While original cost is one of the factors the Commission may consider while arriving at the fair value, it is not in of itself an accurate reflection of the fair value of the utility's property.

Q: Is fair value the same as reproduction cost new less depreciation ("RCNLD")?

A: No. RCNLD is *one* input the Commission may consider when determining the fair value of Petitioner's plant.

Q: What are your concerns regarding Westfield Gas' fair value rate base?

A: Westfield Gas' method of estimating a fair value rate base inappropriately inflates the value of the rate base used to determine the return its customers must pay to Petitioner. A fair rate of return fairly compensates a utility for the use of its capital invested in utility plant and equipment. A fair rate of return is not so high that it results in rates that are excessive and/or unaffordable to the utility's customers. The authorized rate of return should be no higher than necessary to ensure customers' rates will be just and reasonable.

Q: Is Westfield Gas proposing an appropriate fair value rate base?

A: No. As previously mentioned, Westfield Gas is proposing an inflated $22,073,595 fair value rate base by adding an $8,196,110 fair value increment to the original cost rate base of $13,877,485. (Petitioner's Exhibit No. 2, Attachment CLJ-1, line 23.) Petitioner's proposed fair value rate base was developed by Petitioner's witness Scott A. Miller. On Attachment LDC-13, columns (1), (5), and (6), I have used the original cost and reproduction cost new amounts from page 58 of Mr. Miller's Attachment SAM-1. Column (2) reflects the accumulated depreciation amounts from Petitioner's workpaper ("wp') 155. (Attachment LDC-14; wp 155 from MSFR Vol. 2.) Column (3) is the original cost minus accumulated depreciation for each account. Column (4) is the percent depreciated for each account. Column (5) shows Petitioner's proposed fair value rate base – reproduction cost. Column (6) is Petitioner's proposed reproduction cost new less depreciation ("RCNLD"). Column (7) is the percent depreciated based on Petitioner's proposed RCNLD. The difference in the percent depreciated for Mains (30.2% vs. 16.0%) and Services (39.4% vs. 20.2%) results in millions of dollars of inflated rate base. Column (8) was calculated by taking Petitioner's reproduction cost – fair value in column (5) multiplied by the % depreciated for original cost reflected in column (4). Column (9) reflects the proper fair value rate base after adjusting accumulated depreciation for Petitioner's fair value plant. The accumulated depreciated *percentage* should not change because the valuation method of the utility plant in service changes. An asset that is 10% depreciated under original cost is still 10% depreciated under fair value. The dollar amounts will be different because of the valuation method – but the accumulated depreciated *percentage* of the asset should be the same under original cost and fair value. Column (9) indicates the corrected RCNLD amount of $17,149,406.

Q: How did Petitioner take depreciation into account when determining the fair value rate base?

A: Petitioner calculated the estimated expired life of the assets by asset class. Petitioner determined the weighted average years that each asset has been in service. After the weighted average years of service for each asset listing was calculated, the sum of these figures by asset class was totaled. (Petitioner's Exhibit No. 6, page 12, line 5 – page 13, line 6.)

Q: Is it appropriate to establish a fair value rate base without considering how much of Petitioner's investment has already been recovered through customers' rates?

A: No. It is necessary to consider how much capital investment has been returned to Westfield Gas through charges paid by its customers. In setting rates, the NOI must be fair and reasonable to both investors and to Petitioner's customers. Petitioner is allowed to fully recover its prudent and reasonable investment in utility plant and equipment and earn a fair rate of return on the unrecovered investment balance. However, Petitioner should not be allowed to overcharge its customers based on an inappropriate fair value rate base.

Q: Will Petitioner's method of calculating a fair value rate base require Petitioner's customers to pay more than a fair and reasonable return?

A: Yes. Petitioner's reproduction cost new methodology will require its customers to pay a rate of return on part of Petitioner's rate base in which the investor capital used to invest in that rate base has *already* been returned to Westfield Gas and its investor via depreciation charges paid by customers. After capital is returned to Petitioner and its investor, customers should not be obligated to pay a rate of return on that returned capital. Petitioner's customers should only be obligated to pay a rate of return on the capital that has not been returned to Westfield Gas and is still invested in the utility rate base and is providing service to customers.

Q: Why do you say Petitioner's customers will pay a return on rate base that has already been recovered by Petitioner?

A: Attachment LDC-13, column 4 indicates the percentage of Petitioner's original cost rate base, for each account, which has already been recovered from customers through their payment of depreciation expense. However, column (7) indicates the implied depreciation percentages of Petitioner's proposed RCNLD rate base valuation. As previously mentioned, the percentage differences in the largest accounts, Mains and Services, results in millions of dollars of inflated rate base, which Petitioner is unreasonably seeking to recover from its customers.

Q: Can you estimate the amount of accumulated depreciation that should be deducted from the fair value rate base to calculate a corrected RCNLD?

A: Yes. The depreciation reserve (accumulated depreciation) percentage should be the same for each account in the original cost and fair value rate bases. I took the depreciation reserve percentage for each account of the original cost rate base and applied it to the same accounts of the fair value rate base. (*Id*., columns 4 and 5.) These calculations derive a corrected accumulated depreciation amount for each account. (*Id*., column 8.) Finally, column (9) reflects the corrected RCNLD amount for each account, and the total corrected RCNLD amount of $17,149,406. (Attachment LDC-13, column 9.)

Q: As a result of your corrections indicated above, what is your recommendation regarding Petitioner's fair value rate base?

A: I still consider a return on an original cost rate base to be more accurate. However, as indicated on Attachment LDC-13, I recommend a fair value rate case for Westfield Gas of $18,301,018.

Q: Are you also recommending a fair rate of return?

A: Yes, I am recommending a fair rate of return of 5.65% and an NOI of $1,034,008. (Attachment LDC-13.)

Q: What inflation adjustment did you make to calculate your fair rate of return?

A: I used the same (-2.30%) inflation adjustment used by Petitioner. (Petitioner's Exhibit No. 3, page 81, lines 20-21.)

Q; Petitioner only applied the inflation adjustment to the cost of equity portion of the capital structure. Why have you applied the inflation adjustment to the debt as well as the equity.

A: The Commission addressed the inflation adjustment issue in an IPL rate case when it stated:

> The record shows that the Federal Reserve has targeted inflation at approximately 2.0%, and we find that 2.0% is a reasonable reflection of inflation over the expected life of the resulting rates. Accordingly, based on our calculated weighted cost of capital of 6.51%, we find that with inflation removed, the fair return on IPL's fair value rate base should be 4.51%, which results in an authorized fair value NOI of $124.1 million. In comparison, the original cost NOI is $122.9 million, which supports the reasonableness of the fair value NOI.
>
> *In re Indianapolis Power & Light Co.*, Cause No. 44576, Final Order p. 48 (Ind. Util. Regulatory Comm. Mar. 16, 2016).

Therefore, the Commission removed inflation from both debt and equity in the cost of capital.

Q: What rate of return is Petitioner requesting in this Cause?

A: Petitioner is requesting a 10.9% cost of equity on an original cost rate base of $13,877,485. (Petitioner's Exhibit No. 2, Attachment CLJ-1.) The WACC times the original cost rate base produces an NOI of $1,258,187. (*Id*.) Petitioner is requesting a return of 8.426% on a fair value rate base of $22,073,595. Petitioner only proposed an inflation adjustment for the equity portion of the capital structure. The WACC times the fair value rate base yields an NOI of $1,859,896.

An NOI of $1,859,896 produces an implied return of 13.4% on Petitioner's cost of capital. [$1,859,896 / $13,877,485 = 13.4%]

XVI. RATE CASE EXPENSES

Q: How much is Westfield Gas seeking to recover from its customers in rate case expenses?

A: Westfield Gas wants its customers to pay $468,050 in rate case expenses. (Public's Exhibit No. 3, Attachment LNV-2, page 2; Petitioner's workpaper S640-1.) This amount is made up of $425,500 in consultant and legal notice fees, and a 10% contingency of $42,550.

Q: Do you agree this entire amount should be paid by Westfield Gas' customers?

A: No. OUCC witness LaCresha Vaulx describes why the 10% contingency should be disallowed. (Public's Exhibit No. 3.) The rest of the rate case expenses should be shared equally by Westfield Gas' shareholder and its customers. Westfield Gas' shareholder benefits from rate cases as much as Petitioner's customers.

Q: What benefits does Westfield Gas' shareholder receive from rate cases?

A: The shareholder receives the benefit of an updated rate base, and updated revenue requirements. The shareholder also receives an updated and reasonable return on equity, which allows Westfield Gas to attract capital and provide dividends to its shareholder.

Q: Does Indiana statute allow Westfield Gas to recover rate case expenses from its customers?

A: Yes. However, Indiana statute does not prohibit the Commission from allowing rate case expenses to be shared between shareholders and utility customers. Ind. Code § 8-1-2-42.7 provides the Commission with jurisdiction over utility rate case proceedings. The language of the statute does not prohibit the Commission from requiring a utility's shareholders to pay an equitable portion of rate case expenses. Furthermore, Ind. Code § 8-1-2-4 states:

> The charge made by any public utility for any service rendered or to be rendered either directly or in connection therewith *shall be reasonable and just*, and every unjust or unreasonable charge for such service is prohibited and declared unlawful. (*Emphasis* added.)

Q: Are you aware of any cases where the Commission has specifically addressed the sharing of rate case expenses between a utility's shareholders and its customers?

A: Yes. In 1987, the Commission did not require the utility's shareholders to pay any rate case expenses. *In re Kokomo Gas and Fuel Co.*, Cause No. 38096, Final Order, p. 13 (Ind. Util. Regul. Comm'n July 29, 1987.) The Commission indicated the OUCC's proposal appeared to be peculiarly disadvantageous to the small public utilities in Indiana, which do not have in-house personnel and counsel to handle their rate cases. (*Id*.)

Also, the Commission did not require the utility's shareholders to pay any rate case expenses in a Community Natural Gas rate case, indicating rate case expense is a cost of doing business. *In re Community Nat. Gas Co. Inc.*, Cause No. 44768, Final Order, p. 22 (Ind. Util. Regul. Comm'n Mar. 22, 2017.)

Q: Do you agree sharing rate case expenses between shareholders and customers could be disadvantageous to small public utilities?

A: I agree small public utilities probably do not have the financial ability to have in-house counsel or some other experts required for presenting a rate case. However, in this situation, Westfield Gas can obtain in-house legal counsel and accounting through Citizens Energy Group. Rate case expenses must be reasonable regardless of who is responsible for paying those costs of doing business.

Q: You mentioned the reasonableness of rate case expenses. How much in rate case expenses is Westfield Gas seeking to recover from its customers?

A: Westfield Gas is seeking to recover $468,050 in rate case expenses. Assuming Westfield Gas has approximately 7,000 customers, this equates to about $67 per customer during the time the new rates are in effect. Assuming a five-year amortization, this equates to about $13 annually per customer. This amount is in addition to the $601,709 fair value increment Petitioner is also requesting its customers pay ($86/customer annually). Between the rate case expenses ($13), inflated proposed COE ($22), and fair value increment ($86), each Westfield Gas customer is supposed to annually pay $121 *in addition to* the distribution and commodity charges.

Q: Are you aware of any jurisdictions where the state commission has disallowed rate case expenses?

A: Yes. The Missouri Supreme Court on February 9, 2021, upheld a Missouri Public Service Commission ("MPSC") decision to disallow certain rate case expenses claimed by Spire Missouri, Inc. ("Spire"). (Attachment LDC-15, page 2.) Spire is one of the utilities in the Gas Group.

Q: What was the legal basis the MPSC used to disallow a portion of the rate case expenses?

A: The MPSC concluded that because it is required under section 393.130.13 to set rates that are "just and reasonable," it had the broad discretion to determine whether it was just and reasonable for Spire's shareholders to share the burden of rate case expenses with ratepayers. (*Id*., page 3.)

Q: Is there a similar legal standard in Indiana which the Commission must follow?

A: Yes. Ind. Code § 8-1-2-4 requires charges for utility service must be reasonable and just.

Q: Why did the MPSC disallow a portion of the rate case expenses?

A: The Missouri Supreme Court Opinion states:

> The PSC determined that approximately half the litigated issues in this case were driven by Spire and among these issues were the proposed use of various shareholder-favorable ratemaking tools, including a revenue stabilization mechanism, a rate of return on equity of 10.35 percent (which would have been the highest of any large utility in Missouri), tracking mechanisms to limit shareholder risk, and earnings-based incentive compensation. The PSC further determined Spire "padded" its revenue requirement by pursuing positions it did not expect to win.

(Attachment LDC-15, page 4, emphasis in original.)

The Opinion also states: "…the PSC concluded that including all of these expenditures in setting Spire's future rates was not ***just*** because some of the expenses were not fair to ratepayers in that they only were incurred to benefit (if anyone) Spire's shareholders." (*Id*. at 12, ***emphasis*** in original.)

Q: Are there issues in this Cause like the Missouri case?

A: Yes. Similar to Spire's 10.35% request, Westfield Gas is proposing a rate of return of 10.9%, which would be higher than any cost of equity awarded to a natural gas utility in Indiana in over a decade.

Q: Did the Missouri Supreme Court state that ratepayers benefit from rate cases?

A: Yes. The Opinion states:

> Generally, ratepayers benefit from rate cases because they have an interest in ensuring the financial well-being of the utilities that serve them. Therefore, ratepayers justly and reasonably can be expected to pay a utility's expenses in bringing such a case.

(Attachment LDC-15, page 12.)

However, the Opinion also states:

> *But this does not mean there cannot be limits.* A utility cannot spend any amount it pleases secure in the knowledge or expectation that ratepayers will foot the bill, particularly when those expenses include items seeking to subordinate ratepayers' interests to those of the utility's investors.

(*Id*. at 12-13, *emphasis* added.)

The Missouri Supreme Court concluded the MPSC did not err in its decision to exclude a portion of those expenses in setting "just and reasonable" rates because they served only to benefit shareholders and minimize shareholder risk with no accompanying benefit (or potential benefit) to ratepayers. (*Id*. at 13, emphasis in original.)

Q: Is there a State policy protecting the affordability of utility service?

A: Yes. Ind. Code § 8-1-2-0.5 states:

> The general assembly declares that it is the continuing policy of the state, in cooperation with local governments and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to create and maintain conditions under which utilities plan for and invest in infrastructure necessary for operation and maintenance *while protecting the affordability of utility services for present and future generations of Indiana citizens*. (*Emphasis* added.)

Q: Will sharing the rate case expense help protect the affordability of utility services for Westfield Gas' present and future customers?

A: Yes. A reduction of rate case expense that customers pay results in lower, more affordable utility service rates.

Q: What is your recommendation regarding rate case expenses?

A: Based on the reasonable and just standard of the Indiana Code, the State's statutory policy of protecting the affordability of utility services, and similar facts in this Cause to those presented in the Missouri case, I recommend rate case expenses be shared equally between Westfield Gas' shareholder and its customers. OUCC witness Vaulx uses my recommendation to share rate case expense in her discussion of Westfield Gas' rate case amortization adjustment in her testimony.

XVII. SUMMARY AND RECOMMENDATIONS

Q: Please summarize your testimony on DCF calculations for the proxy group.

A: I calculated a 3.4% forward dividend yield for the Gas Group. I also performed calculations and analyses in which I concluded a DCF growth rate, *g*, of 6.0% is reasonable. These estimates were made using historical and projected growth rates from *Value Line*, Zacks, Yahoo Finance, and S&P Cap IQ, and economic growth data from the CBO. I considered both projected and historical data. My DCF calculations result in a 9.4% cost of equity for the Gas Group.

Q: Please summarize your testimony on CAPM calculations for the proxy groups.

A: Based on *Value Line* betas and using the same proxy group as Petitioner, I calculated an average beta of 0.84 for the Gas Group. As the beta is less than 1.0, it also describes a relatively low-risk industry. I calculated a risk-free rate of 4.0% based on a 13-week average of 20-Year Treasury Bonds. I used Kroll's (formerly Duff & Phelps) equity risk premium of 6.0%. This results in a CAPM cost of equity for the Gas Group of 9.0%.

Q: Please summarize your testimony on macroeconomic and capital market trends influencing cost of equity.

A: As discussed above, short-term inflation expectations are high. Additional factors include the war in Ukraine and supply shortages. Interest rates are high with another 0.75-point rate hike on November 2. Climate change. Hurricanes. Floods. Droughts. Political unrest in the U.S. and abroad. Putin. Nukes. All of these factors affect the capital markets.

Q: Please summarize your recommendation for Westfield Gas' cost of equity.

A: I recommend the Commission authorize a 9.40% cost on equity for Westfield Gas. This recommendation is at the high end of the range of my DCF and CAPM calculations for the Gas Group. I recommend a fair return cost of equity of 7.10%.

Q: Please summarize your recommendation regarding fair value rate base.

A: I recommend a fair value rate base of $18,301,018.

Q: Please summarize your recommendation regarding Petitioner's capital structure of 75%, 24.82% debt, and 0.18% customer deposits.

A: I agree with Petitioner's proposed capital structure as referenced above.

Q: Please summarize your recommendation regarding rate case expenses.

A: I recommend rate case expenses be shared equally, and affordably, between Westfield Gas' shareholder and its customers.

Q: Does this conclude your testimony?

A: Yes.

<u>APPENDIX LDC-1 TO TESTIMONY OF</u>
<u>OUCC WITNESS LEJA D. COURTER</u>

Q: Please describe your educational background and experience.

A: I graduated from Ball State University in Muncie, Indiana with Bachelor of Science degrees in Finance and Economics. I received my Juris Doctorate from the University of Dayton. In previous years, I have been engaged in the private practice of law, and I also served as an in-house counsel at Indiana Gas Company. I have been an attorney at the OUCC for over twenty years. I was the Director of the OUCC's Natural Gas Division for twelve years. I became a Chief Technical Advisor at the OUCC in December 2021. I am a Certified Rate of Return Analyst ("CRRA").

Q: Have you previously testified before the Indiana Utility Regulatory Commission?

A: Yes.

Q: Please describe the review and analysis you conducted to prepare your testimony.

A: I reviewed Westfield Gas' petition, testimony, exhibits, and supporting documentation submitted in this Cause. I prepared and reviewed discovery requests, and reviewed Westfield Gas' responses. I reviewed numerous financial reports and articles that discuss market returns. I reviewed the Final Order in Westfield Gas' last two base rate cases, Cause Nos. 43624 and 44731. I reviewed Commission Orders concerning cost of equity issues.

I. DISCOUNTED CASH FLOW ("DCF") ANALYSIS

A. Introduction to DCF Model

Q: Please describe the DCF model.

A: The DCF model is typically used by investors to determine the appropriate price to pay for a security. This model assumes the price of a security should be determined by its expected cash flows discounted by the company's cost of equity. On a one-year horizon, the price of a stock (P_0) is equal to the anticipated dividends paid during the year (D_1), plus the anticipated price of the stock at the end of the year (P_1) divided by one plus the company's cost of equity (k). In turn, this year's year-end price (P_1) is determined by next year's anticipated dividends (D_2) and next year's anticipated year-end price (P_2) divided by one plus the company's cost of equity (k).

Because investors may plan to hold securities for extended periods, the DCF equation can be restated for an infinite or unknown number of periods as follows:

$$P_0 = D_1/(k-g)$$

[Where the price of a security (P_0) equals the anticipated dividends paid over the current period (D_1) divided by the company's cost of equity (k) minus the expected growth rate of dividends (g)].

The company's cost of equity must be greater than its expected dividend growth rate for this model to be valid. By rearranging the model, the familiar DCF formula used in regulatory proceedings can be obtained.

$$k = (D_1/P_0) + g$$

[Where the cost of equity (k) equals the forward dividend yield (D1/P0) plus the expected growth rate in dividends per share (g). To estimate the cost of equity (k), the forward yield (D1/P_0) and the expected growth rate in dividends (g) must be estimated.]

B. <u>Dividend yield</u>

Q: How did you calculate the forward yields (D1/P0) in your analysis?

A: To calculate a forward yield (D_1/P_0), the current yield (D_0/P_0) must be calculated first. A company's current yield equals its current annual dividends (D_0) divided by its current stock price (P_0).

Q: How do you convert current yields (D_0/P_0) into forward yields (D_1/P_0)?

A: I use the following equation to convert a current yield to a forward yield:

$$D_1/P_0 = (D_0/P_0) * (1 + .5g)$$

For example, if Company N had a current dividend yield of 4.0% and an expected growth rate of 2%, I would multiply the 4% current dividend yield by 1 plus 2% or 1.01 (1% is one-half of the 2% expected growth rate). This results in a forward dividend yield of 4.04%, or an increase of 4 basis points over the current dividend yield.

Q: What dividend yields do you use in your DCF analyses?

A: Attachment LDC-7, page 2, contains the average dividend yields for my proxy group.

C. <u>Dividend growth rate</u>

Q: How did you estimate the long run dividend growth component (g) of the DCF model?

A: The DCF model assumes investors expect earnings per share (EPS), dividends per share (DPS), and book value per share (BVPS) to all grow at the constant long run growth rate (g). When the data is available, to estimate (g), I use both historical and forecasted growth rates of EPS, DPS, and BVPS. I use Value Line, Yahoo Finance, Zacks, and S&P Cap IQ as my source of growth rates.

Q: What is your estimated long run dividend growth component (g) of the DCF model using Value Line growth rates in EPS, DPS, and BVPS?

A: My estimate of growth is 6.0% for the Gas Group. (Attachment LDC-7, page 1.) To estimate growth for the Value Line data, I average the forecasted and historical growth rates of EPS, DPS, and BVPS.

Q: To estimate the dividend growth (g) for your DCF analysis, did you include negative growth rates or zero growth rates?

A: No. I excluded zero and negative growth rates to estimate (g) in my DCF analysis.

Q: Why haven't you eliminated low (positive) growth rates from your DCF analysis?

A: Low growth rates are not ignored by investors. While investors may not expect low growth rates to occur (especially in perpetuity), if a company has experienced low historical growth rates or is forecasted to experience low growth rates, then those low growth rates are considered by and relevant to investors when they estimate a company's future growth rate. The purpose in estimating a growth rate in the DCF model is to infer the investor's long-term (perpetual) forecast in growth of the company. Relevant factors are not ignored. Also, one should consistently use or reject, both high positive growth rates and low positive growth rates. While growth rates as high as 14.0% or as low as 1.0% by themselves may not reflect investor expectations, neither should be ignored - or alternatively, both should be disregarded.

D. <u>DCF Model conclusions</u>

Q: What do you conclude from your DCF study?

A: The results of my DCF analysis are 9.4% for the Gas Group. (Attachment LDC-7, page 1.) My DCF analysis uses both historical and forecasted growth rates in EPS, DPS, and BVPS. It is based on a review of growth rates, and it is most consistent with prior Commission decisions on how to estimate a growth rate in a DCF analysis. As discussed above, analysts' forecasts of intermediate term growth rates in EPS may be optimistic and should not be used by themselves to estimate long-term growth (g) in a DCF analysis.

II. CAPITAL ASSET PRICING MODEL (CAPM) ANALYSIS

Q: Please describe your CAPM analysis.

A: The Capital Asset Pricing Model, or CAPM, is a form of risk premium analysis used to estimate the cost of capital. The CAPM is based on the premise that investors require a higher return for assuming additional risk. Total risk is divisible into two categories: systematic risk and unsystematic risk. Systematic risk is risk that affects the entire market, including inflation, monetary policy, fiscal policy, or politics. Unsystematic risk is risk unique to the company, and may include strikes, management errors, merger activity, or individual financing policy.

Investors can eliminate unsystematic risk through diversification. Because returns on individual securities of a portfolio do not usually move in the same direction at the same time, the total risk of a portfolio is less than the risk of the individual securities that make up the portfolio. The market does not compensate investors for assuming unsystematic risk because investors can eliminate unsystematic risk through diversification. Conversely, systematic risk, also referred to as market risk, cannot be eliminated through diversification. However, because investments will move with different relationships to the market, investors can form a portfolio to assume the amount of market risk they wish. An investor's required return depends on the market risk that the investor assumes.

Q: How is systematic (market) risk measured?

A: Beta is the measurement of an investment's relationship to the market. More specifically, beta measures an asset's price volatility compared to the stock market.

The market has a beta of one. The market refers to the returns on all assets. It is difficult to measure the return on all assets. Therefore, analysts typically rely on a market index, such as the Standard & Poor's 500 Index, as a proxy for the market. Assets more volatile than the market will have a beta greater than one, and thus, are considered riskier than the market. Assets that are less volatile will have a beta less than one and are considered less risky than the market.

The CAPM formula can be stated as follows:

$$K = Rfc + B\,(Rm\text{-}Rf)$$

where,

K	Cost of Equity
Rfc	Current Risk-Free Rate of Return
B	Beta
Rm-Rf	Expected Market Equity Risk Premium
Rm	Market Equity Return
Rf	Risk Free Rate of Return

The return on an asset (K) equals the risk-free rate of return (Rfc) plus its beta (B) multiplied by the market equity risk premium (Rm - Rf). The market equity risk premium equals the market equity return minus the risk-free rate of return.

Q: Is the CAPM controversial?

A: The CAPM is typically more controversial and less reliable than the DCF model. Different applications of CAPM may result in vastly different cost of equity estimates. For example, the source of beta can influence the results of a CAPM analysis. If a market risk premium of 5.0% is used, a difference in beta of only 0.10 changes the results of a CAPM analysis by 50 basis points.

The method used to estimate the market risk premium can also be particularly controversial. An historical risk premium can be calculated, but a decision must be made between using a geometric mean or an arithmetic mean calculation. This decision is important because the use of the arithmetic mean can produce results that are over 140 basis points higher than the geometric mean. The geometric mean calculation is preferable over the arithmetic mean calculation because the geometric mean calculation more accurately measures the change in wealth over multiple periods. Selecting the appropriate period to calculate a historical risk premium is not only controversial, it also dramatically affects the results. When relying on a historical risk premium, the longest historical period for which accurate historical data exists should be used to estimate a risk premium.

Q: When calculating a market risk premium, do you use total returns or income returns?

A: I use total returns. Investors who buy long-term bonds (both risk-free and utility bonds) do not earn just income returns, but total returns. Therefore, a determination of the risk premium should be based on total returns for both equity and debt investments when estimating a risk premium. In Indiana-American Water Company Inc.'s, Cause No. 42520, the Commission agreed with the testimony of Intervenor witness Michael Gorman that total returns and not income returns should be used to estimate an historical risk premium. The Order states:

> Another area of disagreement in the CAPM analysis is whether the model should use total returns or income returns. We find Mr. Gorman's analysis in this area to be most persuasive. The income return on Treasury bonds is simply the average of Treasury bond yield quotes over the historical period, and this yield quote does not measure the actual return investors earn by making investments in Treasury bonds. Investors simply cannot invest only in Treasury bond income returns. Rather, investors must take the risk of variations in bond prices before they invest in treasury bonds. Therefore the actual return experienced by investors in Treasury securities is measured by total return, not simply the income return. *In re Indiana-American Water Company, Inc.*, Cause No. 45520, Final Order p. 59 (Ind. Util. Regulatory Comm'n Nov. 18, 2004.)

B. **Risk-free rate of return**

Q: **Is the risk-free rate of return also controversial?**

A: Yes. Aside from the market risk premium controversy, financial analysts do not agree on the determination of the risk-free rate. Theoretically, the risk-free rate is the rate of return on a completely risk-free asset. In practice, analysts typically use yields on United State Treasury securities as a proxy for the risk-free rate.

Q; **How did you estimate the risk-free rate?**

A: I reviewed 20-Year Treasury bonds and reviewed market publications.

C. **Beta.**

Q: **What source did you review to estimate beta?**

A: I relied on Value Line as my source of beta. Based on Value Line, the Gas Group produces an average beta of 0.84. (Attachment LDC-6, page 3.)

D. **Conclusions on CAPM analysis**

Q: **Please review the results of your CAPM analysis.**

A: The cost of equity based on my CAPM analysis for the Gas Group is 9.0%%. (Attachment LDC-6, page 1.) I used a risk-free rate of 4.0%, a beta of 0.84, and an equity risk premium of 6.0%.

DATA REQUEST NO. 24:

Please describe how Westfield Gas accesses external capital. If Westfield Gas' external capital is provided by its parent company under a credit agreement, then please describe the terms of the credit agreement and the associated service fees and provide a copy of the credit agreement.

RESPONSE:

There are multiple sources of external capital that Westfield Gas considers including: equity contributions and issuance of long-term debt, but the mix of equity and debt is evaluated based on capital availability, Westfield Gas' capital structure, and cost of capital.

Westfield Gas has previously received equity contributions from its parent and any potential future contributions would come from its parent as well.

Westfield Gas discusses long-term debt needs with its banks. However, there are challenges to raising debt, notably Westfield Gas' size, as discussed in my testimony on page 19, lines 12 – 15.

No external capital is provided to Westfield Gas by its parent under a credit agreement.

WITNESS:

Craig L. Jackson

DATA REQUEST NO. 2:

Referencing Petitioner's Exhibit No. 2, page 7, lines 2-3, which states, "Credit ratings are important to investors because the higher the rating, the safer the debt."

a. Please define the term "investors" as used in the context of the referenced sentence.

b. Please provide a list of Westfield Gas' shareholders, the amount of shares purchased, and the dates the shares were purchased.

c. Please explain whether Westfield Gas' shareholders have sold or traded any Westfield Gas shares since the last rate case order was issued in Cause No. 44731 in 2017.

OBJECTION:

Petitioner objects to subparts b and c of this request on the grounds set forth in General Objection Nos. 2 and 5. Subject to and without waiving the foregoing objection, Petitioner responds as follows.

RESPONSE:

a. In this context, investors are bond or debt holders.

b. As stated in Paragraph 1 of the Verified Petition, "Petitioner is an Indiana limited liability company," and "Citizens Westfield Utilities, LLC is the sole member of Westfield Gas."

c. There has been no change to the ownership structure since the last rate case order was issued in 2017.

WITNESS:

Craig L. Jackson (subpart a only)

Capital Structure - December 31, 2021

	Amount	% of Total	Cost of Capital	Weighted Cost of Capital	Inflation Adjustment	Adjusted Cost of Capital	Adjusted Weighted Cost of Capital
Equity	$15,109,326	75%	9.40%	7.05%	-2.30%	7.10%	5.33%
Debt	$5,000,000	24.80%	3.59%	0.89%	-2.30%	1.29%	0.32%
Customer Deposits	$36,500	0.18%	0.50%	0.00%	-2.30%	0.00%	0.00%
Total	$20,145,826	100%		7.94%			5.65%

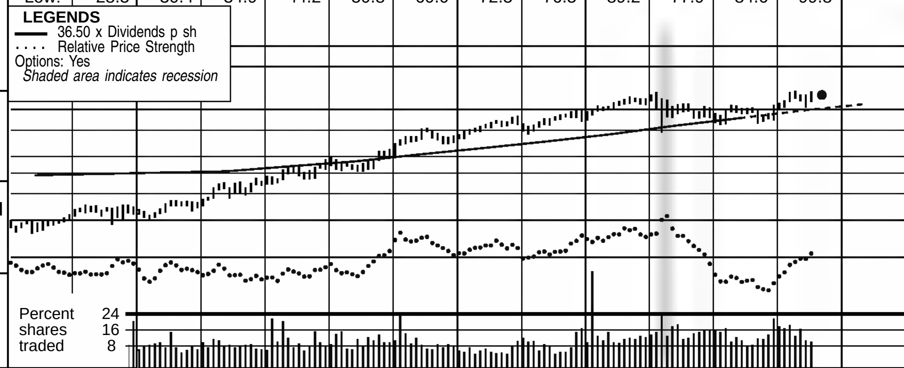
	Orignal Cost	Fair Value
Total Rate Base	$13,877,485	$18,301,018
Weighted Cost of Capital	7.94%	5.65%
NOI	$1,101,872	$1,034,008

ATMOS ENERGY CORP. NYSE-ATO

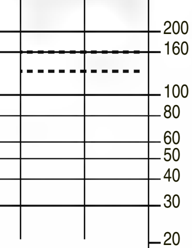
RECENT PRICE **117.39** | P/E RATIO **20.2** (Trailing: 21.3; Median: 20.0) | RELATIVE P/E RATIO **1.22** | DIV'D YLD **2.5%** | VALUE LINE

TIMELINESS 2 Raised 8/19/22
SAFETY 1 Raised 6/6/14
TECHNICAL 2 Lowered 6/10/22
BETA .80 (1.00 = Market)

High:	35.6	37.3	47.4	58.2	64.8	82.0	93.6	100.8	115.2	121.1	105.3	123.0
Low:	28.5	30.4	34.9	44.2	50.8	60.0	72.5	76.5	89.2	77.9	84.6	99.8



Target Price Range
2025 | 2026 | 2027



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$86-$139	$113 (-5%)

2025-27 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	160	(+35%)	10%
Low	130	(+10%)	5%

Institutional Decisions

	3Q2021	4Q2021	1Q2022
to Buy	262	305	315
to Sell	217	223	221
Hld's(000)	114371	120194	126318

% TOT. RETURN 7/22

	THIS STOCK	VL ARITH.* INDEX
1 yr.	26.4	-8.2
3 yr.	19.1	40.3
5 yr.	56.2	56.9

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27
75.27	66.03	79.52	53.69	53.12	48.15	38.10	42.88	49.22	40.82	32.23	26.01	28.00	24.32	22.41	25.73	*28.85*	*30.15*	Revenues per sh A	*35.50*
4.26	4.14	4.19	4.29	4.64	4.72	4.76	5.14	5.42	5.81	6.19	6.62	7.24	7.57	8.03	8.64	*9.20*	*9.90*	"Cash Flow" per sh	*11.95*
2.00	1.94	2.00	1.97	2.16	2.26	2.10	2.50	2.96	3.09	3.38	3.60	4.00	4.35	4.72	5.12	*5.60*	*6.00*	Earnings per sh AB	*7.30*
1.26	1.28	1.30	1.32	1.34	1.36	1.38	1.40	1.48	1.56	1.68	1.80	1.94	2.10	2.30	2.50	*2.72*	*2.92*	Div'ds Decl'd per sh C■	*3.50*
5.20	4.39	5.20	5.51	6.02	6.90	8.12	9.32	8.32	9.61	10.46	10.72	13.19	14.19	15.38	14.87	*17.25*	*17.10*	Cap'l Spending per sh	*18.00*
20.16	22.01	22.60	23.52	24.16	24.98	26.14	28.47	30.74	31.48	33.32	36.74	42.87	48.18	53.95	59.71	*65.85*	*68.20*	Book Value per sh	*82.85*
81.74	89.33	90.81	92.55	90.16	90.30	90.24	90.64	100.39	101.48	103.93	106.10	111.27	119.34	125.88	132.42	*142.00*	*146.00*	Common Shs Outst'g D	*155.00*
13.5	15.9	13.6	12.5	13.2	14.4	15.9	15.9	16.1	17.5	20.8	22.0	21.7	23.2	22.3	18.8	*Bold figures are*		Avg Ann'l P/E Ratio	*20.0*
.73	.84	.82	.83	.84	.90	1.01	.89	.85	.88	1.09	1.11	1.17	1.24	1.15	1.00	*Value Line*		Relative P/E Ratio	*1.10*
4.7%	4.2%	4.8%	5.3%	4.7%	4.2%	4.1%	3.5%	3.1%	2.9%	2.4%	2.3%	2.2%	2.1%	2.2%	2.6%	*estimates*		Avg Ann'l Div'd Yield	*2.4%*

CAPITAL STRUCTURE as of 6/30/22
Total Debt $7960.6 mill. **Due in 5 Yrs** $2410.0 mill.
LT Debt $5759.2 mill. **LT Interest** $85.0 mill.
(LT interest earned: 10.8x; total interest coverage: 10.8x)
Leases, Uncapitalized Annual rentals $41.8 mill.

Pfd Stock None

Pension Assets-9/21 $596.8 mill. **Oblig.** $596.0 mill.
Common Stock 139,891,918 shs. **as of 7/29/22**

MARKET CAP: $16.4 billion (Large Cap)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		25-27
3438.5	3886.3	4940.9	4142.1	3349.9	2759.7	3115.5	2901.8	2821.1	3407.5	*4100*	*4400*	Revenues ($mill) A	*6000*
192.2	230.7	289.8	315.1	350.1	382.7	444.3	511.4	580.5	665.6	*780*	*870*	Net Profit ($mill)	*1130*
33.8%	38.2%	39.2%	38.3%	36.4%	36.6%	27.0%	21.4%	19.5%	18.8%	*8.5%*	*17.5%*	Income Tax Rate	*25.0%*
5.6%	5.9%	5.9%	7.6%	10.5%	13.9%	14.3%	17.6%	20.6%	19.5%	*19.0%*	*19.8%*	Net Profit Margin	*18.8%*
45.3%	48.8%	44.3%	43.5%	38.7%	44.0%	34.3%	38.0%	40.0%	38.4%	*38.5%*	*40.0%*	Long-Term Debt Ratio	*40.0%*
54.7%	51.2%	55.7%	56.5%	61.3%	56.0%	65.7%	62.0%	60.0%	61.6%	*61.5%*	*60.0%*	Common Equity Ratio	*60.0%*
4315.5	5036.1	5542.2	5650.2	5651.8	6965.7	7263.6	9279.7	11323	12837	*15200*	*16600*	Total Capital ($mill)	*21400*
5475.6	6030.7	6725.9	7430.6	8280.5	9259.2	10371	11788	13355	15064	*17300*	*18700*	Net Plant ($mill)	*24000*
6.1%	5.9%	6.4%	6.6%	7.2%	6.4%	6.9%	6.1%	5.5%	5.5%	*6.5%*	*6.5%*	Return on Total Cap'l	*6.5%*
8.1%	8.9%	9.4%	9.9%	10.1%	9.8%	9.3%	8.9%	8.5%	8.4%	*8.5%*	*8.5%*	Return on Shr. Equity	*9.0%*
8.1%	8.9%	9.4%	9.9%	10.1%	9.8%	9.3%	8.9%	8.5%	8.4%	*8.5%*	*8.5%*	Return on Com Equity	*9.0%*
2.8%	4.0%	4.7%	4.9%	5.1%	4.9%	4.8%	4.6%	4.4%	4.3%	*4.0%*	*4.5%*	Retained to Com Eq	*4.5%*
65%	56%	50%	51%	50%	50%	48%	48%	49%	49%	*50%*	*49%*	All Div'ds to Net Prof	*48%*

CURRENT POSITION ($MILL.)	2020	2021	6/30/22
Cash Assets	20.8	116.7	328.1
Other	450.5	2722.0	2953.8
Current Assets	471.3	2838.7	3281.9
Accts Payable	235.8	423.2	397.1
Debt Due	.2	2400.5	2201.4
Other	546.4	686.7	660.6
Current Liab.	782.4	3510.4	3259.1
Fix. Chg. Cov.	1306%	1457%	1450%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21 to '25-'27
Revenues	-7.5%	-10.0%	*6.5%*
"Cash Flow"	6.0%	7.0%	*7.0%*
Earnings	8.5%	8.5%	*7.5%*
Dividends	5.5%	8.0%	*7.0%*
Book Value	8.5%	11.0%	*7.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2019	877.8	1094.6	485.7	443.7	2901.8
2020	875.6	977.6	493.0	474.9	2821.1
2021	914.5	1319.1	605.6	568.3	3407.5
2022	1012.8	1649.8	816.4	*621*	*4100*
2023	*1115*	*1740*	*905*	*640*	*4400*

Fiscal Year Ends	EARNINGS PER SHARE A B E Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2019	1.38	1.82	.68	.49	4.35
2020	1.47	1.95	.79	.53	4.72
2021	1.71	2.30	.78	.37	5.12
2022	1.86	2.37	.92	*.45*	*5.60*
2023	*2.02*	*2.43*	*1.01*	*.54*	*6.00*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	.485	.485	.485	.525	1.98
2019	.525	.525	.525	.575	2.15
2020	.575	.575	.575	.625	2.35
2021	.625	.625	.625	.68	2.56
2022	.68	.68	.68		

BUSINESS: Atmos Energy Corporation is engaged primarily in the distribution and sale of natural gas to over three million customers through six regulated natural gas utility operations: Louisiana Division, West Texas Division, Mid-Tex Division, Mississippi Division, Colorado-Kansas Division, and Kentucky/Mid-States Division. Gas sales breakdown for fiscal 2021: 67.9%, residential; 26.8%, commercial; 3.6%, industrial; and 1.7% other. The company sold Atmos Energy Marketing, 1/17. Officers and directors own approximately .9% of common stock (12/21 Proxy). President and Chief Executive Officer: Kevin Akers. Incorporated: Texas. Address: Three Lincoln Centre, Suite 1800, 5430 LBJ Freeway, Dallas, Texas 75240. Telephone: 972-934-9227. Internet: www.atmosenergy.com.

Atmos Energy seems to be on track to a solid fiscal 2022 (which concludes on September 30th). Through the first nine months, share net of $5.15 was 7.5% higher than last year's $4.79 figure. This was made possible partially by the distribution division, aided by favorable rate case outcomes and an expanded customer base. Too, results of the pipeline and storage unit benefited from GRIP filings approved in May, 2021 and May, 2022. A significantly reduced effective income tax rate also helped the company. So, if there are no major setbacks in the fourth quarter, Atmos' full-year profits might rise around 10%, to $5.60 a share, compared to fiscal 2021's $5.12 total. Concerning next year, share net stands to increase another 7%, to $6.00, assuming additional expansion of operating margins.

There's adequate liquidity to meet various commitments for quite a while. When the third quarter ended, cash and equivalents sat at $328.1 million. Furthermore, long-term debt was reasonable (roughly 38% of total capital) and short-term obligations did not seem to be a major obstacle. Also, $2.2 billion in common stock and/or debt securities remained available for issuance (out of $5 billion) under a shelf registration statement expiring in June, 2024. Finally, Atmos Energy can access four revolving credit facilities totaling $2.5 billion plus a $1.5 billion commercial paper program.

We think good things are in store for the company over the 2025-2027 span. It ranks as one of the country's biggest natural gas-only distributors, with more than three million customers across several states, including Texas, Louisiana, and Mississippi. Too, the pipeline and storage segment seems to have promising overall growth opportunities, given that it operates in one of the most-active drilling regions in the world. The sound balance sheet is another plus.

The top-quality stock offers unexciting long-term total return potential. Capital appreciation possibilities are underwhelming. Moreover, the dividend yield is lower than the average of *Value Line's* Natural Gas Utility group. But these shares are ranked 2 (Above Average) for Timeliness.

Frederick L. Harris, III *August 26, 2022*

(A) Fiscal year ends Sept. 30th. (B) Diluted shrs. Excl. nonrec. gains (loss): '10, 5¢; '11, (1¢); '18, $1.43; '20, 17¢. Excludes discontinued operations: '11, 10¢; '12, 27¢; '13, 14¢; '17, 13¢. Next egs. rpt. due early Nov.
(C) Dividends historically paid in early March, June, Sept., and Dec. ■ Div. reinvestment plan. Direct stock purchase plan avail.
(D) In millions.
(E) Qtrs may not add due to change in shrs outstanding.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	100

CHESAPEAKE UTIL. NYSE-CPK

RECENT PRICE 135.35 | P/E RATIO 26.6 (Trailing: 26.9, Median: 21.0) | RELATIVE P/E RATIO 1.61 | DIV'D YLD 1.6% | VALUE LINE

TIMELINESS	2	Raised 8/19/22
SAFETY	2	New 6/5/15
TECHNICAL	2	Raised 8/19/22

BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$118-$214	$166 (25%)

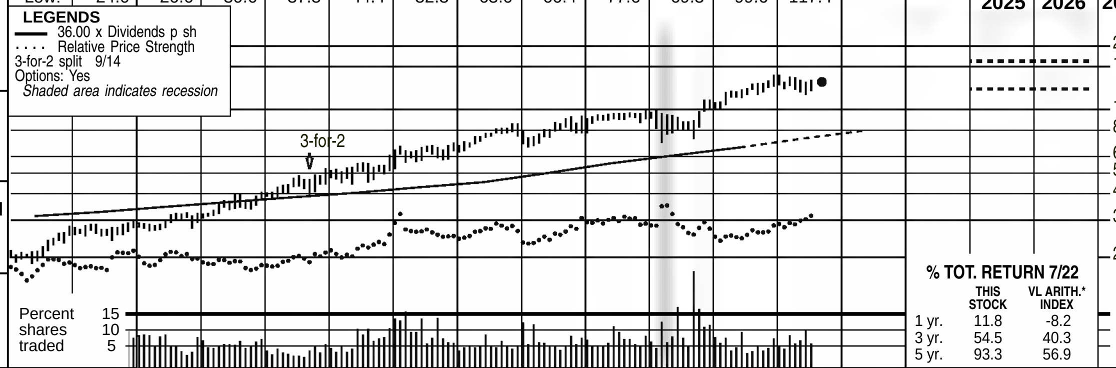
2025-27 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	170	(+25%)	8%
Low	125	(-10%)	Nil

Institutional Decisions

	3Q2021	4Q2021	1Q2022
to Buy	84	125	116
to Sell	93	85	97
Hld's(000)	13078	13157	13238

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
High:	29.7	32.6	40.8	52.7	61.1	70.0	86.4	93.4	98.6	111.4	146.1	146.3
Low:	24.0	26.6	30.6	37.5	44.4	52.3	63.0	66.4	77.6	69.5	99.6	117.4



% TOT. RETURN 7/22

	THIS STOCK	VL ARITH.* INDEX
1 yr.	11.8	-8.2
3 yr.	54.5	40.3
5 yr.	93.3	56.9

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27
23.05	25.41	28.46	19.07	29.93	29.13	27.26	30.73	34.19	30.07	30.60	37.79	43.81	29.24	27.96	32.28	*35.95*	*39.45*	Revenues per sh	*61.70*
2.18	2.52	2.50	2.15	3.50	3.69	3.95	4.35	4.73	5.05	5.16	5.42	6.47	6.50	7.37	8.28	*9.50*	*10.35*	"Cash Flow" per sh	*12.55*
1.15	1.29	1.39	1.43	1.82	1.91	1.99	2.26	2.47	2.68	2.86	2.68	3.45	3.72	4.21	4.73	*5.00*	*5.25*	Earnings per sh A	*6.50*
.77	.78	.81	.83	.87	.91	.96	1.01	1.07	1.12	1.19	1.26	1.39	1.55	1.69	1.84	*2.03*	*2.22*	Div'ds Decl'd per sh B■	*2.75*
4.87	3.08	3.00	1.89	3.18	3.28	5.00	6.72	6.66	9.47	10.42	10.73	16.47	11.26	9.48	10.59	*8.75*	*9.85*	Cap'l Spending per sh	*13.50*
11.08	11.76	12.02	14.89	15.84	16.78	17.82	19.28	20.59	23.45	27.36	29.75	31.65	34.23	39.92	43.85	*47.15*	*50.10*	Book Value per sh	*56.15*
10.03	10.17	10.24	14.09	14.29	14.35	14.40	14.46	14.59	15.27	16.30	16.34	16.38	16.40	17.46	17.66	*18.50*	*19.00*	Common Shs Outst'g C	*23.50*
17.9	16.7	14.2	14.2	12.2	14.2	14.8	15.6	17.7	19.1	21.8	27.8	22.9	24.7	21.6	25.6	*Bold figures are*		Avg Ann'l P/E Ratio	*22.5*
.97	.89	.85	.95	.78	.89	.94	.88	.93	.96	1.14	1.40	1.24	1.32	1.11	1.39	*Value Line*		Relative P/E Ratio	*1.25*
3.8%	3.6%	4.1%	4.1%	3.9%	3.4%	3.3%	2.9%	2.4%	2.2%	1.9%	1.7%	1.8%	1.7%	1.9%	1.5%	*estimates*		Avg Ann'l Div'd Yield	*1.9%*

CAPITAL STRUCTURE as of 6/30/22
Total Debt $744.3 mill. **Due in 5 Yrs** $340.0 mill.
LT Debt $585.8 mill. **LT Interest** $27.0 mill.
(LT interest earned: 6.6x; total interest coverage: 6.6x) (42% of Cap'l)
Leases, Uncapitalized Annual rentals $2.0 mill.
Pfd Stock None
Pension Assets-12/21 $58.7 mill. **Oblig.** $69.1 mill.
Common Stock 17,737,871 shs. as of 7/29/22

MARKET CAP: $2.4 billion (Mid Cap)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		25-27
392.5	444.3	498.8	459.2	498.9	617.6	717.5	479.6	488.2	570.0	*665*	*750*	Revenues ($mill)	*1450*
28.9	32.8	36.1	40.2	44.7	43.8	56.6	61.1	70.6	83.5	*92.0*	*100*	Net Profit ($mill)	*155*
40.1%	40.2%	39.9%	39.5%	38.8%	39.5%	27.1%	25.6%	25.0%	25.9%	*26.5%*	*26.5%*	Income Tax Rate	*29.0%*
7.4%	7.4%	7.2%	8.8%	9.0%	7.1%	7.9%	12.7%	14.5%	14.6%	*13.8%*	*13.3%*	Net Profit Margin	*10.7%*
28.4%	29.7%	34.5%	29.4%	23.5%	28.9%	37.9%	43.9%	42.2%	41.5%	*43.0%*	*43.0%*	Long-Term Debt Ratio	*40.0%*
71.6%	70.3%	65.5%	70.6%	76.5%	71.1%	62.1%	56.1%	57.8%	58.5%	*57.0%*	*57.0%*	Common Equity Ratio	*60.0%*
358.5	396.4	458.8	507.5	583.0	683.7	834.5	1001.7	1205.6	1324.0	*1530*	*1670*	Total Capital ($mill)	*2200*
541.8	631.2	689.8	855.0	986.7	1126.0	1384.0	1463.8	1601.2	1744.9	*1900*	*2100*	Net Plant ($mill)	*2700*
8.8%	8.8%	8.5%	8.9%	8.6%	7.3%	7.8%	7.2%	6.8%	7.1%	*6.0%*	*7.5%*	Return on Total Cap'l	*8.0%*
11.2%	11.8%	12.0%	11.2%	10.0%	9.0%	10.9%	10.9%	10.1%	10.8%	*10.5%*	*10.5%*	Return on Shr. Equity	*11.5%*
11.2%	11.8%	12.0%	11.2%	10.0%	9.0%	10.9%	10.9%	10.1%	10.8%	*10.5%*	*10.5%*	Return on Com Equity	*11.5%*
6.4%	7.1%	7.4%	6.8%	6.1%	4.9%	6.7%	6.5%	6.2%	6.7%	*6.0%*	*6.0%*	Retained to Com Eq	*7.0%*
43%	40%	38%	40%	39%	45%	39%	40%	38%	38%	*41%*	*42%*	All Div'ds to Net Prof	*42%*

CURRENT POSITION ($MILL.)	2020	2021	6/30/22
Cash Assets	3.5	5.0	4.2
Other	132.9	168.1	140.8
Current Assets	136.4	173.1	145.0
Accts Payable	60.3	52.6	38.1
Debt Due	189.2	239.6	158.5
Other	79.5	84.2	90.7
Current Liab.	329.0	376.4	287.3
Fix. Chg. Cov.	618%	771%	785%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21 to '25-'27
Revenues	1.5%	-1.0%	*13.0%*
"Cash Flow"	9.0%	8.0%	*9.5%*
Earnings	9.5%	9.5%	*7.5%*
Dividends	7.0%	8.5%	*8.5%*
Book Value	9.5%	10.5%	*6.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	160.5	94.5	92.6	132.0	479.6
2020	152.7	97.1	101.4	137.0	488.2
2021	191.2	111.1	107.3	160.4	570.0
2022	222.9	139.5	*132.6*	*170*	*665*
2023	*240*	*165*	*160*	*185*	*750*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	1.75	.54	.38	1.04	3.72
2020	1.77	.64	.56	1.24	4.21
2021	1.96	.78	.71	1.28	4.73
2022	2.08	.88	*.75*	*1.29*	*5.00*
2023	*2.16*	*.96*	*.80*	*1.33*	*5.25*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	.325	.325	.37	.37	1.39
2019	.37	.37	.405	.405	1.55
2020	.405	.405	.44	.44	1.69
2021	.44	.44	.48	.48	1.84
2022	.48	.48	.535		

BUSINESS: Chesapeake Utilities Corporation consists of two main units. The Regulated Energy segment distributes natural gas in Delaware, Maryland, and Florida; distributes electricity in Florida; and transmits natural gas on the Delmarva Peninsula and in Florida. The Unregulated Energy operation wholesales and distributes propane; markets natural gas; and provides other unregulated energy services, including midstream services in Ohio. Revenue breakdown for 2021: Regulated Energy, 67.4%; Unregulated Energy, 36.3%; Other, d3.7%. Officers and directors own 2.6% of common stock; BlackRock, 15.1% (3/22 Proxy). CEO: Jeffry M. Householder. Inc.: DE. Address: 909 Silver Lake Boulevard, Dover, DE 19904. Tel.: (302) 734-6799. Internet: www.chpk.com.

Chesapeake Utilities continues to generate decent earnings this year. In fact, through the first half, share net was $2.96, 8% higher than 2021's $2.74 tally. That stemmed partially from the Regulated Energy division, supported by such factors as the continued pipeline expansions by the Eastern Shore and Peninsula Pipeline operations, plus organic growth in the natural gas distribution businesses. Moreover, the performance of the Unregulated Energy unit received a lift partly as a result of last year's purchase of Diversified Energy Company, and higher propane margins per gallon and service fees. So, full-year profits stand to increase around 6%, to $5.00 a share, versus 2021's $4.73 total. Regarding 2023, the bottom line might advance at a similar percentage rate, to $5.25 a share, assuming that operating margins widen further.

Capital expenditures for 2022 are now anticipated to be between $140 million and $175 million. That's lower than the initial target of $175 million-$200 million because of a diminished level of new investments due to regulatory delays and supply-chain disruptions. The majority of the funds are being deployed to the Regulated Energy division, with an emphasis on the natural gas distribution and transmission segments. Leadership adds that it looks for total spending to be in the range of $750 million to $1 billion for the five-year period between 2021 and 2025. All told, we believe these objectives can be achieved if finances remain in solid shape, of course.

An acquisition was completed in mid-June. Chesapeake paid $2 million for the propane operating assets of Davenport Energy's Siler City propane unit. That move added around 850 customers, and expanded its geographic footprint further into North Carolina (which seems to have promising demand potential). We would not be surprised to see similar deals in the months ahead.

The stock, though timely, holds unimpressive total return potential over the 3- to 5-year horizon. Long-term capital appreciation possibilities look modest. Too, the present dividend yield of 1.6% is not exciting, compared to the average of *Value Line's* Natural Gas Utility Industry.

Frederick L. Harris, III *August 26, 2022*

(A) Diluted shrs. Excludes nonrecurring items: '08, d7¢; '15, 6¢; '17, 87¢; Q2 '22, 8¢. Excludes discontinued operations: '19, 24¢; '20, 5¢. Quarters for 2019 don't equal total because of rounding. Next earnings report due early Nov.
(B) Dividends historically paid in early January, April, July, and October. ■ Dividend reinvestment plan. Direct stock purchase plan available.
(C) In millions, adjusted for split.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	95
Earnings Predictability	95

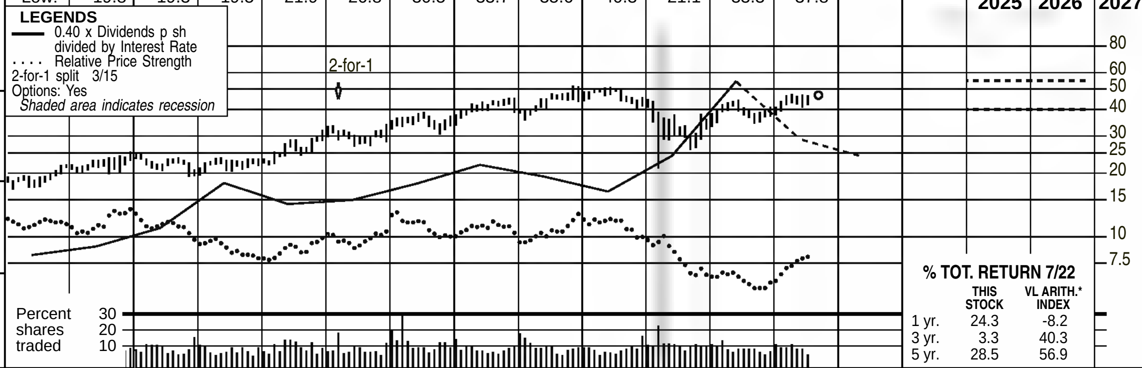
NEW JERSEY RES. NYSE-NJR

RECENT PRICE	46.83	P/E RATIO	18.7 (Trailing: 22.5 / Median: 17.0)	RELATIVE P/E RATIO	1.17	DIV'D YLD	3.2%	VALUE LINE

TIMELINESS 3 Raised 8/19/22
SAFETY 2 Lowered 4/17/20
TECHNICAL 2 Raised 7/22/22
BETA .95 (1.00 = Market)

High:	25.2	25.1	23.8	32.1	34.1	38.9	45.4	51.8	51.2	44.7	44.4	47.5	
Low:	19.8	19.3	19.5	21.9	26.8	30.5	33.7	35.6	40.3	21.1	33.3	37.8	

LEGENDS
— 0.40 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
2-for-1 split 3/15
Options: Yes
Shaded area indicates recession



Target Price Range
2025 | 2026 | 2027

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$30-$53	$42 (-10%)

2025-27 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+15%)	7%
Low	40	(-15%)	Nil

Institutional Decisions

	3Q2021	4Q2021	1Q2022
to Buy	109	158	144
to Sell	121	95	110
Hld's(000)	66131	68260	69401

Percent shares traded 30 20 10

% TOT. RETURN 7/22

	THIS STOCK	VL ARITH.* INDEX
1 yr.	24.3	-8.2
3 yr.	3.3	40.3
5 yr.	28.5	56.9

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27
39.81	36.31	45.37	31.17	32.05	36.30	27.08	38.38	44.40	32.09	21.90	26.28	33.24	29.01	20.39	22.71	**28.15**	**29.40**	Revenues per sh A	**33.00**
1.37	1.22	1.81	1.58	1.63	1.70	1.86	1.93	2.73	2.52	2.46	2.68	3.72	2.99	3.30	3.36	**3.70**	**3.90**	"Cash Flow" per sh	**4.25**
.93	.78	1.35	1.20	1.23	1.29	1.36	1.37	2.08	1.78	1.61	1.73	2.72	1.96	2.07	2.16	**2.40**	**2.50**	Earnings per sh B	**2.90**
.48	.51	.56	.62	.68	.72	.77	.81	.86	.93	.98	1.04	1.11	1.19	1.27	1.36	**1.48**	**1.55**	Div'ds Decl'd per sh C■	**1.95**
.64	.73	.86	.90	1.05	1.13	1.26	1.33	1.52	3.76	4.15	3.80	4.39	5.83	4.65	5.42	**6.05**	**5.15**	Cap'l Spending per sh	**8.50**
7.50	7.75	8.64	8.29	8.81	9.36	9.80	10.65	11.48	12.99	13.58	14.33	16.18	17.37	19.26	17.18	**18.75**	**20.00**	Book Value per sh D	**25.00**
82.88	83.22	84.12	83.17	82.35	82.89	83.05	83.32	84.20	85.19	85.88	86.32	87.69	89.34	95.80	94.95	**98.00**	**99.00**	Common Shs Outst'g E	**100.00**
16.1	21.6	12.3	14.9	15.0	16.8	16.8	16.0	11.7	16.6	21.3	22.4	15.6	24.3	17.7	17.5	*Bold figures are*	*Value Line*	Avg Ann'l P/E Ratio	**17.0**
.87	1.15	.74	.99	.95	1.05	1.07	.90	.62	.84	1.12	1.13	.84	1.29	.91	.94	*estimates*		Relative P/E Ratio	**.95**
3.2%	3.0%	3.3%	3.5%	3.7%	3.3%	3.4%	3.7%	3.5%	3.1%	2.9%	2.7%	2.6%	2.5%	3.5%	3.6%			Avg Ann'l Div'd Yield	**4.0%**

CAPITAL STRUCTURE as of 6/30/22
Total Debt $2919.7 mill. **Due in 5 Yrs** $300 mill.
LT Debt $2524.6 mill. **LT Interest** $78.6 mill.
Incl. $6.0 mill. capitalized leases.
(LT interest earned: 5.0x; total interest coverage: 5.0x)
Pension Assets-9/21 $469.5 mill. **Oblig.** $640.2 mill.
Pfd Stock None

Common Stock 96,228,378 shs.
as of 8/1/22
MARKET CAP: $4.5 billion (Mid Cap)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		25-27
2248.9	3198.1	3738.1	2734.0	1880.9	2268.6	2915.1	2592.0	1953.7	2156.6	**2700**	**2850**	Revenues ($mill) A	**3300**
112.4	113.7	176.9	153.7	138.1	149.4	240.5	175.0	196.2	207.7	**230**	**240**	Net Profit ($mill)	**300**
7.1%	25.4%	30.2%	26.3%	15.5%	17.2%	- -	- -	NMF	10.3%	**10.5%**	**10.5%**	Income Tax Rate	**10.5%**
5.0%	3.6%	4.7%	5.6%	7.3%	6.6%	8.2%	6.7%	10.0%	9.6%	**8.5%**	**8.5%**	Net Profit Margin	**9.0%**
39.2%	36.6%	38.2%	43.2%	47.7%	44.6%	45.4%	49.8%	55.1%	57.0%	**59.0%**	**60.0%**	Long-Term Debt Ratio	**55.0%**
60.8%	63.4%	61.8%	56.8%	52.3%	55.4%	54.6%	50.2%	44.9%	43.0%	**41.0%**	**40.0%**	Common Equity Ratio	**45.0%**
1339.0	1400.3	1564.4	1950.6	2230.1	2233.7	2599.6	3088.9	4104.2	3793.0	**4450**	**4600**	Total Capital ($mill)	**5500**
1484.9	1643.1	1884.1	2128.3	2407.7	2609.7	2651.0	3041.2	3983.0	4213.5	**4575**	**4750**	Net Plant ($mill)	**5000**
9.2%	9.0%	12.1%	8.6%	6.9%	7.7%	10.1%	6.4%	5.6%	6.5%	**5.0%**	**5.0%**	Return on Total Cap'l	**5.0%**
13.8%	12.8%	18.3%	13.9%	11.8%	12.1%	16.9%	11.3%	10.6%	12.7%	**12.8%**	**12.8%**	Return on Shr. Equity	**13.5%**
13.8%	12.8%	18.3%	13.9%	11.8%	12.1%	16.9%	11.3%	10.6%	12.7%	**12.8%**	**12.8%**	Return on Com Equity	**13.5%**
6.2%	5.2%	11.0%	7.0%	4.8%	5.0%	10.2%	4.6%	4.3%	5.6%	**4.5%**	**4.5%**	Retained to Com Eq	**4.5%**
55%	59%	40%	50%	60%	59%	40%	59%	60%	56%	**62%**	**62%**	All Div'ds to Net Prof	**60%**

CURRENT POSITION ($MILL.)	2020	2021	6/30/22
Cash Assets	117.0	4.7	27.7
Other	505.3	629.6	712.4
Current Assets	622.3	634.3	740.1
Accts Payable	270.1	429.6	129.4
Debt Due	152.6	450.1	395.1
Other	111.0	171.7	444.9
Current Liab.	533.7	1051.4	969.4
Fix. Chg. Cov.	545%	545%	550%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21 to '25-'27
Revenues	-3.0%	-6.0%	*2.5%*
"Cash Flow"	7.0%	4.5%	*5.0%*
Earnings	5.0%	2.5%	*5.0%*
Dividends	6.5%	6.5%	*5.0%*
Book Value	7.5%	7.0%	*4.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2019	811.8	866.2	434.9	479.1	2592.0
2020	615.0	639.6	299.0	400.1	1953.7
2021	454.3	802.2	367.6	532.5	2156.6
2022	675.8	912.3	552.3	**559.6**	**2700**
2023	**775**	**1050**	**500**	**525**	**2850**

Fiscal Year Ends	EARNINGS PER SHARE A B Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2019	.61	1.27	d.20	.29	1.96
2020	.44	1.12	d.06	.57	2.07
2021	.46	1.77	d.15	.07	2.16
2022	.69	1.36	d.04	**.39**	**2.40**
2023	**.70**	**1.45**	**.05**	**.40**	**2.50**

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	.273	.273	.273	.2925	1.11
2019	.2925	.2925	.2925	.3125	1.19
2020	.3125	.3125	.3125	.3325	1.27
2021	.3325	.3325	.3325	.3625	1.36
2022	.3625	.3625	.3625		

BUSINESS: New Jersey Resources Corp. is a holding company providing retail/wholesale energy svcs. to customers in NJ, and in states from the Gulf Coast to New England, and Canada. New Jersey Natural Gas had 564,000 cust. at 9/30/21. Fiscal 2021 volume: 112 bill. cu. ft. (20% interruptible, 61% residential, commercial & firm transportation, 19% other). N.J. Natural Energy subsidiary provides unregulated retail/wholesale natural gas and related energy svcs. 2021 dep. rate: 2.4%. Has 1,251 empls. Off./dir. own less than 1% of common; BlackRock, 15.3%; Vanguard, 10.6% (12/21 Proxy). CEO, President & Director: Steven D. Westhoven. Incorporated: New Jersey. Address: 1415 Wyckoff Road, Wall, NJ 07719. Telephone: 732-938-1480. Web: www.njresources.com.

New Jersey Resources exceeded our fiscal third-quarter revenue estimate and registered more than a nickel above share-net expectations. In the utility company's low season, it posted $552 million in revenues, a 50% increase from the year before, driven chiefly by higher revenues in it's utilities business. Net financial earnings, a non-GAAP financial performance metric used to adjust for unrealized gains and losses on derivatives, economic hedges on inventory, and impairment of equity investments, was negative $0.04 per share, a dime over our forecasts. While the energy services division has continued to experience compressed margins due to higher gas prices, the segment's margins showed improvement from the December period. Strong performance in the core utility segment more than made up for the shortfall, leading to overall good financial results. In fact, all business units other than Clean Energy Ventures showed improved earnings year over year. Overall, the quarter was positive for shareholders as the company raised its fiscal 2022 guidance. New estimates suggest net financial earnings of 2.40 to $2.50 per share.

The company has reinforced its central utility segment, New Jersey Natural Gas, through strategic investments in other business units. With a number of capital projects coming to completion, including the breakthrough Adelphia pipeline, the company is able to leverage the complimentary suite of its business units. In addition to opening doors to new customers, these investments make the company more sustainable, with much of its cutting-edge infrastructure capable of integrating alternative energy sources such as clean hydrogen and solar. Climate and energy provisions within the Inflation Reduction Act provide a prospective boost to the company's clean energy and energy services segments respectively. To-wit, the company has a large pipeline of capital projects moving forward and is actively seeking to expand its balance sheet.

Overall, the innovative company is positioning itself well for the future, but it's stock appears overpriced. Our 18-month price-appreciation forecast is negative, as the stock is currently trading above its estimated fair value.

Earl B.Humes *August 26, 2022*

(A) Fiscal year ends Sept. 30th.
(B) Diluted earnings. Qtly. revenues and egs. may not sum to total due to rounding and change in shares outstanding. Next earnings report due early Nov.
(C) Dividends historically paid in early Jan., April, July, and October. ■ Dividend reinvestment plan available.
(D) Includes regulatory assets in 2021: $522.1 million, $5.49/share.
(E) In millions, adjusted for splits.

Company's Financial Strength	A+
Stock's Price Stability	85
Price Growth Persistence	50
Earnings Predictability	55

NISOURCE INC. NYSE-NI

RECENT PRICE 31.36 | P/E RATIO 20.9 (Trailing: 22.9 Median: 21.0) | RELATIVE P/E RATIO 1.30 | DIV'D YLD 3.0% | VALUE LINE

TIMELINESS 4 Raised 3/11/22
SAFETY 3 Lowered 3/19/21
TECHNICAL 2 Raised 8/19/22
BETA .85 (1.00 = Market)

18-Month Target Price Range
Low-High: $25-$39 | Midpoint (% to Mid): $32 (0%)

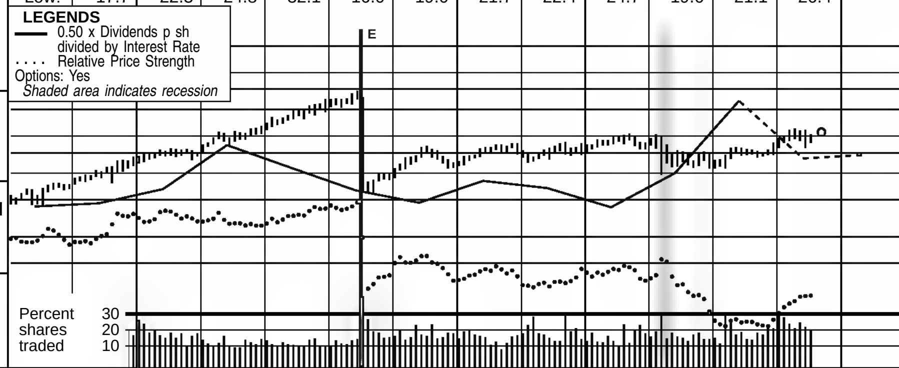
2025-27 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(+60%)	15%
Low	35	(+10%)	6%

Institutional Decisions

	3Q2021	4Q2021	1Q2022
to Buy	230	293	266
to Sell	208	170	235
Hld's(000)	376481	377935	381604

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
High:	24.0	26.2	33.5	44.9	49.2	26.9	27.8	28.1	30.7	30.5	27.8	32.6
Low:	17.7	22.3	24.8	32.1	16.0	19.0	21.7	22.4	24.7	19.6	21.1	26.4



Target Price Range 2025 | 2026 | 2027

% TOT. RETURN 7/22

	THIS STOCK	VL ARITH.* INDEX
1 yr.	26.8	-8.2
3 yr.	12.3	40.3
5 yr.	35.8	56.9

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27
27.37	28.96	32.36	24.02	22.99	21.33	16.31	18.04	20.47	14.58	13.90	14.46	13.74	13.63	11.95	12.09	*14.20*	*14.60*	Revenues per sh	*17.55*
3.18	3.20	3.32	2.96	3.19	2.98	3.13	3.41	3.60	2.27	2.71	2.07	2.86	3.17	3.15	3.26	*3.45*	*3.50*	"Cash Flow" per sh	*4.35*
1.14	1.14	1.34	.84	1.06	1.05	1.37	1.57	1.67	.63	1.00	.39	1.30	1.31	1.32	1.37	*1.45*	*1.60*	Earnings per sh A	*2.40*
.92	.92	.92	.92	.92	.92	.94	.98	1.02	.83	.64	.70	.78	.80	.84	.88	*.94*	*.98*	Div'd Decl'd per sh B ■	*1.08*
2.33	2.88	3.54	2.81	2.88	3.99	4.83	5.99	6.42	4.26	4.57	5.03	4.88	4.72	4.49	4.53	*5.90*	*8.10*	Cap'l Spending per sh	*5.75*
18.32	18.52	17.24	17.54	17.63	17.71	17.90	18.77	19.54	12.04	12.60	12.82	13.08	13.36	12.66	13.33	*13.75*	*14.35*	Book Value per sh C	*17.50*
273.65	274.18	274.26	276.79	279.30	282.18	310.28	313.68	316.04	319.11	323.16	337.02	372.36	382.14	391.76	404.30	*406.00*	*408.00*	Common Shs Outst'g D	*415.00*
19.2	18.8	12.1	14.3	15.3	19.4	17.9	18.9	22.7	37.3	23.2	NMF	19.3	21.3	18.7	18.0	*Bold figures are*		Avg Ann'l P/E Ratio	*19.0*
1.04	1.00	.73	.95	.97	1.22	1.14	1.06	1.19	1.88	1.22	3.24	1.04	1.13	.96	.99	*Value Line*		Relative P/E Ratio	*1.05*
4.2%	4.3%	5.7%	7.6%	5.7%	4.5%	3.8%	3.3%	2.7%	3.5%	2.8%	2.8%	3.1%	2.9%	3.4%	3.6%	*estimates*		Avg Ann'l Div'd Yield	*2.5%*

CAPITAL STRUCTURE as of 6/30/22
Total Debt $10112.5 mill. **Due in 5 Yrs** $1318 mill.
LT Debt $9520.2 mill. **LT Interest** $336 mill.
(Interest cov. earned: 2.2x) (58% of Cap'l)

Leases, Uncapitalized Annual rentals $32.7 mill.
Pension Assets-12/21 $1.9 bill. **Oblig.** $2.0 bill.

Pfd Stock $1547 mill. **Pfd Div'd** $55.1 mill.

Common Stock 405,952,999 shs.
as of 7/26/22
MARKET CAP: $12.7 billion (Large Cap)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		25-27
5061.2	5657.3	6470.6	4651.8	4492.5	4874.6	5114.5	5208.9	4681.7	4899.6	*5750*	*5950*	Revenues ($mill)	*7300*
410.6	490.9	530.7	198.6	328.1	128.6	478.3	549.8	562.6	626.3	*590*	*655*	Net Profit ($mill)	*990*
34.4%	34.8%	36.9%	41.6%	35.7%	71.0%	19.7%	17.0%	18.3%	15.7%	*19.0%*	*19.0%*	Income Tax Rate	*19.0%*
- -	- -	- -	- -	- -	- -	- -	- -	2.9%	2.0%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
55.1%	56.3%	56.9%	60.7%	59.8%	63.5%	55.3%	56.8%	61.2%	56.9%	*55.0%*	*57.5%*	Long-Term Debt Ratio	*52.0%*
44.9%	43.7%	43.1%	39.3%	40.2%	36.5%	37.9%	36.9%	32.9%	33.5%	*33.5%*	*35.0%*	Common Equity Ratio	*39.5%*
12373	13480	14331	9792.0	10129	11832	12856	13843	15058	16131	*17250*	*17500*	Total Capital ($mill)	*18750*
12916	14365	16017	12112	13068	14360	15543	16912	16620	17882	*18750*	*19250*	Net Plant ($mill)	*22500*
5.0%	5.2%	5.3%	4.0%	5.0%	2.6%	5.1%	5.3%	5.0%	4.9%	*3.5%*	*4.0%*	Return on Total Cap'l	*5.5%*
7.4%	8.3%	8.6%	5.2%	8.1%	3.0%	8.3%	9.2%	9.6%	9.0%	*9.5%*	*9.0%*	Return on Shr. Equity	*11.5%*
7.4%	8.3%	8.6%	5.2%	8.1%	3.0%	9.6%	9.7%	10.2%	10.6%	*9.5%*	*9.0%*	Return on Com Equity	*11.5%*
2.5%	3.1%	3.4%	NMF	3.0%	NMF	4.0%	3.8%	3.7%	4.2%	*2.5%*	*3.0%*	Retained to Com Eq	*5.5%*
67%	62%	61%	NMF	63%	NMF	60%	64%	67%	64%	*65%*	*60%*	All Div'ds to Net Prof	*55%*

CURRENT POSITION ($MILL.)	2020	2021	6/30/22
Cash Assets	116.5	85.2	77.8
Other	1542.9	1835.6	1833.9
Current Assets	1659.4	1920.8	1911.7
Accts Payable	589.0	697.8	650.3
Debt Due	526.3	618.1	592.3
Other	1164.1	1430.3	1772.4
Current Liab.	2279.4	2746.2	3015.0
Fix. Chg. Cov.	250%	250%	255%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21 to '25-'27
Revenues	-6.0%	-5.0%	*5.5%*
"Cash Flow"	.5%	2.0%	*5.5%*
Earnings	3.0%	4.0%	*9.5%*
Dividends	-1.0%	- -	*4.5%*
Book Value	-3.0%	-2.5%	*5.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	1869.8	1010.4	931.5	1397.2	5208.9
2020	1605.5	962.7	902.5	1211.0	4681.7
2021	1545.6	986.0	959.4	1408.6	4899.6
2022	1873.3	1183.2	*1050*	*1643.5*	*5750*
2023	*1960*	*1170*	*1120*	*1700*	*5950*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	.82	.05	- -	.45	1.31
2020	.76	.13	.09	.34	1.32
2021	.77	.13	.11	.39	1.37
2022	.75	.12	*.10*	*.48*	*1.45*
2023	*.80*	*.20*	*.20*	*.40*	*1.60*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	.195	.195	.195	.195	.78
2019	.200	.200	.200	.200	.80
2020	.21	.21	.21	.21	.84
2021	.22	.22	.22	.22	.88
2022	.235	.235			

BUSINESS: NiSource Inc. is a holding company for Northern Indiana Public Service Company (NIPSCO), which supplies electricity and gas to the northern third of Indiana. Customers: 479,185 electric in Indiana, 3,200,000 million gas in Indiana, Ohio, Pennsylvania, Kentucky, Virginia, Maryland, through its Columbia subsidiaries. Revenue breakdown, 2021: electrical, 31%; gas, 69%; other, less than 1%. Generating sources, coal, 69.4%; purchased & other, 30.6%. 2021 reported depreciation rates: 2.9% electric, 2.2% gas. Has 7,304 employees. Chairman: Richard L. Thompson. President & Chief Executive Officer: Lloyd Yates. Incorporated: Indiana. Address: 801 East 86th Avenue, Merrillville, Indiana 46410. Telephone: 877-647-5990. Internet: www.nisource.com.

NiSource beat our earnings and revenue expectations in the second-quarter. The northern Indiana utility company posted revenues 20% higher and share net one cent lower than its 2021 June quarter figures. The observed margin compression is primarily due to increased energy costs over the period. The Electric operations segment underperformed; its quarterly earnings decreased $11 million from the year prior as increased operating costs outpaced revenue growth. The Gas Distribution segment also experienced margin pressure, despite overall earnings growth. Energy costs for the segment increased $124.4 million, doubling the quarter's expense year over year. Strong revenue growth of $167 million insulated the segment's bottom line. Yet the reduction in margin displays the company's exposure to structural volatility and commodity price risk in energy markets.

The stock's price exhibited volatility in the quarter, but currently trades where they were three months ago. This result is in line with our expectations, as many of the adverse trends in the operating environment over the quarter have since reversed. Specifically, the shares fell when gas prices peaked in mid-June, but they have since recovered with the price of gas reverting to lower levels. Economic policy and recent data indicate that reductions in energy prices may persist, providing relief to the company's expense profile.

Our 2022 bottom-line forecast remains unchanged. Management has reaffirmed guidance of share net between $1.42 and $1.48 on the year, supporting its long-term target earnings growth rate of 7% to 9% year over year. With a significant number of capital projects in development and more in the pipeline, this growth rate seems achievable. Despite current supply chain challenges disrupting the production of solar panels, the company is committed to developing a sustainable electric supply, which will protect margins from the energy market's volatility and promote growth.

With an attractive 3- to 5- year price upside potential, paired with the above average dividend yield, this issue is suitable for income investors. Furthermore, the optional dividend reinvestment plan is another plus.

Earl B. Humes — *August 26, 2022*

(A) Dil. EPS. Excl. gains (losses) on disc. ops.: '06, (11¢); '07, 3¢; '08, ($1.14); '15, (30¢); '18, ($1.48). Next egs. report due late October. Qtl'y egs. may not sum to total due to rounding.
(B) Div'ds historically paid in mid-Feb., May, Aug., Nov. ■ Div'd reinv. avail.
(C) Incl. intang in '21: $1485.9 million, $3.68/sh.
(D) In mill.
(E) Spun off Columbia Pipeline Group (7/15)

Company's Financial Strength	B+
Stock's Price Stability	100
Price Growth Persistence	20
Earnings Predictability	50

N.W. NATURAL NYSE-NWN

RECENT PRICE **53.11** | P/E RATIO **19.3** (Trailing: 21.3 Median: 24.0) | RELATIVE P/E RATIO **1.23** | DIV'D YLD **3.6%** | **VALUE LINE**

TIMELINESS 3 Raised 8/19/22
SAFETY 3 Lowered 3/19/21
TECHNICAL 1 Raised 8/19/22
BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$37-$63	$50 (-5%)

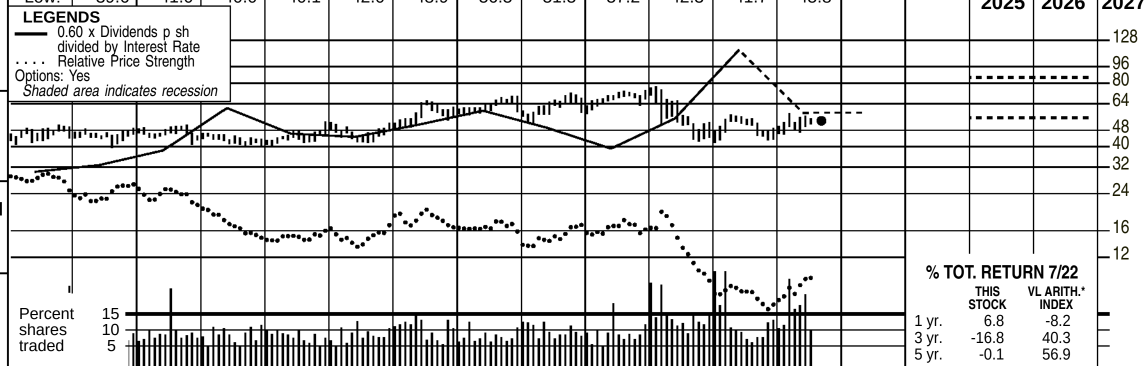
2025-27 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+60%)	15%
Low	55	(+5%)	5%

Institutional Decisions

	3Q2021	4Q2021	1Q2022
to Buy	95	104	161
to Sell	95	93	74
Hld's(000)	21597	21695	24444

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
High:	49.0	50.8	46.6	52.6	52.3	66.2	69.5	71.8	74.1	77.3	56.8	57.6
Low:	39.6	41.0	40.0	40.1	42.0	48.9	56.5	51.5	57.2	42.3	41.7	45.8



% TOT. RETURN 7/22

	THIS STOCK	VL ARITH.* INDEX
1 yr.	6.8	-8.2
3 yr.	-16.8	40.3
5 yr.	-0.1	56.9

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27
37.20	39.13	39.16	38.17	30.56	31.72	27.14	28.02	27.64	26.39	23.61	26.52	24.45	24.49	25.29	27.64	*27.55*	*27.60*	Revenues per sh	*33.55*
4.76	5.41	5.31	5.20	5.18	5.00	4.94	5.04	5.05	4.91	4.93	1.04	5.28	5.15	5.69	6.17	*6.75*	*6.40*	"Cash Flow" per sh	*7.65*
2.35	2.76	2.57	2.83	2.73	2.39	2.22	2.24	2.16	1.96	2.12	d1.94	2.33	2.19	2.30	2.56	*2.60*	*2.85*	Earnings per sh A	*3.45*
1.39	1.44	1.52	1.60	1.68	1.75	1.79	1.83	1.85	1.86	1.87	1.88	1.89	1.90	1.91	1.92	*1.93*	*1.94*	Div'ds Decl'd per sh B■	*1.96*
3.56	4.48	3.92	5.09	9.35	3.76	4.91	5.13	4.40	4.37	4.87	7.43	7.43	7.95	9.18	9.49	*9.60*	*7.75*	Cap'l Spending per sh	*9.40*
22.01	22.52	23.71	24.88	26.08	26.70	27.23	27.77	28.12	28.47	29.71	25.85	26.41	28.42	29.05	30.04	*32.55*	*34.25*	Book Value per sh D	*37.20*
27.24	26.41	26.50	26.53	26.58	26.76	26.92	27.08	27.28	27.43	28.63	28.74	28.88	30.47	30.59	31.13	*35.00*	*35.50*	Common Shs Outst'g C	*32.00*
15.9	16.7	18.1	15.2	17.0	19.0	21.1	19.4	20.7	23.7	26.9	- -	26.6	30.9	25.0	19.5	*Bold figures are*	*Value Line*	Avg Ann'l P/E Ratio	*20.0*
.86	.89	1.09	1.01	1.08	1.19	1.34	1.09	1.09	1.19	1.41	- -	1.44	1.65	1.28	1.06	*estimates*		Relative P/E Ratio	*1.10*
3.7%	3.1%	3.3%	3.7%	3.6%	3.9%	3.8%	4.2%	4.1%	4.0%	3.3%	3.0%	3.0%	2.8%	3.3%	3.8%			Avg Ann'l Div'd Yield	*2.6%*

CAPITAL STRUCTURE as of 6/30/22
Total Debt $1268.6 mill. **Due in 5 Yrs** $175.3 mill.
LT Debt $1045.5 mill. **LT Interest** $44.5 mill.

(Total interest coverage: 3.1x)

Pension Assets-12/21 $399.2 mill. **Oblig.** $569.8 mill.

Pfd Stock None

Common Stock 34,817,043 shares as of 07/28/22

MARKET CAP $1.8 billion (Mid Cap)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		25-27
730.6	758.5	754.0	723.8	676.0	762.2	706.1	746.4	773.7	860.4	*965*	*980*	Revenues ($mill)	*1125*
59.9	60.5	58.7	53.7	58.9	d55.6	67.3	65.3	70.3	78.7	*90.0*	*100.0*	Net Profit ($mill)	*135*
42.4%	40.8%	41.5%	40.0%	40.9%	- -	26.4%	16.2%	23.1%	25.8%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
8.2%	8.0%	7.8%	7.4%	8.7%	NMF	9.5%	8.8%	9.1%	9.1%	*9.3%*	*9.7%*	Net Profit Margin	*12.0%*
48.5%	47.6%	44.8%	42.5%	44.4%	47.9%	48.1%	48.2%	49.2%	52.8%	*50.0%*	*50.0%*	Long-Term Debt Ratio	*48.0%*
51.5%	52.4%	55.2%	57.5%	55.6%	52.1%	51.9%	51.8%	50.8%	47.2%	*50.0%*	*50.0%*	Common Equity Ratio	*52.0%*
1424.7	1433.6	1389.0	1357.7	1529.8	1426.0	1468.9	1672.0	1748.8	1979.7	*2200*	*2255*	Total Capital ($mill)	*2550*
1973.6	2062.9	2121.6	2182.7	2260.9	2255.0	2421.4	2438.9	2654.8	2871.4	*3150*	*3360*	Net Plant ($mill)	*4250*
5.7%	5.8%	5.8%	5.5%	5.1%	NMF	5.8%	5.2%	5.2%	5.1%	*4.0%*	*4.5%*	Return on Total Cap'l	*6.0%*
8.2%	8.1%	7.6%	6.9%	6.9%	NMF	8.8%	7.5%	7.9%	8.4%	*8.0%*	*9.5%*	Return on Shr. Equity	*9.5%*
8.2%	8.1%	7.6%	6.9%	6.9%	NMF	8.8%	7.5%	7.9%	8.4%	*8.0%*	*9.5%*	Return on Com Equity	*9.5%*
1.6%	1.5%	1.1%	.6%	.9%	NMF	2.1%	1.4%	1.7%	2.4%	*2.0%*	*3.0%*	Retained to Com Eq	*4.0%*
80%	81%	85%	92%	87%	NMF	76%	82%	79%	71%	*75%*	*68%*	All Div'ds to Net Prof	*55%*

CURRENT POSITION ($MILL.)	2020	2021	6/30/22
Cash Assets	30.2	18.6	17.2
Other	293.0	418.7	340.8
Current Assets	323.2	437.3	358.0
Accts Payable	97.9	133.5	135.4
Debt Due	399.9	389.8	223.0
Other	129.3	201.5	180.9
Current Liab.	627.1	724.8	539.3
Fix. Chg. Cov.	335%	335%	312%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21 to '25-'27
Revenues	-2.5%	- -	4.5%
"Cash Flow"	1.0%	2.5%	5.0%
Earnings	-1.0%	2.5%	6.5%
Dividends	1.5%	.5%	.5%
Book Value	1.0%	.5%	4.0%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	285.4	123.4	90.3	247.3	746.4
2020	285.2	135.0	93.3	260.2	773.7
2021	315.9	148.9	101.5	294.1	860.4
2022	350.3	195.0	*110*	*309.7*	*965*
2023	*365*	*160*	*115*	*340*	*980*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	1.50	.07	d.61	1.26	2.19
2020	1.58	d.17	d.61	1.50	2.30
2021	1.94	d.02	d.67	1.31	2.56
2022	1.80	.05	*d.60*	*1.35*	*2.60*
2023	*1.95*	*.05*	*d.55*	*1.40*	*2.85*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	.4725	.4725	.4725	.475	1.89
2019	.475	.475	.475	.4775	1.90
2020	.4775	.4775	.4775	.48	1.91
2021	.48	.48	.48	.483	1.92
2022	.483	.483	.483		

BUSINESS: Northwest Natural Holding Co. distributes natural gas to 1,000 communities, 775,000 customers, in Oregon (89% of customers) and in southwest Washington state. Principal cities served: Portland and Eugene, OR; Vancouver, WA. Service area population: 3.7 mill. (77% in OR). Company buys gas supply from Canadian and U.S. producers; has transportation rights on Northwest Pipeline system. Owns local underground storage. Rev. breakdown: residential, 37%; commercial, 22%; industrial, gas transportation, 41%. Employs 1,167. BlackRock Inc. owns 17.2% of shares; Vanguard, 11.8%; Off./Dir., .92% (4/22 proxy). CEO: David H. Anderson. Inc.: Oregon. Address: 220 NW 2nd Ave., Portland, OR 97209. Tel.: 503-226-4211. Internet: www.nwnatural.com.

Shares of Northwest Natural Holdings traded modestly higher over the quarter, registering an advance of 2.3% since our last report in May. These gains are less than the S&P 500's 4.4% rise over the same period. However, considering the stock's bright first-quarter returns, year to date performance has outpaced the index by more than 18%.

The company exceeded second-quarter earnings and revenue estimates. Revenues of $195 million represented a 32% increase from a year earlier. Earnings per share increased to $0.05 in the quarter, up from a loss of $0.02 in 2021. In the six months ended June 30, revenues were $80.5 million higher, while share-net was down $0.07. Higher energy costs in the first half of the year impaired the company's profitability. With these prices falling in July and August, the company's third and fourth-quarter profit margins and earnings are likely to show year over year improvement.

A petition for higher base rates is expected to pass, effective November 1, subject to regulatory approval. The rate settlement stipulates an annual revenue requirement increase of $62.7 million per year and an overall higher base rate of $1.77 billion, allowing for $337 million of additional provisions for net plant. These investments will serve to allow continued customer growth as the company expands geographically. In the past year it has added more than ten-thousand new customers. The settlement will also boost its efforts towards its ambitious destination zero program to reduce scope 2 greenhouse gas emissions. One of Northwest's flagship cap-ex projects resulting from the higher rates is a one megawatt hydrogen gas plant that will be blended into the gas supply. In the fourth-quarter we expect revenue and earnings to see a material advancement as these new rates take effect.

The stock's strong dividend yield does not make up for modest appreciation potential. Ranked 4 for Timeliness, this innovative utility stock does not offer outsized returns from it's current price level. The 18 month midpoint is showing a loss of 5%. Even with a 3.6% dividend yield, this stock does not offer an attractive valuation compared to its industry peers.

Earl B. Humes *August 26, 2022*

(A) Diluted earnings per share. Excludes nonrecurring items: '06, ($0.06); '08, ($0.03); '09, $0.06; May not sum due to rounding. Next earnings report due in early November.
(B) Dividends historically paid in mid-February, May, August, and November.
■ Dividend reinvestment plan available.
(C) In millions.
(D) Includes intangibles. In 2021: $70.6 million, $2.27/share.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	35
Earnings Predictability	10

ONE GAS, INC. NYSE-OGS

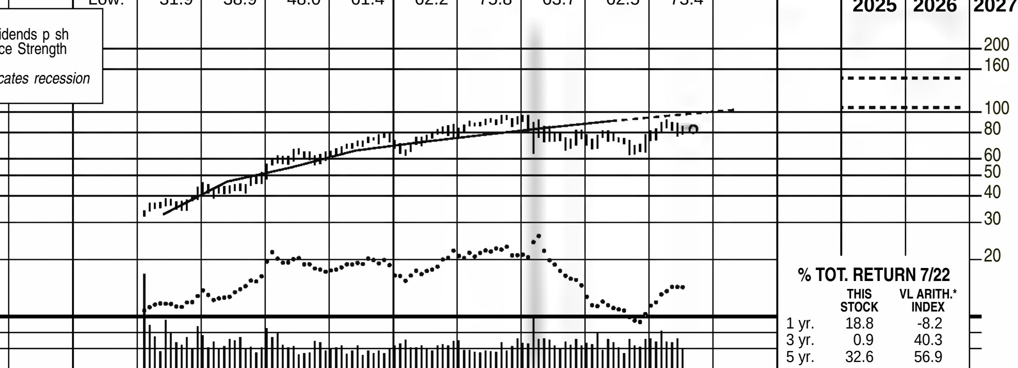
RECENT PRICE	P/E RATIO		RELATIVE P/E RATIO	DIV'D YLD
83.14	20.5	(Trailing: 21.2, Median: NMF)	1.24	3.1%

VALUE LINE

TIMELINESS	3 Raised 5/13/22
SAFETY	2 New 6/2/17
TECHNICAL	2 Lowered 8/26/22
BETA	.80 (1.00 = Market)

	2014	2015	2016	2017	2018	2019	2020	2021	2022
High:	44.3	51.8	67.4	79.5	87.8	96.7	97.0	81.9	92.3
Low:	31.9	38.9	48.0	61.4	62.2	75.8	63.7	62.5	73.4

LEGENDS
— 39.00 x Dividends p sh
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$69-$115	$92 (10%)

2025-27 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	145	(+75%)	17%
Low	105	(+25%)	9%

Institutional Decisions

	3Q2021	4Q2021	1Q2022
to Buy	135	148	146
to Sell	122	119	118
Hld's(000)	42681	43769	44094

Percent shares traded 21 14 7

% TOT. RETURN 7/22

	THIS STOCK	VL ARITH.* INDEX
1 yr.	18.8	-8.2
3 yr.	0.9	40.3
5 yr.	32.6	56.9

The shares of ONE Gas, Inc. began trading "regular-way" on the New York Stock Exchange on February 3, 2014. That happened as a result of the separation of ONEOK's natural gas distribution operation. Regarding the details of the spinoff, on January 31, 2014, ONEOK distributed one share of OGS common stock for every four shares of ONEOK common stock held by ONEOK shareholders of record as of the close of business on January 21. It should be mentioned that ONEOK did not retain any ownership interest in the new company.

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27
--	--	34.92	29.62	27.30	29.43	31.08	31.32	28.78	33.72	*43.30*	*45.85*	Revenues per sh	*61.40*
--	--	4.52	4.82	5.43	5.96	6.32	6.96	7.36	7.71	*8.05*	*8.50*	"Cash Flow" per sh	*10.55*
--	--	2.07	2.24	2.65	3.02	3.25	3.51	3.68	3.85	*4.00*	*4.20*	Earnings per sh A	*5.30*
--	--	.84	1.20	1.40	1.68	1.84	2.00	2.16	2.32	*2.48*	*2.64*	Div'ds Decl'd per sh B■	*3.12*
--	--	5.70	5.63	5.91	6.81	7.50	7.91	8.87	9.23	*9.35*	*9.55*	Cap'l Spending per sh	*9.85*
--	--	34.45	35.24	36.12	37.47	38.86	40.35	42.01	43.81	*49.60*	*50.70*	Book Value per sh	*63.15*
--	--	52.08	52.26	52.28	52.31	52.57	52.77	53.17	53.63	*54.50*	*54.50*	Common Shs Outst'g C	*57.00*
--	--	17.8	19.8	22.7	23.5	23.1	25.3	21.7	18.9	*Bold figures are*		Avg Ann'l P/E Ratio	*23.5*
--	--	.94	1.00	1.19	1.18	1.25	1.35	1.11	1.03	*Value Line*		Relative P/E Ratio	*1.30*
--	--	2.3%	2.7%	2.3%	2.4%	2.5%	2.3%	2.7%	3.2%	*estimates*		Avg Ann'l Div'd Yield	*2.5%*
--	--	1818.9	1547.7	1427.2	1539.6	1633.7	1652.7	1530.3	1808.6	*2360*	*2500*	Revenues ($mill)	*3500*
--	--	109.8	119.0	140.1	159.9	172.2	186.7	196.4	206.4	*218*	*230*	Net Profit ($mill)	*300*
--	--	38.4%	38.0%	37.8%	36.4%	23.7%	18.7%	17.5%	16.3%	*18.0%*	*18.5%*	Income Tax Rate	*22.0%*
--	--	6.0%	7.7%	9.8%	10.4%	10.5%	11.3%	12.8%	11.4%	*9.2%*	*9.2%*	Net Profit Margin	*8.6%*
--	--	40.1%	39.5%	38.7%	37.8%	38.6%	37.7%	41.5%	61.0%	*48.0%*	*49.0%*	Long-Term Debt Ratio	*52.0%*
--	--	59.9%	60.5%	61.3%	62.2%	61.4%	62.3%	58.5%	39.0%	*52.0%*	*51.0%*	Common Equity Ratio	*48.0%*
--	--	2995.3	3042.9	3080.7	3153.5	3328.1	3415.5	3815.7	6032.9	*5200*	*5420*	Total Capital ($mill)	*7500*
--	--	3293.7	3511.9	3731.6	4007.6	4283.7	4565.2	4867.1	5190.8	*5500*	*5800*	Net Plant ($mill)	*6750*
--	--	4.4%	4.7%	5.2%	5.8%	5.9%	6.4%	6.0%	3.9%	*5.5%*	*5.5%*	Return on Total Cap'l	*5.5%*
--	--	6.1%	6.5%	7.4%	8.2%	8.4%	8.8%	8.8%	8.8%	*8.0%*	*8.5%*	Return on Shr. Equity	*8.5%*
--	--	6.1%	6.5%	7.4%	8.2%	8.4%	8.8%	8.8%	8.8%	*8.0%*	*8.5%*	Return on Com Equity	*8.5%*
--	--	3.7%	3.1%	3.5%	3.7%	3.7%	3.8%	3.7%	3.5%	*3.0%*	*3.0%*	Retained to Com Eq	*3.5%*
--	--	40%	53%	52%	55%	56%	56%	58%	60%	*62%*	*63%*	All Div'ds to Net Prof	*59%*

CAPITAL STRUCTURE as of 6/30/22
Total Debt $4174.0 mill. **Due in 5 Yrs** $2900.0 mill.
LT Debt $2283.9 mill. **LT Interest** $140.0 mill.
(LT interest earned: 5.1x; total interest coverage: 5.1x)
Leases, Uncapitalized Annual rentals $7.5 mill.
Pfd Stock None
Pension Assets-12/21 $1245.2 mill. **Oblig.** $1272.8 mill.
Common Stock 54,137,522 shs. as of 7/25/22
MARKET CAP: $4.5 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2020	2021	6/30/22
Cash Assets	8.0	8.9	7.4
Other	531.9	2215.7	2141.5
Current Assets	539.9	2224.6	2148.9
Accts Payable	152.3	258.6	186.4
Debt Due	418.2	494.0	1890.1
Other	226.6	227.9	251.8
Current Liab.	797.1	980.5	2328.3
Fix. Chg. Cov.	587%	625%	635%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21 to '25-'27
Revenues	--	.5%	*12.0%*
"Cash Flow"	--	8.5%	*6.5%*
Earnings	--	9.5%	*6.5%*
Dividends	--	13.5%	*6.5%*
Book Value	--	3.5%	*8.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	661.0	290.6	248.6	452.5	1652.7
2020	528.2	273.3	244.6	484.2	1530.3
2021	625.3	315.6	273.9	593.8	1808.6
2022	971.5	428.9	*343.5*	*616.1*	*2360*
2023	*1019*	*470*	*366*	*645*	*2500*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	1.76	.46	.33	.96	3.51
2020	1.72	.48	.39	1.09	3.68
2021	1.79	.56	.38	1.12	3.85
2022	1.83	.59	*.43*	*1.15*	*4.00*
2023	*1.88*	*.65*	*.49*	*1.18*	*4.20*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	.46	.46	.46	.46	1.84
2019	.50	.50	.50	.50	2.00
2020	.54	.54	.54	.54	2.16
2021	.58	.58	.58	.58	2.32
2022	.62	.62	.62		

BUSINESS: ONE Gas, Inc. provides natural gas distribution services to more than two million customers. There are three divisions: Oklahoma Natural Gas, Kansas Gas Service, and Texas Gas Service. The company purchased 164 Bcf of natural gas supply in 2021, compared to 153 Bcf in 2020. Total volumes delivered by customer (fiscal 2021): transportation, 59.3%; residential, 30.4%; commercial & industrial, 9.7%; other, .6%. ONE Gas has around 3,600 employees. BlackRock owns 12.2% of common stock; The Vanguard Group, 10.9%; American Century Investment, 8.0%; officers and directors, 1.5% (4/22 Proxy). CEO: Robert S. McAnnally. Incorporated: Oklahoma. Address: 15 East Fifth Street, Tulsa, Oklahoma 74103. Tel.: 918-947-7000. Internet: www.onegas.com.

Earnings for ONE Gas are running a bit ahead of last year's. Indeed, through the first half, share net of $2.42 was 3% higher than the 2021 total of $2.35. This can be attributed partly to benefits from new rates. Moreover, there was an increase in residential sales due primarily to net customer growth in Texas and Oklahoma. Bad-debt expense dropped, as well. So, if there are no major downside surprises during the second half, full-year profits stand to advance around 4%, to $4.00 a share, relative to the 2021 figure of $3.85. Concerning next year, the company's share net may grow at a similar percentage rate, to $4.20, assuming that operating margins widen further.

Corporate finances are in solid shape. When the second quarter concluded, cash and equivalents were about $7.4 million, and cash flows were decent. Furthermore, there was $490.1 million available (out of $1 billion) under a commercial paper program. ONE Gas also possesses a $1 billion revolving credit facility expiring in March, 2027. Finally, at the end of the June period, long-term debt was a reasonable 48% of total capital, and short-term borrowings did not seem to be a major stumbling block. All things considered, the energy firm ought to continue to be able to meet its working capital requirements, capital expenditures, and other obligations with minimal difficulty.

Business prospects over the 2025-2027 horizon look promising. ONE Gas remains the top natural gas distributor (as measured by customer count) in both Oklahoma and Kansas, and holds the number-three position in Texas. Also, we believe these markets have decent growth possibilities and are located in one of the most active drilling regions in the United States. Another positive is the healthy balance sheet.

The good-quality stock holds worthwhile long-term total return potential. Upside possibilities during the 3- to 5-year span are decent. What's more, the dividend yield is respectable, relative to the average yield in *Value Line's* Natural Gas Utility universe. Meanwhile, these shares are ranked to perform in line with the broader market for the coming six to 12 months.

Frederick L. Harris, III *August 26, 2022*

(A) Diluted EPS. Excludes nonrecurring gain: 2017, $0.06. Next earnings report due early Nov.
(B) Dividends historically paid in early March, June, Sept., and Dec. ■ Dividend reinvestment plan. Direct stock purchase plan.
(C) In millions.

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

SOUTHWEST GAS NYSE-SWX

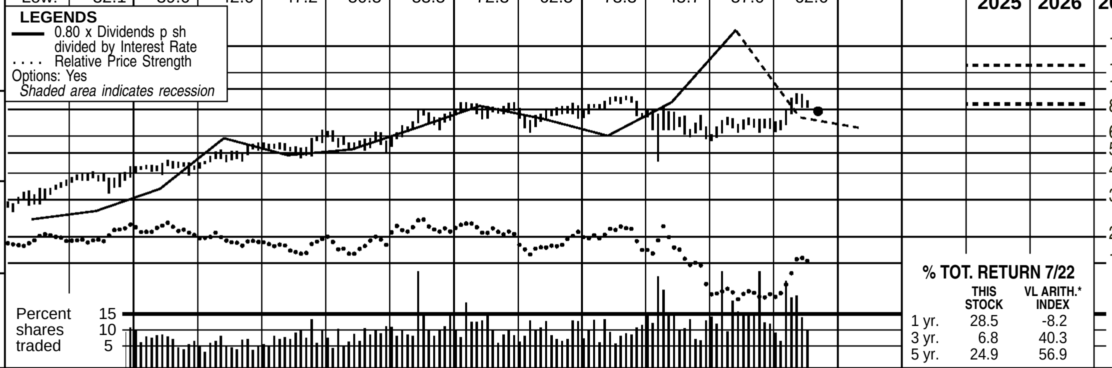
RECENT PRICE 78.66 | P/E RATIO 18.4 (Trailing: 32.2, Median: 19.0) | RELATIVE P/E RATIO 1.11 | DIV'D YLD 3.2% | VALUE LINE

TIMELINESS 4 New 8/26/22
SAFETY 3 Lowered 1/4/91
TECHNICAL 2 New 8/26/22
BETA .90 (1.00 = Market)

High:	43.2	46.1	56.0	64.2	63.7	79.6	86.9	86.0	92.9	81.6	73.5	95.6
Low:	32.1	39.0	42.0	47.2	50.5	53.5	72.3	62.5	73.3	45.7	57.0	62.6

Target Price Range 2025 | 2026 | 2027

LEGENDS
— 0.80 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$63-$112	$88 (10%)

2025-27 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	130	(+65%)	16%
Low	85	(+10%)	5%

Institutional Decisions

	3Q2021	4Q2021	1Q2022
to Buy	121	156	171
to Sell	122	98	97
Hld's(000)	52325	50972	58085

% TOT. RETURN 7/22

	THIS STOCK	VL ARITH.* INDEX
1 yr.	28.5	-8.2
3 yr.	6.8	40.3
5 yr.	24.9	56.9

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27
48.47	50.28	48.53	42.00	40.18	41.07	41.77	42.08	45.61	52.00	51.82	53.00	54.31	56.72	57.68	60.91	*66.20*	*67.85*	Revenues per sh	*82.65*
5.97	6.21	5.76	6.16	6.46	6.81	7.73	8.24	8.47	8.62	9.29	8.83	8.14	9.40	9.87	9.46	*11.05*	*12.15*	"Cash Flow" per sh	*15.75*
1.98	1.95	1.39	1.94	2.27	2.43	2.86	3.11	3.01	2.92	3.18	3.62	3.68	3.94	4.14	3.39	*4.24*	*4.90*	Earnings per sh A	*6.75*
.82	.86	.90	.95	1.00	1.06	1.18	1.32	1.46	1.62	1.80	1.98	2.08	2.18	2.28	2.38	*2.48*	*2.60*	Div'ds Decl'd per sh B■†	*3.10*
8.27	7.96	6.79	4.81	4.73	8.29	8.57	7.86	8.53	10.30	11.15	12.97	14.44	17.06	14.43	11.84	*11.05*	*12.85*	Cap'l Spending per sh	*20.00*
21.58	22.98	23.49	24.44	25.62	26.66	28.35	30.47	31.95	33.61	35.03	37.74	42.47	45.56	46.77	48.89	*52.95*	*56.45*	Book Value per sh	*72.00*
41.77	42.81	44.19	45.09	45.56	45.96	46.15	46.36	46.52	47.38	47.48	48.09	53.03	55.01	57.19	60.42	*68.00*	*70.00*	Common Shs Outst'g C	*75.00*
15.9	17.3	20.3	12.2	14.0	15.7	15.0	15.8	17.9	19.4	21.6	22.2	20.6	21.3	16.8	19.9	*Bold figures are*		Avg Ann'l P/E Ratio	*16.0*
.86	.92	1.22	.81	.89	.98	.95	.89	.94	.98	1.13	1.12	1.11	1.13	.86	1.08	*Value Line*		Relative P/E Ratio	*.90*
2.6%	2.6%	3.2%	4.0%	3.2%	2.8%	2.8%	2.7%	2.7%	2.9%	2.6%	2.5%	2.7%	2.6%	3.3%	3.5%	*estimates*		Avg Ann'l Div'd Yield	*2.9%*

CAPITAL STRUCTURE as of 6/30/22
Total Debt $6092.5 mill. **Due in 5 Yrs** $1765 mill.
LT Debt $4588.5 mill. **LT Interest** $80.0 mill.
(Total interest coverage: 2.6x) (56% of Cap'l)
Leases, Uncapitalized Annual rentals $15.2 mill.
Pension Assets-12/21 $1418.2 mill. **Oblig.** $1615.4 mill.
Pfd Stock None

Common Stock 67,007,222 shs. as of 7/29/22

MARKET CAP: $5.3 billion (Mid-Cap)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		25-27
1927.8	1950.8	2121.7	2463.6	2460.5	2548.8	2880.0	3119.9	3298.9	3680.5	*4500*	*4750*	Revenues ($mill)	*6200*
133.3	145.3	141.1	138.3	152.0	173.8	182.3	213.9	232.3	200.8	*272*	*325*	Net Profit ($mill)	*480*
36.2%	35.0%	35.7%	36.4%	33.9%	32.8%	25.3%	20.5%	21.6%	16.1%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
6.9%	7.4%	6.7%	5.6%	6.2%	6.8%	6.3%	6.9%	7.0%	5.5%	*6.0%*	*6.8%*	Net Profit Margin	*7.7%*
49.2%	49.4%	52.4%	49.3%	48.2%	49.8%	48.3%	47.9%	50.5%	58.2%	*56.5%*	*56.0%*	Long-Term Debt Ratio	*52.5%*
50.8%	50.6%	47.6%	50.7%	51.8%	50.2%	51.7%	52.1%	49.5%	41.8%	*43.5%*	*44.0%*	Common Equity Ratio	*47.5%*
2576.9	2793.7	3123.9	3143.5	3213.5	3613.3	4359.3	4806.4	5407.2	7069.5	*8300*	*8950*	Total Capital ($mill)	*11400*
3343.8	3486.1	3658.4	3891.1	4132.0	4523.7	5093.2	5685.2	6176.1	7594.0	*8000*	*8400*	Net Plant ($mill)	*10000*
6.4%	6.3%	5.7%	5.5%	5.8%	5.8%	5.2%	5.4%	5.3%	3.4%	*4.0%*	*4.0%*	Return on Total Cap'l	*4.5%*
10.2%	10.3%	9.5%	8.7%	9.1%	9.6%	8.1%	8.5%	8.7%	6.8%	*7.5%*	*8.0%*	Return on Shr. Equity	*9.0%*
10.2%	10.3%	9.5%	8.7%	9.1%	9.6%	8.1%	8.5%	8.7%	6.8%	*7.5%*	*8.0%*	Return on Com Equity	*9.0%*
6.1%	6.1%	5.0%	4.0%	4.1%	4.5%	3.6%	3.9%	4.0%	2.1%	*3.0%*	*3.5%*	Retained to Com Eq	*4.5%*
40%	41%	47%	54%	55%	53%	55%	54%	54%	69%	*62%*	*56%*	All Div'ds to Net Prof	*48%*

CURRENT POSITION ($MILL.)	2020	2021	6/30/22
Cash Assets	83.4	222.7	216.0
Other	787.6	1392.1	1427.8
Current Assets	871.0	1614.8	1643.8
Accts Payable	231.3	353.4	306.8
Debt Due	147.4	2206.3	1504.0
Other	533.3	552.3	539.6
Current Liab.	912.0	3112.0	2350.4
Fix. Chg. Cov.	379%	310%	262%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21 to '25-'27
Revenues	3.5%	3.0%	*6.0%*
"Cash Flow"	4.0%	1.5%	*8.5%*
Earnings	5.5%	4.5%	*10.0%*
Dividends	8.5%	7.0%	*5.5%*
Book Value	6.5%	7.0%	*7.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	833.6	713.0	725.2	848.1	3119.9
2020	836.3	757.2	791.2	914.2	3298.9
2021	885.9	821.4	888.7	1084.5	3680.5
2022	1267.4	1146.1	*1050*	*1036.5*	*4500*
2023	*1310*	*1100*	*1100*	*1240*	*4750*

Cal-endar	EARNINGS PER SHARE A D Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2019	1.77	.41	.10	1.67	3.94
2020	1.31	.68	.32	1.82	4.14
2021	2.03	.43	d.19	1.15	3.39
2022	1.58	.23	*.39*	*1.80*	*4.00*
2023	*1.85*	*.65*	*.40*	*2.00*	*4.90*

Cal-endar	QUARTERLY DIVIDENDS PAID B■† Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	.495	.520	.520	.520	2.06
2019	.520	.545	.545	.545	2.16
2020	.545	.570	.570	.570	2.26
2021	.570	.595	.595	.595	2.36
2022	.595	.620			

BUSINESS: Southwest Gas Holdings, Inc. is the parent holding company of Southwest Gas and Centuri Group. Southwest Gas is a regulated gas distributor serving 2.2 million customers in Arizona, Nevada, and California. Centuri provides construction services. 2021 margin mix: residential and small commercial, 85%; large commercial and industrial, 4%; transportation, 11%. Total through-put: 2.2 billion therms. Has 12,973 employees. Off. & dir. own .9% of common; BlackRock, 15.3%; The Vanguard Group, 9.9%; T. Rowe Price Associates, 5.6% (3/22 Proxy). Chairman: Michael J. Melarkey. Pres. & CEO: Karen S. Haller. Inc.: DE. Addr.: 8360 S. Durango Drive, P.O. Box 98510 Las Vegas, Nevada 89193. Telephone: 702-876-7237. Internet: www.swgas.com.

Southwest Gas Holdings posted mixed results for the June period. Combined performance showed top-line growth of 40% on a year-over-year basis. The corporation posted consolidated earnings per share of $0.23 on revenues of $1.15 billion. Its natural gas segment reported a net loss of $2.3 million on revenues of $378 million. During the period, its operating margin declined 12.8% on a GAAP basis and O&M expenses continued to rise. Still, segment revenues grew 29% on a year-over-year basis, largely backed by strong customer growth and rate base increases. Benefits from Nevada rate relief began during the quarter. Centuri, its infrastructure segment, earned $4.7 million on record sales of $706 million. Despite sales growth, expenses restrained earnings. Revenues from MountainWest, its pipeline and storage segment, remained largely unchanged from the March quarter, its first on record. Sustained expenses allowed for $15.1 million in earnings on $62 million in sales, making it the largest contributor to overall results.

In early August, it was announced that the company would not be sold. The statement brought partial resolution to terms agreed on in its May cooperation agreement with Carl Icahn. The company will, however, move forward with attempts to sell MountainWest and Centuri. Contrary to Mr. Icahn's preference, a Centuri spinoff remains in the cards. However, since it failed to happen within 90 days of the agreement, Icahn was allowed to appoint a fourth director.

Shortly after the earnings presentation, Ruby Sharma was appointed to the board of directors. Ms. Sharma will provide insight to both its corporate governance and compensation committees. She takes the place of Jose Cardenas, who served the board for eleven years and advised on its audit and pension plan comitees.

Shares of the holding company continue to trade at a premium relative to its earnings. In Arizona, rate case resolution is expected by early next year. Natural gas operations face significant opportunity in the years ahead, but remain stifled by O&M expenses. Investors may be better-served elsewhere at the moment.

Augustine Young *August 26, 2022*

(A) Diluted earnings. Excl. nonrec. gains (losses): '06, 7¢; '22, 10¢. Next egs. report due early November. **(B)** Dividends historically paid early March, June, September, and December.
■† Div'd reinvestment and stock purchase plan avail. **(C)** In millions.
(D) Totals may not sum due to rounding.

Company's Financial Strength	A
Stock's Price Stability	80
Price Growth Persistence	55
Earnings Predictability	80

SPIRE INC. NYSE-SR

RECENT PRICE **76.28** | P/E RATIO **17.6** (Trailing: 19.5; Median: 19.0) | RELATIVE P/E RATIO **1.06** | DIV'D YLD **3.7%** | VALUE LINE

TIMELINESS **3** Raised 6/17/22
SAFETY **2** Raised 6/20/03
TECHNICAL **2** Lowered 8/26/22
BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$54-$89	$72 (-5%)

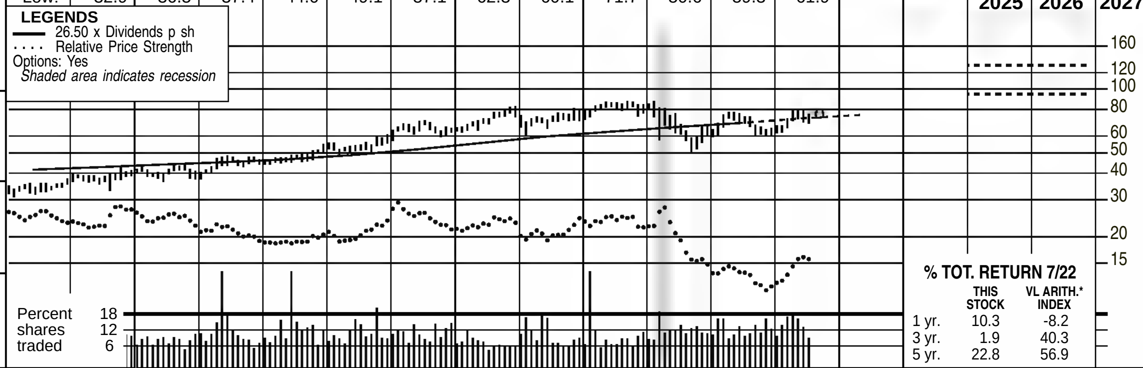
2025-27 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	130	(+70%)	17%
Low	95	(+25%)	9%

Institutional Decisions

	3Q2021	4Q2021	1Q2022
to Buy	125	132	144
to Sell	113	116	113
Hld's(000)	42729	44013	44838

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
High:	42.8	44.0	48.5	55.2	61.0	71.2	82.9	81.1	88.0	88.0	77.9	79.2
Low:	32.9	36.5	37.4	44.0	49.1	57.1	62.3	60.1	71.7	50.6	59.3	61.9



% TOT. RETURN 7/22

	THIS STOCK	VL ARITH.* INDEX
1 yr.	10.3	-8.2
3 yr.	1.9	40.3
5 yr.	22.8	56.9

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27
93.51	93.40	100.44	85.49	77.83	71.48	49.90	31.10	37.68	45.59	33.68	36.07	38.78	38.30	35.96	43.24	*40.85*	*41.90*	Revenues per sh A	*63.65*
3.81	3.87	4.22	4.56	4.11	4.62	4.58	3.12	3.87	6.15	6.16	6.54	7.55	7.12	5.25	9.09	*8.40*	*9.10*	"Cash Flow" per sh	*10.90*
2.37	2.31	2.64	2.92	2.43	2.86	2.79	2.02	2.35	3.16	3.24	3.43	4.33	3.52	1.44	4.96	*3.90*	*4.35*	Earnings per sh A B	*5.50*
1.40	1.45	1.49	1.53	1.57	1.61	1.66	1.70	1.76	1.84	1.96	2.10	2.25	2.37	2.49	2.60	*2.74*	*2.86*	Div'ds Decl'd per sh C■	*3.30*
2.97	2.72	2.57	2.36	2.56	3.02	4.83	4.00	3.96	6.68	6.42	9.08	9.86	16.15	12.37	12.09	*10.30*	*11.25*	Cap'l Spending per sh	*12.00*
18.85	19.79	22.12	23.32	24.02	25.56	26.67	32.00	34.93	36.30	38.73	41.26	44.51	45.14	44.19	46.74	*50.80*	*56.15*	Book Value per sh D	*67.10*
21.36	21.65	21.99	22.17	22.29	22.43	22.55	32.70	43.18	43.36	45.65	48.26	50.67	50.97	51.60	51.70	*52.50*	*52.50*	Common Shs Outst'g E	*55.00*
13.6	14.2	14.3	13.4	13.7	13.0	14.5	21.3	19.8	16.5	19.6	19.8	16.7	22.8	NMF	13.6	*Bold figures are*		Avg Ann'l P/E Ratio	*20.5*
.73	.75	.86	.89	.87	.82	.92	1.20	1.04	.83	1.03	1.00	.90	1.21	NMF	.73	*Value Line*		Relative P/E Ratio	*1.15*
4.3%	4.4%	3.9%	3.9%	4.7%	4.3%	4.1%	4.0%	3.8%	3.5%	3.1%	3.1%	3.1%	3.0%	3.4%	3.8%	*estimates*		Avg Ann'l Div'd Yield	*3.0%*
						1125.5	1017.0	1627.2	1976.4	1537.3	1740.7	1965.0	1952.4	1855.4	2235.5	*2145*	*2200*	Revenues ($mill) A	*3500*
						62.6	52.8	84.6	136.9	144.2	161.6	214.2	184.6	88.6	271.7	*205*	*230*	Net Profit ($mill)	*300*
						29.6%	25.0%	27.6%	31.2%	32.5%	32.4%	NMF	15.7%	12.3%	20.1%	*20.0%*	*20.5%*	Income Tax Rate	*25.0%*
						5.6%	5.2%	5.2%	6.9%	9.4%	9.3%	10.9%	9.5%	4.8%	12.2%	*9.6%*	*10.5%*	Net Profit Margin	*8.6%*
						36.1%	46.6%	55.1%	53.0%	50.9%	50.0%	45.7%	45.0%	49.0%	52.5%	*53.0%*	*52.0%*	Long-Term Debt Ratio	*51.0%*
						63.9%	53.4%	44.9%	47.0%	49.1%	50.0%	54.3%	49.7%	46.1%	43.2%	*43.0%*	*44.0%*	Common Equity Ratio	*45.0%*
						941.0	1959.0	3359.4	3345.1	3601.9	3986.3	4155.5	4625.6	4946.0	5597.3	*6200*	*6700*	Total Capital ($mill)	*8200*
						1019.3	1776.6	2759.7	2941.2	3300.9	3665.2	3970.5	4352.0	4680.1	5055.7	*5400*	*5715*	Net Plant ($mill)	*7100*
						7.9%	3.3%	3.1%	5.1%	4.9%	5.0%	6.3%	5.1%	2.9%	5.8%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.0%*
						10.4%	5.0%	5.6%	8.7%	8.2%	8.1%	9.5%	7.3%	3.5%	10.2%	*7.5%*	*8.0%*	Return on Shr. Equity	*8.0%*
						10.4%	5.0%	5.6%	8.7%	8.2%	8.1%	9.5%	7.9%	3.2%	10.6%	*7.5%*	*8.0%*	Return on Com Equity	*8.0%*
						4.3%	1.0%	1.5%	3.7%	3.3%	3.3%	4.7%	2.7%	NMF	5.1%	*1.5%*	*2.0%*	Retained to Com Eq	*3.0%*
						59%	81%	73%	58%	59%	60%	51%	66%	NMF	54%	*77%*	*72%*	All Div'ds to Net Prof	*65%*

CAPITAL STRUCTURE as of 6/30/22
Total Debt $3948.3 mill. **Due in 5 Yrs** $1520.0 mill.
LT Debt $3207.9 mill. **LT Interest** $145.0 mill.
(Total interest coverage: 4.2x)

Leases, Uncapitalized Annual rentals $8.8 mill.
Pension Assets-9/21 $945.7 mill. **Oblig.** $1318.0 mill.
Pfd Stock $242.0 mill. **Pfd Div'd** $14.8 mill.
Common Stock 52,492,777 shs. as of 7/31/22

MARKET CAP: $4.0 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2020	2021	6/30/22
Cash Assets	4.1	4.3	16.0
Other	586.5	1312.2	1245.1
Current Assets	590.6	1316.5	1261.1
Accts Payable	243.3	409.9	581.2
Debt Due	708.4	727.8	740.4
Other	497.5	470.6	428.3
Current Liab.	1449.2	1608.3	1749.9
Fix. Chg. Cov.	373%	448%	440%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21 to '25-'27
Revenues	-6.5%	--	8.5%
"Cash Flow"	5.0%	6.0%	7.5%
Earnings	2.0%	2.5%	9.0%
Dividends	4.5%	6.0%	5.0%
Book Value	6.5%	4.5%	7.0%

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.)A Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2019	602.0	803.5	321.3	225.6	1952.4
2020	566.9	715.5	321.1	251.9	1855.4
2021	512.6	1104.9	327.8	290.2	2235.5
2022	555.4	880.9	448.0	*260.7*	*2145*
2023	*580*	*950*	*405*	*265*	*2200*

Fiscal Year Ends	EARNINGS PER SHARE A B F Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2019	1.32	3.04	d.09	d.74	3.52
2020	1.24	2.54	d1.87	d.45	1.44
2021	1.65	3.55	.03	d.26	4.96
2022	1.01	3.27	d.10	*d.28*	*3.90*
2023	*1.35*	*3.36*	*d.03*	*d.33*	*4.35*

Cal-endar	QUARTERLY DIVIDENDS PAID C■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	.5625	.5625	.5625	.5625	2.25
2019	.5925	.5925	.5925	.5925	2.37
2020	.6225	.6225	.6225	.6225	2.49
2021	.65	.65	.65	.65	2.60
2022	.685	.685	.685		

BUSINESS: Spire Inc., formerly known as the Laclede Group, Inc., is a holding company for natural gas utilities, which distributes natural gas across Missouri, including the cities of St. Louis and Kansas City, Alabama, and Mississippi. Has roughly 1.7 million customers. Acquired Missouri Gas 9/13, Alabama Gas Co 9/14. Utility therms sold and transported in fiscal 2021: 3.3 bill. Revenue mix for regulated operations: residential, 58%; commercial and industrial, 28%; transportation, 6%; other, 8%. Has about 3,710 employees. Officers and directors own 3.0% of common shares; BlackRock, 11.5% (1/22 proxy). Chairman: Edward Glotzbach; CEO: Suzanne Sitherwood. Inc.: Missouri. Address: 700 Market Street, St. Louis, Missouri 63101. Tel.: 314-342-0500. Internet: www.spireenergy.com.

Spire Inc. appears to be en route to a down year. Indeed, through the first nine months of fiscal 2022 (which concluded on June 30th), share net of $4.18 was 20% below the previous-year figure of $5.23. That was attributable partly to reduced earnings from the Gas Marketing division, as fiscal 2021's results enjoyed very favorable market conditions, particularly in the second quarter, created by extreme weather associated with Winter Storm Uri. Furthermore, the Gas Utility unit was constrained, to a certain degree by heightened expenses. So, full-year share net stands to plummet over 20%, to $3.90, relative to fiscal 2021's $4.96 tally.

Earnings prospects in fiscal 2023 are hazy, at the moment. That's attributable, in part, to a pending rate case in Missouri. Too, the company is authorized by the Federal Energy Regulatory Commission to operate the key Spire STL Pipeline, temporarily, while it reviews whether permanent approval should be granted. (Management expects the process to continue into calendar 2023.) In any event, our tentative share-net estimate sits at $4.35, which indicates a partial rebound, assuming that the business climate is generally favorable.

This year's capital expenditures are now anticipated to be around $540 million. (That is almost 14% lower than the fiscal 2021 figure of $624.8 million.) Investments are being deployed to such segments as infrastructure upgrades at the utilities and new business development initiatives. Management adds that it expects total spending from fiscal 2022 through fiscal 2026 to be in the neighborhood of $3 billion. If corporate finances remain in solid condition, Spire ought to have minimal difficulty accomplishing these goals.

The good-quality stock's primary attraction is the dividend yield. In fact, this figure compares nicely to that of the average Natural Gas Utility equity tracked by *Value Line*. What's more, steady increases in the payout seem to be in store out to 2025-2027. Meanwhile, Spire shares are pegged to perform just in line with the broader market during the coming six to 12 months (Timeliness rank 3: Average).

Frederick L. Harris, III *August 26, 2022*

(A) Fiscal year ends Sept. 30th. **(B)** Based on diluted shares outstanding. Excludes nonrecurring loss: '06, 7¢. Excludes gain from discontinued operations: '08, 94¢. Next earnings report due late Oct. **(C)** Dividends paid in early January, April, July, and October. ■ Dividend reinvestment plan available. **(D)** Incl. deferred charges. In '21: $1,171.6 mill., $22.66/sh. **(E)** In millions. **(F)** Qtly. egs. may not sum due to rounding or change in shares outstanding.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	55
Earnings Predictability	40

FEDERAL RESERVE press release

For release at 2:00 p.m. EDT November 2, 2022

Recent indicators point to modest growth in spending and production. Job gains have been robust in recent months, and the unemployment rate has remained low. Inflation remains elevated, reflecting supply and demand imbalances related to the pandemic, higher food and energy prices, and broader price pressures.

Russia's war against Ukraine is causing tremendous human and economic hardship. The war and related events are creating additional upward pressure on inflation and are weighing on global economic activity. The Committee is highly attentive to inflation risks.

The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. In support of these goals, the Committee decided to raise the target range for the federal funds rate to 3-3/4 to 4 percent. The Committee anticipates that ongoing increases in the target range will be appropriate in order to attain a stance of monetary policy that is sufficiently restrictive to return inflation to 2 percent over time. In determining the pace of future increases in the target range, the Committee will take into account the cumulative tightening of monetary policy, the lags with which monetary policy affects economic activity and inflation, and economic and financial developments. In addition, the Committee will continue reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities, as described in the Plans for Reducing the Size of the Federal Reserve's Balance Sheet that were issued in May. The Committee is strongly committed to returning inflation to its 2 percent objective.

(more)

In assessing the appropriate stance of monetary policy, the Committee will continue to monitor the implications of incoming information for the economic outlook. The Committee would be prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede the attainment of the Committee's goals. The Committee's assessments will take into account a wide range of information, including readings on public health, labor market conditions, inflation pressures and inflation expectations, and financial and international developments.

Voting for the monetary policy action were Jerome H. Powell, Chair; John C. Williams, Vice Chair; Michael S. Barr; Michelle W. Bowman; Lael Brainard; James Bullard; Susan M. Collins; Lisa D. Cook; Esther L. George; Philip N. Jefferson; Loretta J. Mester; and Christopher J. Waller.

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For media inquiries, please email media@frb.gov or call 202-452-2955.

For release at 2:00 p.m. EDT November 2, 2022

Decisions Regarding Monetary Policy Implementation

The Federal Reserve has made the following decisions to implement the monetary policy stance announced by the Federal Open Market Committee in its statement on November 2, 2022:

- The Board of Governors of the Federal Reserve System voted unanimously to raise the interest rate paid on reserve balances to 3.9 percent, effective November 3, 2022.
- As part of its policy decision, the Federal Open Market Committee voted to authorize and direct the Open Market Desk at the Federal Reserve Bank of New York, until instructed otherwise, to execute transactions in the System Open Market Account in accordance with the following domestic policy directive:

  "Effective November 3, 2022, the Federal Open Market Committee directs the Desk to:
  - Undertake open market operations as necessary to maintain the federal funds rate in a target range of 3-3/4 to 4 percent.
  - Conduct overnight repurchase agreement operations with a minimum bid rate of 4 percent and with an aggregate operation limit of $500 billion; the aggregate operation limit can be temporarily increased at the discretion of the Chair.
  - Conduct overnight reverse repurchase agreement operations at an offering rate of 3.8 percent and with a per-counterparty limit of $160 billion per day; the per-counterparty limit can be temporarily increased at the discretion of the Chair.
  - Roll over at auction the amount of principal payments from the Federal Reserve's holdings of Treasury securities maturing in each calendar month that exceeds a cap of $60 billion per month. Redeem Treasury coupon securities up to this monthly cap and Treasury bills to the extent that coupon principal payments are less than the monthly cap.
  - Reinvest into agency mortgage-backed securities (MBS) the amount of principal payments from the Federal Reserve's holdings of agency debt and agency MBS received in each calendar month that exceeds a cap of $35 billion per month.
  - Allow modest deviations from stated amounts for reinvestments, if needed for operational reasons.
  - Engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions."

- In a related action, the Board of Governors of the Federal Reserve System voted unanimously to approve a 3/4 percentage point increase in the primary credit rate to 4 percent, effective November 3, 2022. In taking this action, the Board approved requests to establish that rate submitted by the Boards of Directors of the Federal Reserve Banks of Boston, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Dallas, and San Francisco.

(more)

This information will be updated as appropriate to reflect decisions of the Federal Open Market Committee or the Board of Governors regarding details of the Federal Reserve's operational tools and approach used to implement monetary policy.

More information regarding open market operations and reinvestments may be found on the Federal Reserve Bank of New York's website.

Congressional Budget Office
Nonpartisan Analysis for the U.S. Congress

The Budget and Economic Outlook: 2022 to 2032

MAY | 2022

At a Glance

The Congressional Budget Office regularly publishes reports presenting its baseline projections of what the federal budget and the economy would look like in the current year and over the next 10 years if current laws governing taxes and spending generally remained unchanged. This report is the latest in that series.

- **The Budget.** CBO projects that the federal budget deficit will shrink to $1.0 trillion in 2022 (it was $2.8 trillion last year) and that the annual shortfall would average $1.6 trillion from 2023 to 2032. The deficit continues to decrease as a percentage of gross domestic product (GDP) next year as spending related to the coronavirus pandemic wanes, but then deficits increase, reaching 6.1 percent of GDP in 2032. The deficit has been greater than that only six times since 1946 (see Chapter 1).

  Outlays are projected to average 23 percent of GDP over that period, a level high by historical standards, boosted by rising interest costs and greater spending for programs that provide benefits to elderly people (see Chapter 3). Revenues are projected to reach their highest level as a share of GDP in more than two decades in 2022 and then to decline over the following few years but remain above their long-term average through 2032 (see Chapter 4).

  Relative to the size of the economy, federal debt held by the public is projected to dip over the next two years, to 96 percent of GDP in 2023, and to rise thereafter. In CBO's projections, it reaches 110 percent of GDP in 2032 (higher than it has ever been) and 185 percent of GDP in 2052 (see Chapter 1). Moreover, if lawmakers amended current laws to maintain certain policies now in place, even larger increases in debt would ensue (see Chapter 5).

- **Changes in CBO's Budget Projections.** CBO's projection of the deficit for 2022 is now $118 billion less than it was in July 2021, but its projection of the cumulative deficit over the 2022–2031 period is $2.4 trillion more (see Appendix A).

- **The Economy.** In CBO's projections, elevated inflation initially persists in 2022 because of the combination of strong demand and restrained supply in the markets for goods, services, and labor. Inflation then subsides as supply disruptions dissipate, energy prices decline, and less accommodative monetary policy takes hold. Since mid-2021, inflation has reached its fastest pace in four decades. In CBO's projections, the price index for personal consumption expenditures increases by 4.0 percent in 2022. In response, the Federal Reserve tightens monetary policy and interest rates rise rapidly. Real GDP grows by 3.1 percent in 2022, and the unemployment rate averages 3.8 percent. After 2022, economic growth slows, and inflationary pressures ease (see Chapter 2).

- **Changes in CBO's Economic Projections.** The agency's projection of real GDP growth is similar to what it was last summer for 2022, higher for 2023 and 2024, and similar over the remainder of the projection period. CBO currently projects higher inflation in 2022 and 2023 than it did last July; prices are increasing more rapidly across many sectors of the economy than CBO anticipated. CBO now expects both short- and long-term interest rates over the coming decade to be higher, on average, than in its previous forecast, partly reflecting higher inflation.

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Notes

The budget projections in this report include the effects of legislation enacted through April 8, 2022, and are based on the Congressional Budget Office's economic projections. Those economic projections reflect economic developments through March 2, 2022. The projections do not include budgetary or economic effects of subsequent legislation, economic developments, administrative actions, or regulatory changes.

Unless this report indicates otherwise, all years referred to in describing the budget outlook are federal fiscal years, which run from October 1 to September 30 and are designated by the calendar year in which they end. Years referred to in describing the economic outlook are calendar years.

Numbers in the text, tables, and figures may not add up to totals because of rounding.

Some of the figures in this report use shaded vertical bars to indicate periods of recession. (A recession extends from the peak of a business cycle to its trough.)

Previous editions of this report often included an appendix of historical budget data. Those data and other supplemental data for this analysis are available on CBO's website (www.cbo.gov/publication/57950#data), as are a glossary of common budgetary and economic terms (www.cbo.gov/publication/42904), a description of how CBO prepares its baseline budget projections (www.cbo.gov/publication/53532), a description of how CBO prepares its economic forecast (www.cbo.gov/publication/53537), and previous editions of this report (https://go.usa.gov/xQrzS).

bonus depreciation by the end of 2026—is projected to temporarily slow economic growth. (For details about those expiring provisions, see Chapter 4.)

Monetary Policy

CBO projects that, to contain inflationary pressures in the economy, the Federal Reserve will raise the target range for the federal funds rate. That rate will increase to 1.9 percent by the end of 2022 and to 2.6 percent by the end of 2023, the agency estimates. (CBO's projections reflect economic developments as of March 2, 2022.) Over the 2024–2032 period, the federal funds rate averages 2.5 percent, a level that the agency estimates is consistent with the Federal Reserve's long-run goal of 2 percent for inflation.

CBO projects that the Federal Reserve will begin reducing the size of its balance sheet in the middle of 2022. Specifically, the agency expects that the Federal Reserve will reinvest only a portion of the principal proceeds from maturing Treasury securities and agency MBSs, thus allowing slightly less than $100 billion worth of assets to drop off its balance sheet each month. The balance sheet will thus shrink until 2026, at which point the Federal Reserve is expected to purchase enough Treasury securities to keep reserves, measured as a share of GDP, at a constant value consistent with their prepandemic levels.

CBO projects that the Federal Reserve's policy actions will eventually slow the growth of overall demand—reducing inflationary pressures in the economy—by increasing real interest rates. The agency estimates that higher real interest rates will reduce the growth of household spending by making it more costly to finance large purchases (especially houses and motor vehicles) and will reduce the growth of business investment by making it more costly to borrow money to expand productive capacity. In CBO's projections, real interest rates in the United States that are higher than the rates of major trading partners also increase the value of the dollar in foreign exchange markets, reducing the competitiveness of U.S. exports in global markets.

Moreover, the Federal Reserve's policy actions signal to market participants its commitment to stabilize the growth of prices in the long run, which keeps expected future inflation from spiraling upward. Interest rates on long-term bonds depend in part on the path of future short-term interest rates. Raising the target range for the federal funds rate therefore results in higher interest rates for securities with longer maturities. The agency also estimates that reducing the size of the Federal Reserve's balance sheet will boost long-term interest rates by removing downward pressure on the premium paid to bondholders for the extra risk associated with holding longer-maturity bonds.

The Economic Outlook for 2022 to 2026

In CBO's projections, the current economic expansion continues, and economic output grows rapidly over the next year. Consumer spending increases, driven by strong gains in spending on services. To fulfill the elevated demand for goods and services, businesses increase both investment and hiring, although supply disruptions hinder that growth in 2022. The growth of payroll employment is projected to continue at a rapid pace through 2022. In 2023, the growth of economic output slows as financial conditions tighten and fiscal support wanes further.

Elevated inflation persists in 2022 as both strong demand and disruptions to supply in product and labor markets continue to add upward pressure on many prices and wages. As product markets adjust, and as factors that discourage labor supply dissipate, those disruptions fade by the end of the year, in CBO's projections. As a result, the inflation rate falls in 2023 but remains above the Federal Reserve's long-run goal of 2 percent.

The agency expects short-term interest rates to increase rapidly in 2022. Long-term interest rates, which remained historically low at the end of 2021, are also expected to rise substantially in 2022. CBO expects both short- and long-term interest rates to rise less rapidly after 2022.

After 2023, in CBO's projections, tightening monetary policy and several other factors combine to slow the growth of demand, slowing output growth and further reducing inflationary pressures.

Gross Domestic Product

Under the assumption that current laws governing federal taxes and spending generally remain unchanged, CBO projects that real GDP will grow by 3.1 percent in 2022 (as measured from the fourth quarter of 2021 to the fourth quarter of 2022). That expansion is driven by strong growth in consumer spending and real business

Appendix C: CBO's Economic Projections for 2022 to 2032

The tables in this appendix show the Congressional Budget Office's economic projections for each year from 2022 to 2032. For the projections by calendar year, see Table C-1; for the projections by fiscal year, see Table C-2.

Table C-1.

CBO's Economic Projections, by Calendar Year

Percent

	Actual, 2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
						Change From Year to Year						
Gross Domestic Product												
Real[a]	5.7	3.8	2.8	1.6	1.5	1.4	1.6	1.7	1.8	1.8	1.7	1.7
Nominal	10.1	9.3	5.5	3.8	3.6	3.5	3.7	3.8	3.9	3.9	3.9	3.8
Inflation												
PCE price index	3.9	5.1	2.7	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Core PCE price index[b]	3.3	4.5	2.8	2.3	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.0
Consumer price index[c]	4.7	6.1	3.1	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.3
Core consumer price index[b]	3.6	5.1	3.3	2.6	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3
GDP price index	4.2	5.2	2.7	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Employment Cost Index[d]	4.0	5.6	4.5	3.8	3.5	3.3	3.2	3.2	3.1	3.1	3.1	3.0
						Calendar Year Average						
Unemployment Rate	5.4	3.8	3.5	3.7	3.9	4.0	4.2	4.5	4.5	4.6	4.5	4.5
Payroll Employment (Monthly change, in thousands)[e]	514	345	123	58	46	35	30	54	65	60	66	63
Interest Rates												
3-month Treasury bills	*	0.9	2.0	2.5	2.6	2.5	2.3	2.3	2.3	2.3	2.3	2.3
10-year Treasury notes	1.4	2.4	2.9	3.1	3.2	3.5	3.7	3.8	3.8	3.8	3.8	3.8
Tax Bases (Percentage of GDP)												
Wages and salaries	44.9	44.7	44.2	44.1	44.0	44.0	44.1	44.1	44.0	44.0	43.9	43.9
Domestic corporate profits[f]	10.1	9.7	9.3	8.8	8.6	8.2	8.0	7.9	7.8	7.8	7.8	7.7
Tax Bases (Billions of dollars)												
Wages and salaries	10,327	11,233	11,725	12,128	12,541	13,001	13,504	14,021	14,548	15,095	15,666	16,258
Domestic corporate profits[f]	2,314	2,426	2,461	2,426	2,451	2,428	2,444	2,500	2,592	2,684	2,772	2,865
Nominal GDP (Billions of dollars)	22,996	25,135	26,529	27,531	28,525	29,517	30,614	31,788	33,032	34,323	35,654	37,026

Data sources: Congressional Budget Office; Bureau of Economic Analysis; Bureau of Labor Statistics; Federal Reserve. See www.cbo.gov/publication/57950#data.

GDP = gross domestic product; PCE = personal consumption expenditures; * = between zero and 0.05 percent.

a. Real values are nominal values that have been adjusted to remove the effects of changes in prices.

b. Excludes prices for food and energy.

c. The consumer price index for all urban consumers.

d. The employment cost index for wages and salaries of workers in private industry.

e. The average monthly change, calculated by dividing by 12 the change in payroll employment from the fourth quarter of one calendar year to the fourth quarter of the next.

f. Adjusted to remove distortions in depreciation allowances caused by tax rules and to exclude the effect of changes in prices on the value of inventories.

CAPM Cost of Equity Summary -- Gas Group

CAPM Formula: $K = R_f + b(R_m - R_f)$

Risk Free Rate (R_f)	**4.0%**
Beta (β) - Value Line	**0.84**
Equity Risk Premium (Rm - Rf) *	**6.0%**
Equity Cost Rate	**9.0%**

* Source: Attachment LDC-9, page 2.

Yields on U.S. Treasury Bonds

Month	Treasury Bonds	10 Year Treasury Bonds	20 Year Treasury Bonds	30 Year Treasury Bonds
November 16, 2022	**3.83%**	**3.67%**	**4.03%**	**3.85%**
November 9, 2022	**4.27%**	**4.12%**	**4.50%**	**4.31%**
November 2, 2022	**4.30%**	**4.10%**	**4.41%**	**4.15%**
October 26, 2022	**4.20%**	**4.04%**	**4.38%**	**4.19%**
October 19, 2022	**4.35%**	**4.14%**	**4.38%**	**4.15%**
October 12, 2022	**4.12%**	**3.91%**	**4.18%**	**3.90%**
October 5, 2022	**3.96%**	**3.76%**	**4.05%**	**3.78%**
September 28, 2022	**3.92%**	**3.72%**	**3.98%**	**3.70%**
September 21, 2022	**3.91%**	**3.51%**	**3.73%**	**3.50%**
September 14, 2022	**3.60%**	**3.41%**	**3.73%**	**3.47%**
September 7, 2022	**3.37%**	**3.27%**	**3.67%**	**3.42%**
August 31, 2022	**3.30%**	**3.15%**	**3.53%**	**3.27%**
August 24, 2022	**3.20%**	**3.11%**	**3.55%**	**3.32%**
Mean	**3.87%**	**3.69%**	**4.01%**	**3.77%**
Median	**3.92%**	**3.72%**	**4.03%**	**3.78%**

`

Source: https://ycharts.com/indicators/5_year_treasury_rate; https://ycharts.com/indicators/10_year_treasury_rate; https://ycharts.com/indicators/20_year_treasury_rate; https://ycharts.com/indicators/30_year_treasury_rate

Duff and Phelps Normalized Risk Free Rate	**3.50%**
20-Year Treasury Bond Rate	**3.80%**

Beta for Gas Group

Company Name	Value Line Betas*
Atmos Energy Corp. (ATO)	0.80
Chesapeake Utilities (	0.80
New Jersey Res. (NJR)	0.95
NiSource Inc. (NI)	0.85
Northwest Natural (NWN)	0.80
ONE Gas, Inc. (OGS)	0.80
Southwest Gas (SWX)	0.90
Spire, Inc. (SR)	0.80
Mean	0.84

* See Attachment LDC-7, pp. 1-8.
Sources: http://finance.yahoo.com; www.zacks.com; S&P Cap IQ;
October 2022

Summary of
Discounted Cash Flow Analysis (DCF)

DCF formula: $K = (D_1 / P_0) + g$

Gas Proxy Group:

Dividend Yield (D_1/P_0):	**3.4%**	**see page 2**
Dividend Growth (g):	**6.0%**	**see pages 3, 4, and 5**
DCF Cost of Equity *(K)*:	**9.4%**	

Dividend Yield Data

Gas Group Companies:	Annual Dividend *	Dividend Yield 30 Days **	Dividend Yield 90 Days	Dividend Yield 180 Days
Atmos Energy Corp. (ATO)	$2.72	2.7%	2.2%	2.4%
Chesapeake Util. (CPK)	$2.14	1.9%	1.6%	1.7%
New Jersey Res. (NJR)	$1.45	3.7%	3.1%	3.4%
NiSource (NI)	$0.94	3.7%	3.1%	3.2%
Northwest Natural (NWN)	$1.93	4.4%	3.6%	4.0%
One Gas, Inc.(OGS)	$2.48	3.5%	2.9%	2.9%
Southwest Gas (SWX)	$2.48	3.6%	2.9%	2.8%
Spire, Inc. (SR)	$2.74	4.4%	3.6%	3.8%
Mean		3.5%	2.9%	3.0%
Median		3.6%	3.0%	3.1%

* Most quarterly dividend listed on Value Line times 4 to derive annual dividend.
** 30, 90, and 180-Day Stock Prices from S&P Cap IQ
Forward Dividend Yields:

Average Dividend Yield, adjusted for growth by (1 + 0.5g)

$D_1/P_0 = D_0/P_0 * (1 + 0.5g) = 3.3\% * [1 + 0.5(0.060)] =$ **3.4%**

Value Line Historical, Projected, and Sustainable Growth Rates

Value Line Companies - Gas Group

	Annual Growth - Past 10 Years			**Annual Growth - Past 5 Years**			**_Value Line_ Projected Growth**			**_Value Line_ Sustainable Growth**		
Company Name	Earnings Per Share	Dividends Per Share	Book Value Per Share	Earnings Per Share	Dividends Per Share	Book Value Per Share	Earnings Per Share	Dividends Per Share	Book Value Per Share	Return on Equity	Retention Rate	Internal Growth
Atmos Energy Corp. (ATO)	8.5%	5.5%	8.5%	8.5%	8.0%	11.0%	7.5%	7.0%	7.5%	9.0%	52.0%	4.7%
Chesapeake Utilities (CPK)	9.5%	7.0%	9.5%	9.5%	8.5%	10.5%	7.5%	8.5%	6.0%	11.5%	58.0%	6.7%
New Jersey Res. (NJR)	5.0%	6.5%	7.5%	2.5%	6.5%	7.0%	5.0%	5.0%	4.5%	13.5%	40.0%	5.4%
NiSource Inc. (NI)	3.0%	-1.0%	-3.0%	4.0%	n/a*	-2.5%	9.5%	4.5%	5.0%	11.5%	45.0%	5.2%
Northwest Natural (NWN)	-1.0%	1.5%	1.0%	2.5%	0.5%	0.5%	6.5%	0.5%	4.0%	9.5%	45.0%	4.3%
ONE Gas, Inc. (OGS)	n/a*	n/a*	n/a*	9.5%	13.5%	3.5%	6.5%	6.5%	8.0%	8.5%	41.0%	3.5%
Southwest Gas (SWX)	5.5%	8.5%	6.5%	4.5%	7.0%	7.0%	10.0%	5.5%	7.5%	9.0%	52.0%	4.7%
Spire Inc. (SR)	2.0%	4.5%	6.5%	2.5%	6.0%	4.5%	9.0%	5.0%	7.0%	8.0%	35.0%	3.0%
Mean	**5.6%**	**5.6%**	**5.2%**	**5.4%**	**7.1%**	**5.2%**	**7.7%**	**5.3%**	**6.2%**	**10%**	**46.0%**	**4.7%**
Median	**5.0%**	**5.5%**	**6.5%**	**4.3%**	**7.0%**	**5.8%**	**7.5%**	**5.3%**	**6.5%**	**9.3%**	**45.0%**	**4.7%**

Average of Historical Median Firgures **5.7%** `

Average of Projected Median Figures **6.4%**

Median of Sustainable Internal Growth **4.7%**

Source: *Value Line Investment Survey, August 26, 2022.*
Est'd '19-'21 to '25-'27 is the estimated growth rate from the base period 2019 to 2021 until the future period 2025 to 2027.
***** *Value Line did not list data for these entries.*

DCF Equity Growth Rates
Analysts Projected EPS Growth Rate Estimates

Company	Yahoo	Zacks	S&P Cap IQ	Mean
Atmos Energy Corp. (ATO)	8.3%	7.5%	7.5%	7.8%
Chesapeake Utilities (CPK)	7.0%	6.3%	8.3%	7.2%
New Jersey Resources Corp. (NJR)	6.0%	6.0%	6.9%	6.3%
NiSource Inc. (NI)	7.3%	7.2%	6.8%	7.1%
Northwest Natural Gas Co. (NWN)	4.3%	4.3%	4.7%	4.4%
ONE Gas, Inc. (OGS)	5.0%	5.0%	6.0%	5.3%
Southwest Gas Company (SWX)	4.0%	5.0%	5.4%	4.8%
Spire (SR)	4.3%	5.0%	4.8%	4.7%
Mean	5.8%	5.8%	6.3%	6.0%
Median	5.5%	5.5%	6.4%	5.8%

Sources: http://finance.yahoo.com; www.zacks.com; S&P Cap IQ; October 2022

DCF Growth Rate Indicators

Growth Rate Indicator	Gas Group
Historic *Value Line* Growth in EPS, DPS, and BVPS	**5.70%**
Projected *Value Line* Growth in EPS, DPS, and BVPS	**6.40%**
Sustainable Growth ROE * Retention Rate	**4.70%**
Projected EPS Growth from Yahoo, Zacks, and S&P Cap IQ - Mean/Median	**6.0%/5.8%**

KROLL

Kroll Increases U.S. Normalized Risk-Free Rate from 3.0% to 3.5%, but Spot 20-Year U.S. Treasury Yield Preferred When Higher

Executive Summary:

Kroll regularly reviews fluctuations in global economic and financial market conditions that may warrant changes to our equity risk premium (ERP) and accompanying risk-free rate recommendations. The risk-free rate and ERP are key inputs used to calculate the cost of equity capital in the context of the Capital Asset Pricing Model (CAPM) and other models used to develop discount rates.

Based on market conditions prevailing in mid-June 2022, **Kroll is increasing the U.S. normalized risk-free rate from 3.0% to 3.5% but recommends using the spot 20-year U.S. Treasury yield, if it is higher than 3.5%, when developing USD-denominated discount rates as of June 16, 2022 and thereafter, until further guidance is issued.**

Background

Based on more recent long-term U.S. inflation expectations, **we are increasing the U.S. normalized risk-free rate from 3.0% to 3.5% when developing USD-denominated discount rates as of June 16, 2022, and thereafter,** until further guidance is issued. For the underlying data supporting this guidance, click here.

Previously, the long-term average of 20-year U.S. Treasury yields was an important input in developing our normalized risk-free rate conclusion. We believe that giving some weight to long-term averages was appropriate when the Federal Reserve Bank's (Fed) monetary policy was ultra-accommodative and inflation was below or close to the Fed's inflation target of 2.0%, which kept interest rates at artificially low levels.

For perspective, the annual U.S. consumer price inflation had averaged 1.8% in the 2010s, on a rolling 12-month basis. By contrast, in recent months inflation has continued to surprise on the upside—reaching 40-year highs—with the recent Russia-Ukraine war exacerbating inflationary pressures. This precipitated a significant shift in the Fed's monetary policy stance relative to December 2021. This more restrictive stance entails: (i) more and/or larger policy interest rate hikes, and (ii) an end to the Fed's quantitative easing policies that expanded its balance sheet to near $9 trillion (instead, the Fed will initiate a quantitative tightening process). The Fed's goal is to contain inflation and normalize the size of its balance sheet.

These recent trends have led to a significant and very rapid rise in U.S. interest rates, with no signs of abating any time soon. For example, the spot 20-year U.S. Treasury yield increased from 1.9% on December 31, 2021 to 3.7% on June 15, 2022, the latter being above our new normalized risk-free rate of 3.5%. Long-term interest rates may finally be reverting to levels considered to be "normal," as attested by the rapid *acceleration* in the rise in yields over the last month and the dramatic change in Fed's projected trajectory for policy interest rate hikes as announced on June 15, 2022.

Therefore, **we recommend using the spot 20-year U.S. Treasury yield as the proxy for the risk-free rate, if the prevailing yield as of the valuation date is higher than our recommended U.S. normalized risk-free rate of 3.5%. This guidance is effective when developing USD-denominated discount rates as of June 16, 2022 and thereafter.**

This hybrid risk-free rate recommendation is to be used with our U.S. recommended ERP (reaffirmed at 5.5%), implying a base U.S. cost of equity capital of at least 9.0% (= the *higher* of the normalized 3.5% risk-free rate OR the U.S. 20-year U.S. Treasury yield + 5.5%).

The adoption of this hybrid methodology in selecting risk-free rates, which was previously used during 2009-2011, is designed to give analysts the flexibility to adjust to potential rapid changes in yields that may outpace any changes indicated by our risk-free rate normalization models.

Please contact the costofcapital.support@kroll.com with any questions.

Kroll Cost of Capital Inputs

Data as of June 16, 2022

	U.S. (in USD)	Eurozone ** (in EUR)	U.K. (in GBP)	Canada (in CAD)
Normalized Risk-Free Rate	Higher of 3.5% or Spot*	2.0%	3.0%	3.0%
Kroll Recommended Equity Risk Premium	5.5%	5.5% to 6.0%	n/a	n/a

* We recommend using the spot 20-year U.S. Treasury yield as the proxy for the risk-free rate, if the prevailing yield as of the valuation date is higher than our recommended U.S. normalized risk-free rate of 3.5%. This guidance is effective when developing USD-denominated discount rates as of June 16, 2022, and thereafter.

** German normalized risk-free rate and Eurozone equity risk premium (ERP) for use in EUR-denominated discount rates from a German investor perspective. Additional country risk adjustments may be warranted when estimating discount rates for other countries in the Eurozone.

Equity Market Risk Premium – Research Summary

30 September 2022

We recommend an MRP of 6.0% as per 30 September 2022

If you are considering this publication, it is likely that you are in regular contact with KPMG Corporate Finance & Valuations ("KPMG Corporate Finance NL") on the topic of valuations. The goal of this document is to provide a summary to our business partners about our recent observations and conclusions regarding one of the key valuation parameters, being the equity market risk premium.

We recommend the use of an equity market risk premium ("MRP") of 6.0% as per 30 September 2022, in line with last quarter. Between the second and third quarter of 2022, we have observed an increase in stock prices followed by a decrease, an increase in risk-free rates and overall a less positive outlook driven by global uncertainties. These developments have put a downward pressure on the MRP, however for this quarter we maintain an MRP of 6.0%.

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Introduction - valuation and discount rates

Introduction

The discount rate is an important input parameter to any valuation based on the discounted cash flow methodology ("DCF"). All else equal, a higher discount rate will lead to a lower asset value and vice versa.

In this document, we will specifically focus on the derivation of the cost of equity for company valuations. This discount rate can either be directly applied to equity cash flow forecasts of a company or it can be used in conjunction with the cost of debt and a certain financing structure to derive the weighted average cost of capital ("WACC").

A general DCF model can be expressed by the following formula:

$$\text{Present value} = \frac{CF_1}{(1+k)^1} + \frac{CF_2}{(1+k)^2} + \frac{CF_3}{(1+k)^3} + \ldots = \sum_{t=1}^{\infty} \frac{CF_t}{(1+k)^t}$$

Present value	=	value of the analysed asset (e.g. a company)
CF_t	=	cash flow that the asset will generate in period t
k	=	asset-specific discount rate

Discount rate derivation

While there are several ways to derive discount rates, the most commonly applied methodology is the 'build-up methodology' based on the Capital Asset Pricing Model ("CAPM"). This methodology builds up the discount rate by summation of several asset-related risk components in order to derive a return at which investors are willing to invest in this asset (e.g. a company).

The build-up of the cost of equity ("k") of a company can be expressed as:

$$k = rfr + \beta \times MRP + \alpha$$

k	=	required return on equity
rfr	=	risk-free rate
β	=	a company's systematic risk
MRP	=	market or equity risk premium
α	=	asset-specific risk factors

The function and derivation of the individual discount rate parameters are briefly discussed on the following slide.

Introduction - discount rate parameters

Risk-free rate

The risk-free rate forms the basis for any discount rate estimation using the build-up methodology. As the name implies, this rate should not take into account any risk factors and should only include two general components:

- The time value of money; and
- Inflation.

Since there are no investments that are truly risk-free, the risk-free rate is commonly approximated by reference to the yield on long-term debt instruments issued by presumably financially healthy governments (e.g. AAA-rated government bonds with a maturity of 30 years).

Beta

Beta measures a stock's volatility in relation to the relevant market benchmark.

A beta greater/smaller than 1.0 means that the share price of a company is more/less volatile than the general market and therefore investors will require a higher/lower return to compensate for this volatility.

Alpha

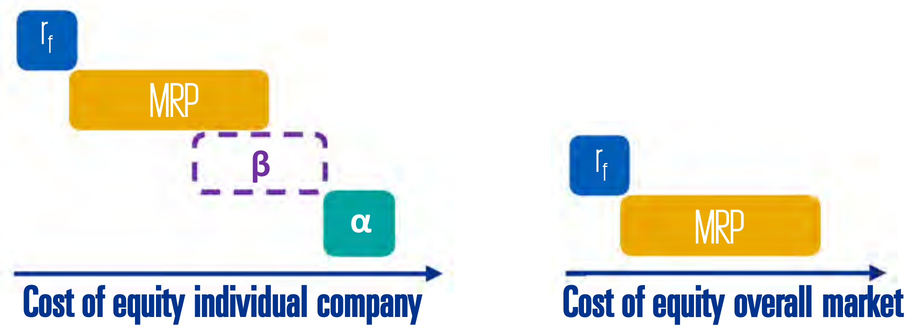
Alpha is an asset-specific adjustment factor representing unsystematic risk not already being captured by way of the beta. If a financial forecast does not account for certain operational risks, it may be appropriate to include a forecast risk premium. Other examples of alpha adjustments are size premia and illiquidity premia.

Equity market risk premium (MRP)

The MRP is the average return that investors require over the risk-free rate for accepting the higher variability in returns that are common for equity investments (i.e. the MRP reflects a minimum threshold on top of the risk-free rate for investors in order to be willing to invest).

Since alpha only relates to unsystematic adjustments, it can be omitted if considering the overall market (alpha = 0). Furthermore it is important to note that for the overall market, beta will by definition always be 1.0, since the sum of all returns of individual stocks equals the overall return of the market, and therefore, the two are perfectly correlated.

As the figure below shows, the required return for the overall market is defined entirely by the risk-free rate and the MRP.



Measurement of the equity market risk premium - methodologies

Implied equity market risk premium

The general DCF formula discussed earlier can be used to solve for the implied discount rate that reconciles these parameters.

Deducting the risk-free rate from this implied discount rate will yield an implied MRP.

The implied MRP methodology is to some extent sensitive to input assumptions and careful consideration must be given to:

- The selection of income proxies (e.g. dividends, buy-backs, cash flow);
- The basis of expected growth rates (e.g. macroeconomic considerations, analyst forecasts); and
- The trade-off between outcome stability and current relevance with regards to certain historical inputs (e.g. dividend yield normalisations, pay-out ratios).

KPMG Corporate Finance NL, continuously inspects if enhancements in applying the above input assumptions are necessary for the current MRP method in order to accurately reflect the current market dynamics.

We deem the implied MRP methodology the most appropriate methodology in order to derive changes in the MRP as a result of economic developments, because it incorporates recent market developments, expectations, and it can be logically deduced from observable market data.

Historical observation methodology

This methodology assumes that the expected MRP can be derived by studying historical equity returns.

While this methodology is well established and theoretically sound, it does not allow for the incorporation of the most recent market developments.

Other methodologies

There are a number of other prominent methodologies which may lead to additional insights, the most common being:

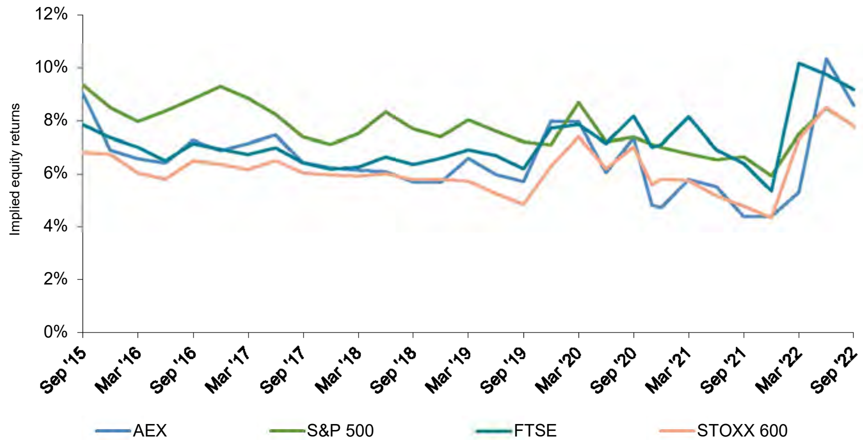
- The multi-factor model;
- The yield spread build-up; and
- The survey approach.

While each of these methodologies offers some unique advantages, the application of these methodologies involves similar trade-offs as the ones between the historical and the implied MRP methodology.

Development of discount rates

Implied equity return

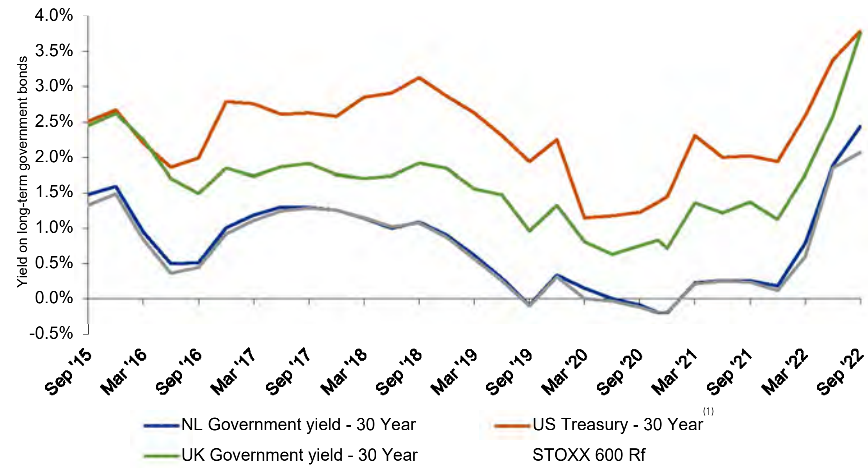
The graph below illustrates the movement in the implied equity returns for a number of major equity markets over time. From this graph it can be observed that the implied equity returns of the markets included have experienced an increase in the first two quarters of 2022, followed by a slight decrease in the third quarter.



Yield on long-term bonds

In the graph below, the interest rate movements for a number of highly developed markets (Netherlands, UK, Europe and US) are displayed.

From this graph it can be observed that for the selected highly developed markets the relevant long term yields have all increased compared to 30 June 2022.

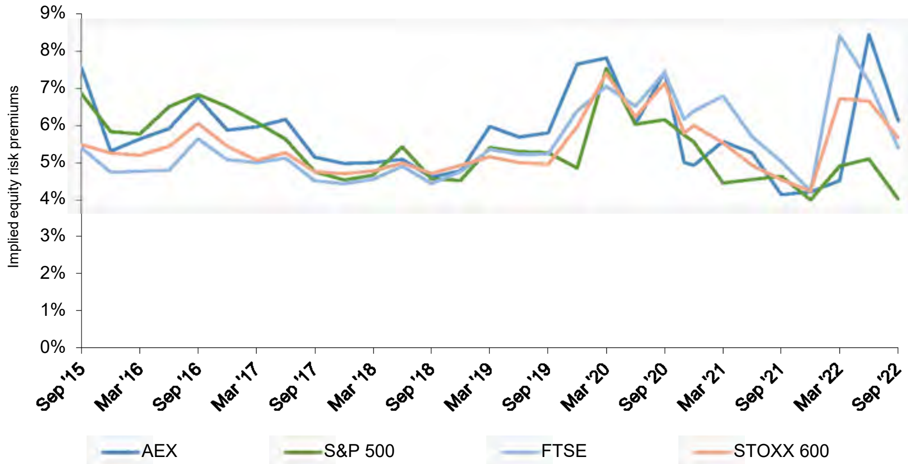


(1) US 20 year treasury bond has been replaced by the US 30 year treasury bond per 30 June 2022 onwards.

Equity market risk premium as per 30 September 2022: 6.0%

Findings

In our current update we observe decreases in MRP estimates compared to 30 June 2022. This is driven by lower implied equity returns and increased risk-free rates. As a result, we observed downward pressure on the MRP per 30 September 2022 compared to 30 June 2022.



Equity market risk premium KPMG Corporate Finance

Based on the analyses set out in this report we conclude that the markets included in our study (with more weight given to the S&P 500, FTSE and STOXX 600), show lower implied premiums compared to 30 June 2022. Despite this development, KPMG Corporate Finance NL recommends the use of an **MRP of 6.0%** as per 30 September 2022.

We note that our estimation is based on information available as at 30 September 2022. Developments in the market after 30 September 2022 are not reflected in the MRP estimate as at 30 September 2022. However, due to the high volatility currently observed in the market, we will monitor the MRP at the end of each month and update it accordingly should any significant changes occur.

Considerations

In order to assess the reasonableness of the outcomes of our implied MRP study, we have considered various other methodologies as previously described. To the extent that these methodologies are valid to derive insights about the current level of the MRP, these methodologies have confirmed our findings.

Based on our research and professional judgement we consider the outcome of our study to represent a global MRP. However, when calculating a discount rate for a specific valuation purpose, consideration must be given to (amongst others):

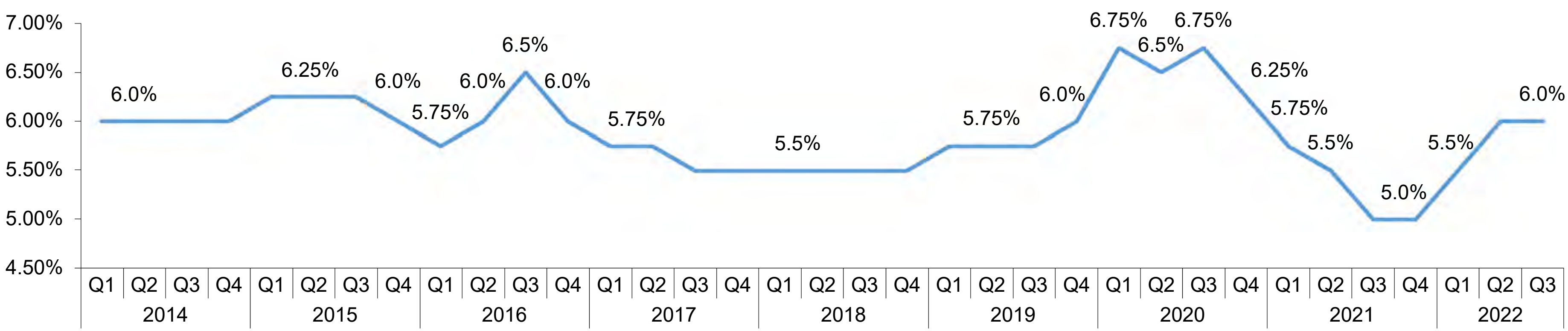
- The basis for the applied risk-free rate;
- The applicable country risk premium; and
- Expected differences in inflationary outlook.

We highlight that the individual input parameters used in the determination of the discount rate should never be viewed in isolation.

Appendix

Historic MRP estimates

Please find an overview of the historic MRP estimates by KPMG Corporate Finance NL in the graph below.



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RRA REGULATORY FOCUS

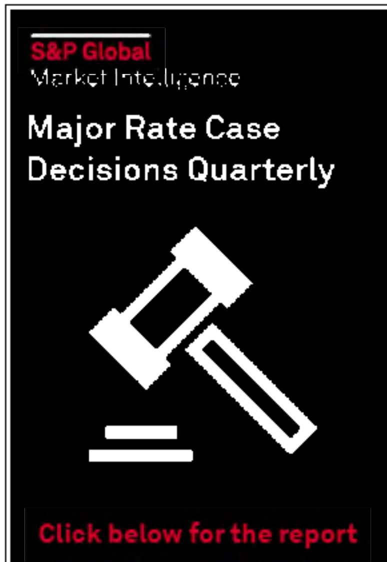
US energy ROE authorizations hit all-time lows as macroeconomic pressures mount

Monday, October 31, 2022 3:00 PM ET

By Lisa Fontanella
Market Intelligence

The average electric and gas authorized returns on equity for the first nine months of 2022 remain at all-time lows.

The average authorized return on equity for electric utilities was 9.37% in rate cases decided in the first nine months of 2022, largely in line with the 9.38% average for full year 2021. There were 27 electric ROE authorizations in the first nine months of 2022 versus 55 in full year 2021.



Oct. 31, 2022

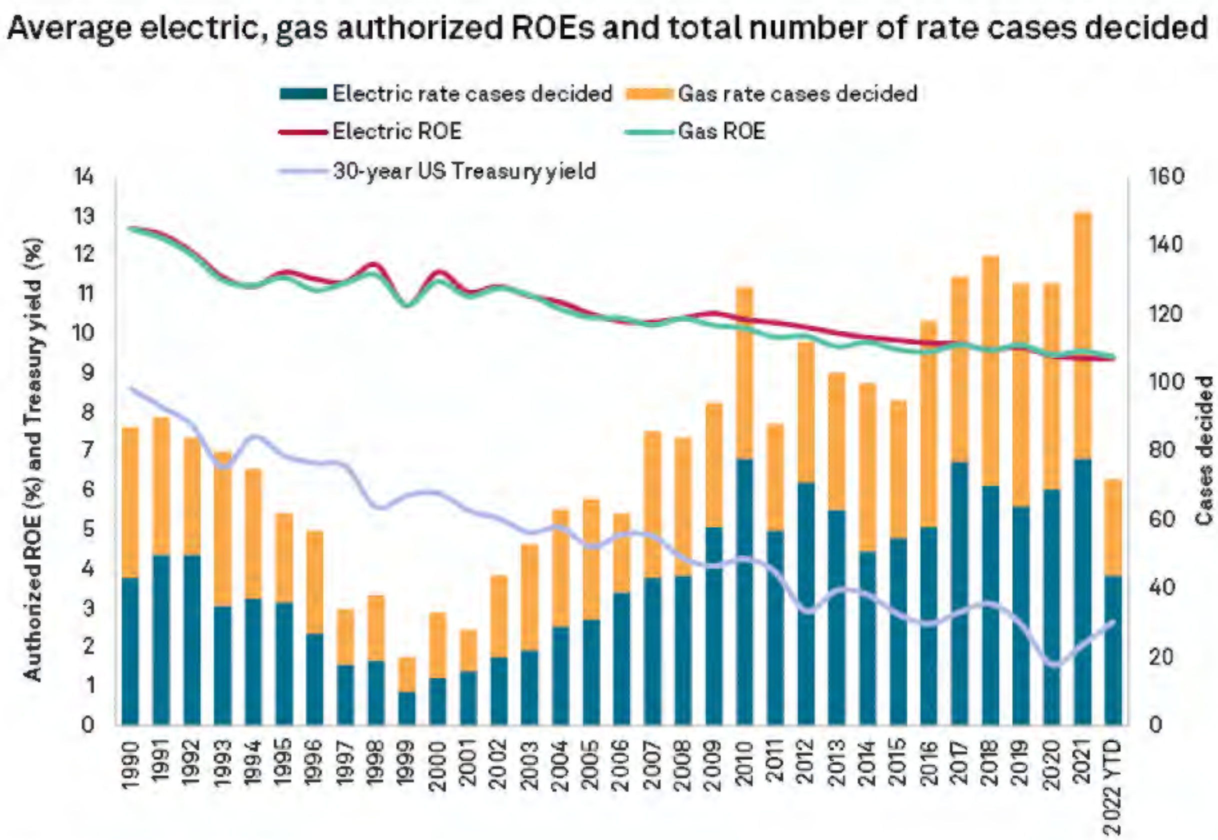
Read the full report

See the related databook

The average authorized ROE for gas utilities was 9.42% in cases decided in the first nine months of 2022 versus 9.56% in full year 2021. There were 17 gas cases that included an ROE determination in the first nine months of 2022 versus 43 in full year 2021.

The electric dataset includes several limited-issue rider cases; however, excluding the rider cases makes little difference in the average ROE. Historically, the annual average authorized ROEs in electric cases that involved limited-issue riders were meaningfully higher than those approved in general rate cases, driven primarily by substantial ROE premiums authorized in generation-related limited-issue rider proceedings in Virginia. However, these premiums were approved for limited durations and have since begun to expire. As a result, the gap between the average ROE in the rider cases and in general rate cases has narrowed. In the gas industry sector, there has not been much use of limited issue rider cases as most of the gas riders rely on ROEs approved in a previous base rate case. Excluding rider cases, the average authorized ROE for electric cases was 9.29% in the first nine months of 2022 versus 9.39% in full year 2021.

In the first nine months of 2022, the median ROE authorized in all electric utility rate cases was 9.30% versus 9.38% in full year 2021; for gas utilities, the metric was 9.42% in the first nine months of 2022 versus 9.56% in full year 2021.



Data compiled Oct. 24, 2022.
YTD = year-to-date, through Sep. 30, 2022.
Sources: Regulatory Research Associates, a group within S&P Global Commodity Insights; U.S. Department of the Treasury.

Looking at the 12 months ended Sept. 30, 2022, the average ROE authorized in all electric utility rate cases was 9.36%, and the median was 9.35%. For gas utilities in the 12 months ended Sept. 30, 2022, the average was 9.50%, and the median was 9.40%.

For a chronological listing of the major energy rate case decisions issued during 2022 as well as historical summary data going back to 1990, see RRA's latest "Rate Case Decisions Quarterly Update."

Regulatory Research Associates is a group within S&P Global Commodity Insights.

S&P Global Commodity Insights produces content for distribution on S&P Capital IQ Pro.

For a full listing of past and pending rate cases, rate case statistics and upcoming events, visit the S&P Capital IQ Pro Energy Research Home Page.

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UTILITY STOCKS AND THE SIZE EFFECT: AN EMPIRICAL ANALYSIS

Annie Wong*

I. Introduction

The objective of this study is to examine whether the firm size effect exists in the public utility industry. Public utilities are regulated by federal, municipal, and state authorities. Every state has a public service commission with board and varying powers. Often their task is to estimate a fair rate of return to a utility's stockholders in order to determine the rates charged by the utility. The legal principles underlying rate regulation are that "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks," and that the return to a utility should be sufficient to "attract capital and maintain credit worthiness." However, difficulties arise from the ambiguous interpretation of the legal definition of *fair and reasonable rate of return* to an equity owner.

Some finance researchers have suggested that the Capital Asset Pricing Model (CAPM) should be used in rate regulation because the CAPM beta can serve as a risk measure, thus making risk comparisons possible. This approach is consistent with the spirit of a Supreme Court ruling that equity owners sharing similar level of risk should be compensated by similar rate of return.

The empirical studies of Banz (1981) and Reinganum (1981) showed that small firms tend to earn higher returns than large firms after adjusting for beta. This phenomenon leads to the proposition that firm size is a proxy for omitted risk factors in determining stock returns. Barry and Brown (1984) and Brauer (1986) suggested that the omitted risk factor could be the differential information environment between small and large firms. Their argument is based on the fact that investors often have less publicly available information to assess the future cash flows of small firms than that of large firms. Therefore, an additional risk premium should be included to determine the appropriate rate of return to shareholders of small firms.

The samples used in prior studies are dominated by industrial firms, no one has examined the size effect in public utilities. The objective of this study is to extend the empirical findings of the existing studies by investigating whether the size effect is also present in the utility industry. The findings of this study have important implications for investors, public utility firms, and state regulatory agencies. If the size effect does exist in the utility industry, this would suggest that the size factor should be considered when the CAPM is being used to determine the fair rate of return for public utilities in regulatory proceedings.

II. Information Environment of Public Utilities

In general, utilities differ from industriales in that utilities are heavily regulated and they follow similar accounting procedures. A public utility's financial reporting is mainly regulated by the Securities and Exchange Commission (SEC) and the Federal Energy Regulatory Commission (FERC). Under the Public Utility Holding Company Act of 1935, the SEC is empowered to regulate the holding company systems of electric and gas utilities. The Act requires registration of public utility holding companies with the SEC. Only under strict conditions would the purchase, sale or issuance of securities by these holding companies be permitted. The purpose of the Act is to keep the SEC and investors informed of the financial conditions of these firms. Moreover, the FERC is in charge of the interstate operations of electric and gas companies. It requires utilities to follow the accounting procedures set forth in its Uniform Systems of Accounts. In particular, electric and gas utilities must request their Certified Public Accountants to certify that certain schedules in the financial reports are in conformity with the Commission's accounting requirements. These detailed reports are submitted annually and are open to the public.

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*Western Connecticut State University. The author thanks Philip Perry, Robert Hagerman, Eric Press, the anonymous referee, and Clay Singleton for their helpful comments.

The FERC requires public utilities to keep accurate records of revenues, operating costs, depreciation expenses, and investment in plant and equipment. Specific financial accounting standards for these purposes are also issued by the Financial Accounting Standards Board (FASB). Uniformity is required so that utilities are not subject to different accounting regulations in each of the states in which they operate. The ultimate objective is to achieve comparability in financial reporting so that factual matters are not hidden from the public view by accounting flexibility.

Other regulatory reports tend to provide additional financial information about utilities. For example, utilities are required to file the FERC Form No. 1 with the state commission. This form is designed for state commissions to collect financial and operational information about utilities, and serves as a source for statistical reports published by state commissions.

Unlike industriales, a utility's earnings are predetermined to a certain extent. Before allowed earnings requests are approved, a utility's performance is analyzed in depth by the state commission, interest groups, and other witnesses. This process leads to the disclosure of substantial amount of information.

III. Hypothesis and Objective

Due to the Act of 1935, the Uniform Systems of Accounts, the uniform disclosure requirements, and the predetermined earnings, all utilities are reasonably homogeneous with respect to the information available to the public. Barry and Brown (1984) and Brauer (1986) suggested that the difference of risk-adjusted returns between small and large firms is due to their differential information environment. Assuming that the differential information hypothesis is true, then uniformity of information availability among utility firms would suggest that the size effect should not be observed in the public utility industry. The objective of this paper is to provide a test of the size effect in public utilities.

IV. Methodology

1. Sample and Data

To test for the size effect, a sample of public utilities and a sample of industriales matched by equity value are formed so that their results can be compared. Companies in both samples are listed on the Center for Research in Security Prices (CRSP) Daily and Monthly Returns files. The utility sample includes 152 electric and gas companies. For each utility in the sample, two industrial firms with similar firm size (one is slightly larger and the other is slightly smaller than the utility) are selected. Thus, the industrial sample includes 304 non-regulated firms.

The size variable is defined as the natural logarithm of market value of equity at the beginning of each year. Both the equally-weighted and value-weighted CRSP indices are employed as proxies for the market returns. Daily, weekly and monthly returns are used. The Fama-MacBeth (1973) procedure is utilized to examine the relation between risk-adjusted returns and firm size.

2. Research Design

All utilities in the sample are ranked according to the equity size at the beginning of the year, and the distribution is broken down into deciles. Decile one contains the stocks with the lowest market values while decile ten contains those with the highest market values. These portfolios are denoted by MV_1, MV_2, ..., and MV_{10}, respectively.

The combinations of the ten portfolios are updated annually. In the year after a portfolio is formed, equally-weighted portfolio returns are computed by combining the returns of the component stocks within the portfolio. The betas for each portfolio at year t, $\hat{\beta}_{pt}$'s, are estimated by regressing the previous five years of portfolio returns on market returns:

$$\tilde{R}_{pt} = \alpha_p + \hat{\beta}_{pt}\tilde{R}_{mt} + \tilde{U}_{pt} \qquad (1)$$

where

R_{pt} = periodic return in year t on portfolio p

R_{mt} = periodic market return in year t

U_{pt} = disturbance term.

Banz (1981) applied both the ordinary and generalized least squares regressions to estimate β; and concluded that the results are essentially identical (p.8). Since adjusting for heteroscedasticity does not necessarily lead to more efficient estimators, the ordinary least squares procedures are used in this study to estimate β in equation (1).

The following cross-sectional regression is then run for the portfolios to estimate γ_{it}, i = 0, 1, and 2:

$$R_{pt} = \gamma_{0t} + \gamma_{1t}\hat{\beta}_{pt} + \gamma_{2t}\hat{S}_{pt} + U_{pt} \qquad (2)$$

where

$\hat{\beta}_{pt}$ = estimated beta for portfolio p at year t, t=1968, ..., 1987

$\hat{S}_{pt}$ = mean of the logarithm of firm size in portfolio p at the beginning of year t

U_{pt} = disturbance term.

Depending on whether daily, weekly or monthly returns are used, a portfolio's average return changes periodically while its beta and size only change once a year. The γ_1 and γ_2 coefficients are estimated over the following four subperiods: 1968-72, 1973-77, 1978-82 and 1983-1987. If portfolio betas can fully account for the differences in returns, one would expect the average coefficient for the beta variable to be positive and for the size variable to be zero. A t-statistic will be used to test the hypothesis. The coefficients of a matched sample are also examined so that the results between industrial and utility firms can be compared.

V. Analysis of Results

1. Equity Value of the Utility Portfolios

The mean equity values of the ten size-based utility portfolios are reported in Table 1. Panels A and B present the average firm size of these portfolios at the beginning and end of the test period, 1968-1987. The first interesting observation from Table 1 is that the difference in magnitude between the smallest and the largest market value utility portfolios is tremendous. In Panel A, the average size of MV_1 is about \$31 million while that of MV_{10} is over \$1.4 billion. In Panel B, that is twenty years later, they are \$62 million and \$5.2 billion, respectively. Another interesting finding is that there is a substantial increase in average firm size from MV_9 to MV_{10}. Since these two findings are consistent over the entire test period, the average portfolio market values for interim years are not reported. These results are similar to the empirical evidence provided by Reinganum (1981).

The utility sample in this study contains 152 firms whereas Reinganum's sample contains 535 firms that are mainly industrial companies. Two conclusions may be drawn from the results of the Reinganum study and this one. First, utilities and industriales are similar in the sense that their market values vary over a wide spectrum. Second, the fact that there is a huge jump in firm size from MV_9 to MV_{10} indicates that the distribution of firm size is positively skewed. To correct for the skewness problem, the natural logarithm of the mean equity value of each portfolio is calculated. This variable is then used in later regressions instead of the actual mean equity value.

2. Betas of the Utility and Industrial Samples

The betas based on monthly, weekly and daily returns are reported for the utility and industrial samples. For simplicity, they will be referred to as monthly, weekly, and daily betas. In all cases, five years of returns are used to estimate the systematic risk. The betas estimated over the 1963-67 time period are used to proxy for the betas in 1968, which is the beginning of the test period. By the same token, the betas obtained from the time period 1982-86 are used as proxies for the betas in 1987, which is the end of the test period.

The betas from using the equally-weighted and value-weighted indices are calculated in order to check whether the results are affected by the choice of market index. Since the results are similar, only those obtained from the equally-weighted index are reported and analyzed.

Table 2 reports the monthly, weekly and daily betas of the two samples at the beginning and end of the test period. Panel A shows the various betas of the industrial portfolios. Two conclusions may be drawn. First, in the 1960's, smaller market value portfolios tend to have relatively larger betas. This is consistent with the empirical findings by Banz (1981) and Reinganum (1981). Second, this trend seems to vanish in the 1980's, especially when weekly and daily returns are used.

The betas of the utility portfolios are presented in Panel B. The table shows that none of the utility betas are greater than 0.71. A comparison between Panels A and B reveals that utility portfolios are relatively less risky than industrial portfolios after controlling for firm size. The comparison also reveals that, unlike industrial stocks, betas of the utility portfolios are not related to the market values of equity.

The negative correlation between firm size and beta in the industrial sample may introduce a multicolinearity problem in estimating equation (2). Banz (p.11) had addressed this issue and concluded that the test results are not sensitive to the multicolinearity problem. For the utility sample, this problem does not exist.

3. Tests on the Coefficients of Beta and Size

The beta and firm size are used to estimate γ_1 and γ_2 in equation (2). A t-statistic is used to test if the mean values of the gammas are significantly different from zero. The tests were performed for four 5-year periods which are reported in Table 3. The mean of the gammas and their t-statistic are presented in Panel A for the utilities and in Panel B for the industrial firms.

The empirical results for the utility sample are reported in Panel A of Table 3. When monthly returns are used, 60 regressions were run to obtain 60 pairs of gammas for each of the 5-year periods. When daily returns are used, over 1200 regressions were run for each period to obtain the gammas. The results are similar: in all of the time periods tested, none of the average coefficients for beta and size are significantly different from zero. When weekly returns are used, 260 pairs of gammas were obtained. The average coefficients for beta are not significant in any test period, and the average coefficients for size are not significant in three of the test periods. For the test period of 1978-82, the average coefficient for size is significantly negative at a 5% level.

The test results for the industrial sample are reported in Panel B of Table 3. When monthly returns are used, the average coefficient estimates for size and beta are significant and have the expected sign only in the 1983-87 test period. When weekly returns are used, only the size variable is significantly negative in the 1978-82 period. When daily returns are used, the coefficient estimates for betas and size are not significant at any conventional level.

According to the CAPM, beta is the sole determinant of stock returns. It is expected that the coefficient for beta is significantly positive. However, the empirical findings reported in this study and in Fama and French (1992) only provide weak support for beta in explaining stock returns. The empirical findings in this study also suggest that the size effect varies over time. It is not unusual to document the firm size effect at certain time periods but not at others. Banz (1981) found that the size effect is not stable over time with substantial differences in the magnitude of the coefficient of the size factor (p.9, Table 1). Brown, Kleidon and Marsh (1983) not only have shown that size effect is not constant over time but also have reported a reversal of the size anomaly for certain years.

The research design of this study allows us to keep the sample, test period, and methodology the same with the holding-period being the only variable. The size effect is documented for the industrial sample in one of the four test periods when monthly returns are used and in another when weekly returns are used. When daily returns are used, no size effect is observed. For the utility sample, the size effect is significant in only one test period when weekly returns are used. When monthly and daily returns are used, no size effect is found. Therefore, this study concludes that the size effect is not only time-period specific but also holding-period specific.

VI. Concluding Remarks

The fact that the two samples show different, though weak, results indicates that utility and industrial stocks do not share the same characteristics. First, given firm size, utility stocks are consistently less risky than industrial stocks. Second, industrial betas tend to decrease with firm size but utility betas do not. These findings may be attributed to the fact that all public utilities operate in an environment with regional monopolistic power and regulated financial structure. As a result, the business and financial risks are very similar among the utilities regardless of their sizes. Therefore, utility betas would not necessarily be expected to be related to firm size.

The objective of this study is to examine if the size effect exists in the utility industry. After controlling for equity values, there is some weak evidence that firm size is a missing factor from the CAPM for the industrial but not for the utility stocks. This implies that although the size phenomenon has been strongly documented for the industriales, the findings suggest that there is no need to adjust for the firm size in utility rate regulations.

References

Banz, R.W. "The Relationship Between Return and Market Value of Common Stocks," *Journal of Financial Economics*, (March 1981): 3-18.

Barry, C.B. and S.J. Brown. "Differential Information and the Small Firm Effect," *Journal of Financial Economics*, (1984): 283-294,

Brauer, G.A. "Using Jump-Diffusion Return Models to Measure Differential Information by Firm

Size," *Journal of Financial and Quantitative Analysis*, (December 1986): 447-458.

Brown, P., A.W. Kleidon, and T.A. Marsh. "New Evidence on the Nature and Size Related Anomalies in Stock Prices," *Journal of Financial Economics*, (1983): 33-56.

Fama, E.F. and K.R. French. "The Cross-Section of Expected Stock Returns," *Journal of Finance*, (June 1992): 427-465.

Fama, E.F. and J.D. MacBeth. "Risk Return and Equilibrium: Empirical Tests," *Journal of Political Economy*, (May/June 1973): 607-636.

Reinganum, M.R. "Misspecification of Capital Asset Pricing: Empirical Anomalies Based on Earnings' Yields and Market Values," *Journal of Financial Economics*, (March 1981): 19-46.

Table 1

Average Equity Size of the Utility Portfolios at the Beginning and End of the Test Period (Dollar figures in millions)

	A: Beginning (1968)	B: End (1987)
MV_1	\$31	\$62
MV_2	\$77	\$177
MV_3	\$113	\$334
MV_4	\$161	\$475
MV_5	\$220	\$715
MV_6	\$334	\$957
MV_7	\$437	\$1,279
MV_8	\$505	\$1,805
MV_9	\$791	\$2,665
MV_{10}	\$1,447	\$5,399

Table 2

Betas of the Two Samples at the Beginning and End of the Test Period

	Monthly Betas		Weekly Betas		Daily Betas	
	1963-67	1982-86	1963-67	1982-86	1963-67	1982-86
Panel A: Industrial Firms						
MV_1	0.89	1.00	1.15	0.95	1.11	0.92
MV_2	0.94	0.87	1.07	1.01	1.14	1.01
MV_3	0.88	0.82	1.12	0.86	1.14	1.04
MV_4	0.69	0.74	1.00	0.83	1.03	0.86
MV_5	0.73	0.80	1.05	0.96	1.13	1.01
MV_6	0.66	0.82	1.03	1.01	1.05	1.04
MV_7	0.64	0.81	0.97	1.04	0.98	1.09
MV_8	0.62	0.75	0.97	1.11	1.00	1.20
MV_9	0.52	0.78	0.84	1.06	0.94	1.16
MV_{10}	0.43	0.65	0.78	1.01	0.86	1.22
Panel B: Public Utilities						
MV_1	0.30	0.37	0.31	0.43	0.30	0.40
MV_2	0.28	0.38	0.37	0.47	0.36	0.44
MV_3	0.22	0.42	0.33	0.42	0.31	0.49
MV_4	0.27	0.35	0.36	0.52	0.34	0.54
MV_5	0.25	0.45	0.37	0.61	0.35	0.62
MV_6	0.25	0.41	0.39	0.54	0.40	0.65
MV_7	0.20	0.35	0.34	0.54	0.37	0.63
MV_8	0.17	0.38	0.34	0.65	0.33	0.68
MV_9	0.19	0.34	0.35	0.60	0.34	0.71
MV_{10}	0.18	0.29	0.38	0.59	0.39	0.71

Table 3

Tests on the Mean Coefficients of Beta (γ_1) and Size (γ_2)

$$R_{pt} = \gamma_{0t} + \gamma_{1t}\hat{\beta}_{pt} + \gamma_{2t}\hat{S}_{pt} + U_{pt}$$

Returns Used:		Monthly (t-value)	Weekly (t-value)	Daily (t-value)
Panel A: Utility Sample				
1968-72	γ_1	-0.46% (-0.26)	-0.32% (-0.42)	-0.02% (-0.18)
	γ_2	-0.07% (-0.78)	-0.01% (-0.51)	-0.00% (-0.46)
1973-77	γ_1	-0.28% (-0.13)	0.14% (0.14)	-0.03% (-0.21)
	γ_2	-0.11% (-0.70)	-0.03% (-0.67)	-0.00% (-0.53)
1978-82	γ_1	0.55% (0.36)	0.54% (1.00)	0.05% (0.43)
	γ_2	-0.10% (-0.75)	-0.05% (-1.71)*	-0.01% (-1.60)
1983-87	γ_1	1.74% (1.28)	-0.24% (-0.51)	-0.02% (-0.18)
	γ_2	-0.16% (-1.54)	-0.03% (-0.86)	-0.01% (-0.63)
Panel B: Industrial Sample				
1968-72	γ_1	-0.36% (-0.27)	-0.28% (-0.55)	-0.02% (-0.32)
	γ_2	0.07% (0.43)	-0.01% (-0.19)	0.00% (0.51)
1973-77	γ_1	1.34% (0.64)	-0.23% (-0.31)	0.14% (1.45)
	γ_2	-0.01% (-0.06)	-0.04% (-0.85)	-0.00% (-0.64)
1978-82	γ_1	-0.84% (-0.28)	-0.56% (-0.91)	-0.09% (-0.81)
	γ_2	-0.29% (-0.75)	-0.01% (-1.72)*	-0.00% (-1.33)
1983-87	γ_1	2.51% (1.83)*	0.34% (0.64)	0.11% (1.40)
	γ_2	-0.25% (-1.90)*	-0.01% (-0.43)	0.00% (0.14)

* Significant at the 5% level based on a one-tailed test.

DATA REQUESTS

DATA REQUEST NO. 1:
Referencing Petitioner's Exhibit 2, pages 16-18 regarding fair value return.

a. Is Mr. Jackson aware of any Indiana utilities that have Commission-authorized returns (net operating income) based on a rate base other than an original cost rate base, which have been approved in the last 20 years?

b. If the response to subpart a. is yes, please list the names of the utilities and the Cause Nos.

c. Please confirm all the stock of Westfield Gas is owned by Citizens Resources.

d. If subpart c. is not confirmed, please provide the name(s) of the owners of the Westfield Gas stock.

e. Please confirm the stock of Citizens Resources is wholly owned by Citizens Energy Group.

f. If subpart e. is not confirmed, please provide the name(s) of the owners of the Citizens Resources stock.

g. Please confirm Citizens Energy Group is a public charitable trust established for the benefit of the citizens of Marion County, Indiana.

h. If subpart g. is not confirmed, please indicate the legal or corporate status of Citizens Energy Group, and why Citizens Energy Group, or its predecessor, was established.

i. Please explain why Westfield Gas requires a Fair Value Increment Return of $601,709, in addition to the original cost return of $1,258,187 as reflected on Petitioner's Exhibit No. 2, page 17, lines 13-14.

j. Please explain how charging Westfield Gas customers higher natural gas rates that produce an additional return of $601,709 benefits the Westfield Gas customers.

k. Please provide the names and positions of the Westfield Gas/Citizens Resources/Citizens Energy Group officers or directors that directed the current rate case be filed to recover a Fair Value Increment Return.

l. Please provide the names and positions of the Westfield Gas/Citizens Resources/Citizens Energy Group officers or directors that directed the current rate case be filed with a proposed return on equity of 10.9% as reflected on Petitioner's Exhibit No. 2, page 21, line 3.

OBJECTIONS:

Petitioner objects to subparts e – h on the grounds set forth in General Objection No. 2 and 5. Petitioner objects to subpart j on the grounds that the question is argumentative, vague, and ambiguous.

RESPONSE:

a. Yes.

b. Petitioner has not performed and is not required to perform the exhaustive research requested by the OUCC. Mr. Jackson is aware that in its Order approved in Cause No. 43624 on March 10, 2010, which was a general rate case filed by Petitioner, the Commission found that "the fair value of Petitioner's utility property . . . is $7,836,100," which was $2.35 million higher than the net original of Petitioner's utility plant in service.

c – d. Please see response to OUCC Data Request 5.2.b

e – h. See objection.

i. As explained in Mr. Jackson's testimony (Pet. Exh. No. 2, Page 9, Lines 4 – 7), "IC 8-1-2-6 requires the Commission to 'value all property of every public utility actually used and useful for the convenience of the public at its fair value.' Thus, in accordance with IC 8-1-2-6, Westfield Gas' property must be valued, for ratemaking purposes, at its fair value."

j. See objection. Subject to and without waiving the foregoing objection, Petitioner responds by referring the OUCC to Mr. Jackson's testimony, Pet. Exh. No. 2, particularly page 4, line 1 through page 8, line 22 and page 20, line 1 – 21.

k. See the attachment provided and identified as OUCC DR 6-1.k.pdf.

l. See response to subpart k.

WITNESS:

Craig L. Jackson

Original Cost and Fair Value Rate Base Comparison

	Original Cost				Fair Value				
Account Description	**Original Cost ***	**Accumulated Depreciation**	**Original Cost minus Accum. Depr.**	**% Depreciated**	**Reproduction Cost - Fair Value***	**Petitioner's RCNLD***	**% Depreciated Per Fair Value**	**Corrected Accumulated Depreciation: Col. 4 x Col. 5**	**Corrected Fair Value Rate Base: Col. 5 - Col. 8**
	1	2	3	4	5	6	7	8	**9**
	(SAM-1, p. 58)	(wp 155)			(SAM-1, p. 58)	(SAM-1, p. 58)			
Land and Land Rights	$46,086		$46,086	0.0%	$46,086	$46,086	0.0%	$0	$46,086
Structures and Improvements	$39,942	-$3,852	$36,090	9.6%	$45,647	$39,996	12.4%	$4,402	$41,245
Transmission Structures and Improvements	$83,079	-$129	$82,950	0.2%	$83,079	$83,079	0.0%	$129	$82,950
Mains	$12,311,991	-$3,724,346	$8,587,645	30.2%	$16,526,900	$13,874,810	16.0%	$4,999,345	$11,527,555
Transmission Mains	$277,307	-$1,470	$275,837	0.5%	$277,307	$276,047	0.5%	$1,470	$275,837
Measuring and Regulating Equipment	$110,036	-$36,694	$73,342	33.3%	$149,584	$114,286	23.6%	$49,882	$99,702
Transmission Measuring and Regulating Equipment	$717,630	-$1,531	$716,099	0.2%	$717,630	$717,630	0.0%	$1,531	$716,099
Services	$4,281,001	-$1,687,229	$2,593,772	39.4%	$5,869,988	$4,684,774	20.2%	$2,313,481	$3,556,507
Meters	$791,240	-$416,155	$375,085	52.6%	$1,605,460	$977,576	39.1%	$844,396	$761,064
Meter Installations	$16,147	-$14,069	$2,078	87%	$46,878	$17,383	62.9%	$40,845	$6,033
House Regulators	$86,663	-$65,143	$21,520	75%	$154,194	$67,070	56.5%	$115,905	$38,289
Industrial Measuring and Regulating Equipment	$32,553	-$33,356	-$803	102%	$79,471	$23,246	70.7%	$81,431	-$1,960
Subtotals	$18,793,675	-$5,983,974	$12,809,701		$25,602,224	$20,921,983		$8,452,818	$17,149,406

	Original Cost		Fair Value
Allocated Corporate Support Services (Attachment CAJ-4)	$667,519	(Attachment SAM-1, p. 58)	$750,488
Total Assets	$13,477,220		$17,899,894
13 Mo. Avg. Inventory (Attachment CLJ-1, line 16)	$ 401,124		$401,124
Total Rate Base	$13,878,344		$18,301,018
Times WACC	7.94%	Times WACC	5.65%
Original Cost Authorized NOI	$1,101,941	Fair Value Authorized NOI	$1,034,008

* Petitioner's Exhibit No. 6, Attachment SAM-1, page 58.
Summary of Reproduction Cost New Less Depreciation.

Westfield Gas, LLC **wp 155**
170 IAC 1-5-10 (2)
Schedule of utility plant in service and accumulated depreciation by subaccount
as of December 31, 2021

		Plant in Service	Accum Depr
WESTFIELD			
Distribution			
006-374-0	Land & Land Rights	46,086	-
006-375-0	Structures & Improvements	39,942	(3,852)
006-376-0	Mains	12,311,991	(3,724,346)
006-378-0	Measuring & Regulating Equip.-General	17,912	(9,490)
006-379-0	Measuring & Regulating Equip.-GCCS	92,124	(27,204)
006-380-0	Service	4,281,001	(1,687,229)
006-381-0	Meters	791,240	(416,155)
006-382-0	Meter Installations	16,147	(14,069)
006-383-0	House Regulators	86,663	(65,413)
006-384-0	House Regulator Installations	-	(589)
006-385-0	Ind Meas & Reg Station Equip	32,553	(33,356)
	Total Distribution	17,715,659	(5,981,703)
Transmission			
065-366-0	Structures & Improvements	83,079	(129)
065-367-0	Mains	277,307	(1,470)
065-369-0	Measuring & Regulating Equipment	717,630	(1,531)
	Total Transmission	1,078,016	(3,130)
	TOTAL WESTFIELD	**18,793,675**	**(5,984,833)**
SHARED SERVICES			
General Plant			
007-389-0	Land	1,581,974	-
007-390-0	Structures & Improvements	51,285,161	(31,440,673)
007-391-1	Office Furniture	3,735,376	(2,353,930)
007-391-2	Office Machines	2,388,128	(750,420)
007-391-3	Computer Equipment	6,069,126	(418,827)
007-391-4	Software	29,564,384	(25,489,840)
007-391-C	Software - CIS	24,130,620	(3,180,324)
007-392-0	Transportation Equipment	75,108	(46,398)
007-394-1	Tool Equipment	19,606	(6,948)
007-394-2	Garage Equipment	21,259	(4,396)
007-397-0	Communication Equipment	3,980,926	(2,079,346)
007-398-0	Other Equipment	709,948	(245,744)
	TOTAL CSS	123,561,616	(66,016,845)
	Allocable to Westfield: 1.16%	**1,433,315**	**(765,795)**

SUPREME COURT OF MISSOURI
en banc

SPIRE MISSOURI, INC., F/K/A LACLEDE GAS COMPANY, Appellant, v. PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI, Respondent, and OFFICE OF PUBLIC COUNSEL, Intervenor.	)	*Opinion issued February 9, 2021* No. SC97834

APPEAL FROM THE MISSOURI PUBLIC SERVICE COMMISSION

Spire Missouri, Inc. ("Spire), formerly known as Laclede Gas Co., is an investor-owned public utility regulated by the Public Service Commission ("PSC"). In April 2017, Spire filed tariffs to increase its general rates for gas services in its Spire Missouri East and Spire Missouri West territories.[1] The PSC suspended Spire's new

[1] Spire East was formerly known as Laclede Gas Company, and Spire West was formerly known as Missouri Gas Energy. For ease of use, only currently existing business entities and

tariffs until March 2018 and established a test year. The cases were consolidated, and several parties were granted intervention. The PSC issued its Amended Report and Order in March 2018. Among the PSC's conclusions, the Amended Report and Order disallowed a portion of Spire's rate case expenses, included some of the proceeds from the 2014 sale of a facility in setting Spire's new rates, and determined Spire East's prepaid pension asset was $131.4 million (or approximately $28.8 million less than Spire contended). Spire appeals. This Court has jurisdiction pursuant to article V, section 10 of the Missouri Constitution. The Amended Report and Order is affirmed in part and reversed in part, and the case is remanded for further proceedings consistent with this opinion.

Background

In April 2017, Spire filed tariffs with the PSC that would implement general rate increases in its Spire East and Spire West service areas. The tariffs would have increased annual gas revenue for Spire East by approximately $58.1 million. Because approximately $29.5 million of this already was being recovered through Spire's infrastructure system replacement surcharge ("ISRS"), the net increase in revenue for Spire East would be $28.5 million. The tariffs would have increased annual gas revenue for Spire West by approximately $50.4 million. Because approximately $13.4 million of this already was being recovered through Spire West's ISRS, the net increase in revenue for Spire West would be $37 million.

corresponding service areas are referenced herein, even though those entities had not yet been formed during a part of the time period at issue in this case.

The PSC suspended Spire's general rate increase tariffs until March 2018 and established a test year for the 12-month period ending December 31, 2016, to be updated for known and measurable changes through June 30, 2017. Several parties, including the Office of Public Counsel, were granted intervention,[2] and the cases were consolidated for hearing purposes. The PSC held local public hearings. The PSC then held evidentiary hearings and true-up hearings followed by briefing. Several issues were resolved by stipulations unopposed by any of the non-signatory parties, and the PSC approved those stipulations. The PSC then issued its consolidated Amended Report and Order on March 7, 2018, which became effective March 17, 2018.

Among the many issues before it, the PSC considered what portion of Spire's rate case expenses ought to be included in Spire's new base rates (and, therefore, paid for by Spire's customers rather than its investors). The PSC concluded that, because it is required under section 393.130.1[3] to set rates that are "just and reasonable," it had the broad discretion to determine whether it was just and reasonable for Spire's shareholders to share the burden of rate case expenses with ratepayers. As of September 30, 2017, Spire's total rate case expenses were $1,393,399. The PSC's staff of technical and subject matter experts ("Staff") recommended disallowing expenses relating to the

[2] These parties also included: Missouri Industrial Energy Consumers; Midwest Energy Consumers Group; Missouri Department of Economic Development – Division of Energy; Missouri School Board Association; the City of St. Joseph; National Housing Trust; Environmental Defense Fund; MoGas Pipeline, LLC; USW Local 11-6, which intervened only in the Spire East case; and Kansas City Power & Light Company and KCP&L Greater Missouri Operations, which intervened only in the Spire West case.

[3] All statutory references are to RSMo 2016.

procurement of a Cash Working Capital study by the consultant firm ScottMadden. The Office of Public Counsel recommended disallowing expenses related to Spire's expert witness Thomas Flaherty because of the high hourly rate charged. The PSC determined that approximately half the litigated issues in this case were driven by Spire and among these issues were the proposed use of various shareholder-favorable ratemaking tools, including a revenue stabilization mechanism, a rate of return on equity of 10.35 percent (which would have been the highest of any large utility in Missouri), tracking mechanisms to limit shareholder risk, and earnings-based incentive compensation. The PSC further determined Spire "padded" its revenue requirement by pursing positions it did not expect to win. Accordingly, the PSC determined Spire should recover the entire cost of customer notices, totaling $436,000, and Spire's depreciation study,[4] totaling $54,114, but only 50 percent of Spire's remaining rate case expenses. The PSC ordered these allowed rate case expenses normalized over four years.

The PSC also considered whether some of the proceeds of Spire's sale of one of its service centers should be used to offset Spire's purchase of a more expensive service center and, therefore, inure to the benefit of ratepayers. Spire East owned and operated three district service centers providing leak detection, leak repair, construction, maintenance, and marking services. One of the service centers was located near Forest Park in the city of St. Louis ("the Forest Park property"). In 2013, Spire acquired two properties adjacent to the Forest Park property for additional leverage in negotiations.

[4] Gas utilities are required to file a depreciation study every five years pursuant to 20 C.S.R. § 4240-3.160(1)(A).

Then, in 2014, as part of a restructuring of Spire following the acquisition of Spire West, Spire sold the Forest Park property (and the two adjacent properties) to the Cortex Innovation Community in St. Louis, which purchased the properties for construction of an IKEA retail store. The sale price for the Forest Park property included a gain of approximately $7.6 million, excluding the $1.8 million undepreciated book value of recent capital improvements to the facilities, and an allowance of $5.7 million for relocation expenses. Of the relocation expense allowance, Spire used $1.95 million to purchase furniture and fixtures for its new offices at 700 and 800 Market Street in the city of St. Louis and $200,000 to lease a temporary space during the move. The evidence did not show how much (if any) of the remaining relocation expenses were necessitated by the move from the Forest Park property to the new Manchester center. Spire contributed $1.5 million from the gain as a civic contribution to further downtown St. Louis rehabilitation.

In November 2016, Spire opened the newly constructed Manchester Avenue facility in the city of St. Louis as a partial replacement for the Forest Park property. The Manchester Avenue facility has a greater capital cost ($7.7 million base rate value), but it is more efficient to operate than the aging Forest Park facility. Pursuant to section 393.190, gas utilities must obtain authorization from the PSC to sell any part of its system that is necessary or useful in the performance of its duties to the public, but Spire did not obtain this authorization prior to selling its Forest Park property.

The PSC was required to decide whether to consider all, some, or none of the proceeds from the sale of the Forest Park property in setting Spire's new rates. Per Staff's recommendation, the PSC ordered nearly $3.6 million from the sale (the $5.7 million relocation costs, less documented relocation expenses and the cost of furniture and fixtures for the new offices) be used to offset the cost of the more expensive capital asset of the Manchester Avenue facility. The PSC ordered this amount amortized over five years.

Finally, the PSC considered the amount of Spire's pension contributions to include in base rates. Spire makes contributions to its pension plan pursuant to a collective bargaining agreement with its union employees. A prepaid pension asset is a regulatory asset representing the amount Spire has contributed to its pension plan but has not yet recovered from ratepayers. A pension liability is the opposite; it arises when Spire collects more from ratepayers than it has contributed to its pension plan. It is undisputed that Spire West has a pension liability of $28.4 million, but the amount of Spire East's pension asset (or liability) was in dispute. Staff and Spire agree that at least $131.4 million has accumulated in Spire East's pension asset since 1996, but they disagree as to what amount (if any) accumulated prior to that time. Spire argued the pension asset includes an additional $28.8 million, which accumulated between 1990 and 1996, during which time Spire East filed rate cases in 1990 (i.e., rates for 1990-1992), 1992 (i.e., rates for 1992-1994), and 1994 (i.e., rates for 1994-1996).

The disagreement between Staff and Spire centers on whether Spire East used the cash or accrual method of accounting to account for the pension asset in its 1990, 1992, and 1994 rate cases. FAS 87 and FAS 88 are Financial Accounting Standards articulating generally accepted accounting principles in accounting for the accrual of a pension asset. These are used routinely in reporting but less regularly in ratemaking. Staff argued Spire East did not begin to use both FAS 87 and FAS 88 to calculate its pension asset in rate cases until the 1996 rate case in that it used neither standard in the 1990 and 1992 cases and only FAS 87 (but not FAS 88) in the 1994 rate case. Spire concedes there is evidence suggesting its pension expense was calculated on a cash basis in the 1992 rate case but argues it had been using FAS 87 for financial reporting purposes since 1987 and, therefore, FAS 87 and FAS 88 would had to have been (and were) used in the 1990, 1992, and 1994 rate cases. With respect to the 1994 rate case, Spire contends the explicit references to FAS 87 necessarily included reference to FAS 88 because the two are inseparably intertwined and the former would not have been used without the latter. The amount in dispute from 1990 through 1994 is $19.8 million, and the amount in dispute between 1994 and 1996 is $9 million.

In its Amended Report and Order, the PSC rejected Spire's position and adopted, instead, the testimony of Staff witness Young. Among his lengthy and complex testimony, Young testified that – even though Spire has used FAS 87 for reporting since 1987 – neither Spire East's nor Staff's accounting schedules in the 1990, 1992, and 1994 rate cases itemized a pension asset using FAS 87 and FAS 88. This was supported by the record in the 1992 rate case, which seems clearly to rely upon the cash accounting approach. Staff contends only FAS 87, but not FAS 88, was used in the 1994 rate case. Because the PSC determined Spire East used the cash method in all three rate cases, it disallowed $19.8 million in claimed pension assets for 1990 through 1994 and $9 million in claimed pension assets for 1994 to 1996. As a result, the PSC determined Spire East's pension asset was $131.4 million, to be amortized over eight years.

Discussion

I. General principles governing the PSC and judicial review

Before proceeding to the merits of this case and analyzing Spire's points on appeal, three principles fundamental to the law governing public utility regulation warrant emphasis.

A PSC decision is presumed valid and the burden is on the party challenging it to demonstrate the decision is unlawful or unreasonable. *Mo. Pub. Serv. Comm'n v. Union Elec. Co.*, 552 S.W.3d 532, 538-39 (Mo. banc 2018). *See also* § 386.510 (providing for judicial review of "the reasonableness or lawfulness of the original order" from the PSC). The decision is lawful where the PSC has statutory authority to render its decision. *Union Elec. Co.*, 552 S.W.3d at 539. It is reasonable if supported by substantial, competent evidence on the whole record, it is not arbitrary and capricious, and is not based on an abuse of discretion. *Id. See also* § 536.140.2 (providing for judicial review of agency decisions to determine whether the action of the agency: "(1) Is in violation of constitutional provisions; (2) Is in excess of the statutory authority or jurisdiction of the agency; (3) Is unsupported by competent and substantial evidence upon the whole record; (4) Is, for any other reason, unauthorized by law; (5) Is made upon unlawful procedure or without a fair trial; (6) Is arbitrary, capricious or unreasonable; (7) Involves an abuse of discretion").

This two-step analysis of lawfulness and reasonableness is required by, and instituted in furtherance of, article V, section 18 of the Missouri Constitution, which provides that judicial review of administrative decisions "shall include the determination whether the same are authorized by law, and in cases in which a hearing is required by law, whether the same are supported by competent and substantial evidence upon the whole record." Analyzing the constitutional standard that administrative decisions must be supported by competent and substantial evidence on the whole record, this Court explained that judicial review of administrative factfinding ***does not*** view the evidence and all reasonable inferences in the light most favorable to the award or decision. *Hampton v. Big Boy Steel Erection*, 121 S.W.3d 220, 223 (Mo. banc 2003). Instead:

> A court must examine the whole record to determine if it contains sufficient competent and substantial evidence to support the award, i.e., whether the award is contrary to the overwhelming weight of the evidence. Whether the award is supported by competent and substantial evidence is judged by examining the evidence in the context of the whole record. An award that is contrary to the overwhelming weight of the evidence is, in context, not supported by competent and substantial evidence.

Id. at 222-23 (citations and footnotes omitted). This approach gives weight to the administrative agency's role as the finder of fact without abdicating the requirement in article V, section 18 that the judiciary stand as an independent check against abuse by the executive branch when it undertakes a judicial or quasi-judicial function.

Second, a public utility is entitled to recover from ratepayers all its costs (plus a reasonable return on its investments) by way of rates that are "just and reasonable." *Office of Pub. Counsel v. Mo. Pub. Serv. Comm'n*, 409 S.W.3d 371, 376 (Mo. banc 2013). *Accord Mo. Pub. Serv. Comm'n*, 552 S.W.3d at 534 ("As a general matter, utilities ... recover their costs (plus a reasonable return on their investments) through the sale of [gas] at the rates set by the [PSC]."); § 393.150.2 ("At any hearing involving a rate sought to be increased, the burden of proof to show that the increased rate or proposed increased rate is ***just and reasonable*** shall be upon the gas corporation ....") (emphasis added). "Just and reasonable" rates, therefore, allow public utilities to recover expenses that are (1) fair to both investors and ratepayers and (2) prudently incurred. The PSC ordinarily applies a presumption of prudence in determining whether a utility reasonably incurred its expenses. *Office of Pub. Counsel*, 409 S.W.3d at 376. This presumption of prudence will "not survive a showing of inefficiency or improvidence that creates serious doubt as to the prudence of an expenditure." *Id.* (quotation omitted). "If such a showing is made, the presumption drops out and the applicant has the burden of dispelling these doubts and proving the questioned expenditure to have been prudent." *Id.*

Finally, the PSC is prohibited from engaging in retroactive ratemaking. This is one of the bedrock principles long governing the PSC's role in setting rates. As this Court has explained:

> The [PSC] has the authority to determine the rate [t]o be charged. In so determining it may consider past excess recovery insofar as this is relevant to its determination of what rate is necessary to provide a just and reasonable return in the future, and so avoid further excess recovery. It may not, however, redetermine rates already established and paid without depriving the utility (or the consumer if the rates were originally too low) of his property without due process .... The utilities take the risk that rates filed by them will be inadequate, or excessive, each time they seek rate approval. To permit them to collect additional amounts simply because they had additional past expenses not covered by either clause is retroactive rate making, i. e., the setting of rates which permit a utility to recover past

> losses or which require it to refund past excess profits collected under a rate that did not perfectly match expenses plus rate-of-return with the rate actually established. Past expenses are used as a basis for determining what rate is reasonable to be charged in the future in order to avoid further excess profits or future losses, but under the prospective language of the statutes, they cannot be used to set future rates to recover for past losses due to imperfect matching of rates with expenses.

State ex rel. Utility Consumers' Council of Mo., Inc. v. Pub. Serv. Comm'n, 585 S.W.2d 41, 58-59 (Mo. banc 1979) ("*UCCM*") (citations omitted), *superseded on other grounds by* § 386.266. In other words, the PSC must determine a rate that is just and reasonable using a utility's past expenses *only* as a way to estimate the utility's future costs (and fair return); not to allow a utility to recover past losses or to force it to refund ratepayers past excess profits.

II. Rate Case Expenses

Spire, in its first point, argues the PSC's decision to exclude a portion[5] of Spire's rate case expenses is contrary to law because the PSC did not find that any of those expenses were imprudent. In its second point, Spire argues this exclusion was unreasonable, arbitrary and capricious, unsupported by competent and substantial evidence, or an abuse of discretion. Both points are denied.

The PSC did not err by excluding a portion of Spire's rate case expenses when calculating Spire's new rates. The expenses Spire sought to recover included: (a) the procurement of a Cash Working Capital study by the consultant firm ScottMadden;

[5] Spire's metronomic insistence that the PSC denied "half" or "almost half" of its rate case expenses is both inaccurate and unavailing. Spire's total rate case expenses were nearly $1.4 million as of September 2017. The PSC allowed full recovery of the cost of customer notices ($436,000) and the depreciation study ($54,000). Accordingly, even after the PSC disallowed

(b) unreasonably high hourly fees paid to Spire's expert witness Thomas J. Flaherty; and (c) various shareholder-oriented (and unlikely to succeed) ratemaking strategies such as a revenue stabilization mechanism, a 10.35-percent rate of return on equity (the highest of any large utility in Missouri), tracking mechanisms to limit shareholder risk, and earnings-based incentive compensation. In terms of their reasonableness, these expenditures were entitled to a presumption of prudence, and the ***prudence*** of the expenditures was never called into question. Nonetheless, the PSC concluded that including all of these expenditures in setting Spire's future rates was not ***just*** because some of the expenses were not fair to ratepayers in that they only were incurred to benefit (if anyone) Spire's shareholders. *See Office of Pub. Counsel*, 409 S.W.3d at 376. Implicit in Spire's argument is an assertion that it is entitled to recover all prudent expenditures in its rates. This is not so. In setting rates, the PSC has broad discretion to include or exclude expenditures to arrive at rates it deems to be "just and reasonable," subject, of course, to judicial review that the PSC's conclusions are supported by competent and substantial evidence and not arbitrary, capricious, or an abuse of discretion.

Generally, ratepayers benefit from rate cases because they have an interest in ensuring the financial well-being of the utilities that serve them. Therefore, ratepayers justly and reasonably can be expected to pay a utility's expenses in bringing such a case. But this does not mean there cannot be limits. A utility cannot spend any amount it

approximately $452,000 of the remaining expenses, Spire recovered approximately $942,000 (or 68 percent) of its total rate case expenses.

pleases secure in the knowledge or expectation that ratepayers will foot the bill, particularly when those expenses include items seeking to subordinate ratepayers' interests to those of the utility's investors. Here, even assuming there was no basis in the evidence to reject the presumption of prudence with respect to one or more of Spire's rate case expenses, the PSC did not err in its decision to exclude a portion of those expenses in setting "just and reasonable" rates because they served only to benefit shareholders and minimize shareholder risk with no accompanying benefit (or potential benefit) to ratepayers. To be sure, the PSC's decision to exclude 50 percent of Spire's remaining rate case expenses (after allowing full recovery of the cost of notices and the depreciation study) was not the result of a decision to include or exclude expenses on an item-by-item basis. This is not to say, however, that the PSC's decision was unsupported by competent and substantial evidence on the whole record, and it was far from the sort of irrational or unconsidered approached properly characterized as arbitrary, capricious, or an abuse of discretion. *Cf. Cox v. Kan. City Chiefs Football Club, Inc.*, 473 S.W.3d 107, 114 (Mo. banc 2015) ("A ruling constitutes an abuse of discretion when it is clearly against the logic of the circumstances then before the court and is so unreasonable and arbitrary that it shocks the sense of justice and indicates a lack of careful, deliberate consideration.").

The PSC expressly identified those issues (and related expenses) Spire pursued that benefitted only its shareholders and not its ratepayers, and the PSC decided what proportion of the total case (and expenses) they represented.[6] Nothing in the PSC's

[6] Spire also argues the PSC's determination to disallow a portion of its rate case expenses is inconsistent with Spire's low average expenses in other cases and contends the PSC's

authorizing statutes or this Court's precedents requires the PSC to conduct an item-by-item analysis when the issue is the degree to which a utility's case expenses should be included in calculating "just and reasonable" rates rather rejecting a particular expense as imprudent. Accordingly, the PSC did not err in excluding a portion of Spire's rate case expenses, and Spire's Points I and II are denied.

III. Forest Park Property Sale

Spire next argues the PSC erred by ordering that nearly $3.6 million in relocation proceeds from the sale of the Forest Park property be used to reduce rates. In its second point, Spire claims this constitutes prohibited retroactive ratemaking and, alternatively, that it was arbitrary and capricious in that it was contrary to the traditional treatment of gains on the sale of utility property.[7] This point is denied.

The PSC did not engage in prohibited retroactive ratemaking. Retroactive ratemaking is setting rates for the future in order to redress imprecision in setting prior rates, i.e., to allow the utility to recover prior losses or force it to disgorge excessive profits. *UCCM*, 585 S.W.2d at 58. This does not mean, however, that the prohibition

disallowance amounts to a penalty for Spire exercising its right to prosecute a rate case as it sees fit. The first argument is unconvincing and largely irrelevant because Spire's expenses in other cases are not the issue in and formed no part of the PSC's decision now before the Court. Spire's claim that it is being penalized fares no better because nothing in the PSC's decision restricts what Spire can and cannot raise in a rate case. Instead, it merely addresses who (between the shareholder and the ratepayers) should be burdened with the cost of the decisions Spire makes in this regard.

[7] This point is multifarious in that it asserts the PSC's decision regarding relocation expenses was error for two separate and distinct reasons. *Bowers v. Bowers*, 543 S.W.3d 608, 615 n.9 (Mo. banc 2018). Multifarious points preserve nothing for appellate review because they fail to comply with Rule 84.04(d). *Id.* This Court, however, has discretion to review, *ex gratia*, multifarious points on the merits and elects to exercise that discretion here. *Id.*

against retroactive ratemaking bars all reference to events occurring outside the test year. *See State ex rel. GTE N., Inc. v. Mo. Pub. Serv. Comm'n*, 835 S.W.2d 356, 368 (Mo. App. 1992) (approving such reference when the "adjustment is (1) 'known and measurable,' (2) promotes the proper relationship of investment, revenues and expenses, and (3) is representative of the conditions anticipated during the time the rates will be in effect"). It is important that the trees do not obscure the forest. The use of the test year concept, the adjustments made to that year, and reference to events outside that year, are merely tools for the PSC to wield in pursuit of identifying rates that are "just and reasonable" as required by § 393.130.1.

For Spire East's future rates to be "just and reasonable," the PSC determined those rates needed to reflect the impact of the sale of the Forest Park property even though that sale occurred outside the test year. Specifically, the PSC determined (among other related matters) that: a) section 393.190.1 required Spire to obtain prior approval of this sale from the PSC but it failed to do so; b) the new service center was a more expensive capital asset than the Forest Park property; and c) the evidence did not establish how much (if any) of the nearly $3.6 million in unspecified relocation expenses were incurred in the move from the Forest Park property to the Manchester property. Spire's point relied on does not claim these findings (or others underlying the PSC's treatment of the Forest Park property sale) were not supported by competent and substantial evidence on the record as a whole, only that this treatment was retroactive ratemaking and inconsistent with the PSC's prior practice. Because there is no suggestion the PSC was setting Spire's new rates to account for profits or losses resulting from prior rates, Spire's claim that this was prohibited, retroactive ratemaking is denied.

The Court also rejects Spire's contention that the PSC's decision regarding the sale of the Forest Park property was arbitrary and capricious because it departed from approaches taken by the PSC in prior cases. "[A]n administrative agency is not bound by *stare decisis,* nor are PSC decisions binding precedent on this Court." *State ex rel. AG Processing, Inc. v. Pub. Serv. Comm'n of Mo.*, 120 S.W.3d 732, 736 (Mo. banc 2003). Therefore, even if the Court assumes (without deciding) that the PSC's approach was a departure from its prior practice, this alone does not render the PSC's approach so illogical or unreasonable as to justify a conclusion that it was arbitrary, capricious, or an abuse of discretion. *Cf. Cox*, 473 S.W.3d at 114 (An abuse of discretion occurs when decision is "clearly against the logic of the circumstances then before the court and is so unreasonable and arbitrary that it shocks the sense of justice and indicates a lack of careful, deliberate consideration."). Because the PSC's decision shows a reasoned, careful approach to what may well be a new or newly increasing problem, this Court rejects Spire's claim that it was arbitrary, capricious, or an abuse of discretion merely because it may have departed from prior decisions on similar issues.

IV. Spire East's Pension Asset

In its final point, Spire argues the PSC's decision to eliminate $28.8 million from Spire East's pension asset was arbitrary, capricious, or unsupported by competent and substantial evidence because it was inconsistent with Spire's evidence that the pension asset was calculated using FAS 87 and FAS 88 throughout Spire's 1990, 1992, and 1994 rate cases. This claim is rejected in part and granted in part.

Spire concedes the pension asset was determined on a cash basis in the 1992 rate case. Nevertheless, Spire points to testimony in the 1990 rate case by Staff witness Rackers that Spire contends supports the conclusion that the pension asset in that case was calculated pursuant to FAS 87 and FAS 88 accounting standards. And, because no departure from this approach was explicitly authorized in the 1992 rate case, Spire argues this could support a finding in its favor regarding that case as well. But this argument was in stark contrast to the testimony of Staff witness Young, who testified that neither Spire East nor Staff included an itemized pension asset based on FAS 87 and FAS 88 in their accounting schedules for Spire's rate cases between 1987 and 1994. Accordingly, there was competent and substantial evidence for the PSC to decide either way with respect to how the pension asset was calculated in the 1990 and 1992 cases. This Court will not substitute its judgment for that of the PSC as to how such a complex question should be resolved where the evidence was in such near equipoise. *See Hampton*, 121 S.W.3d at 222-23.

But the evidentiary scales were not so nearly balanced with respect to how Spire's pension liability was accounted for in the 1994 rate case. Spire showed (and Staff clearly recognized) that Spire East began to use FAS 87 beginning with the 1994 rate case. But, because Staff argues that there was no similar showing with respect to Spire East's use of FAS 88, Staff claimed the cash accounting must have been used to calculate the pension asset in the 1994 rate case and the $9 million accruing between 1994 and 1996 should be excluded. But Spire's evidence (which was uncontroverted) showed that FAS 87 and FAS 88 are inextricably linked, that the former would not have been used without the latter, and that reference to FAS 87 was simply shorthand for reference to both FAS 87 and FAS 88. Moreover, the record in the 1994 rate case suggests the dispute was not over whether FAS 88 would be used but rather how it would be used. In light of this, the Court holds the PSC's decision to extend the period in which it determined Spire East used cash accounting to value its pension asset from 1994 to 1996 was not supported by competent and substantial evidence on the record as a whole. Viewed in isolation, there was evidence to support the PSC's decision in this respect, but this Court's review does not use this approach. *Id.*[8] Instead, the PSC's decision must be supported by competent and substantial evidence on the whole record, including the evidence the PSC rejected. In this very close case, the Court is persuaded it was not. Accordingly, though the Court affirms the PSC's Amended Report and Order in all other respects, the Amended Report and Order is reversed to this extent and the matter remanded to the PSC to add the $9 million in pension assets that accrued between 1994 and 1996 to Spire East's $131.4 million prepaid pension asset. Because this increase in the amount of Spire East's

[8] After *Hampton*, this Court revisited the issue to emphasize that judicial review of an administrative agency finding is not at all like appellate review of a circuit court finding. *Seck v. Dep't of Transp.*, 434 S.W.3d 74, 78-79 (Mo. banc 2014). In reviewing a circuit court's finding, an appellate court considers only the evidence and reasonable inferences that support that finding and examines that evidence and those inferences only in the light most favorable to the finding the circuit court made. *Id.* at 78-79. In reviewing a factual finding made by an administrative agency, on the other hand, judicial review is governed by article V, section 18 of the Missouri Constitution and "must consider all of the evidence that was before the agency and all of the reasonable inferences … including the evidence and inferences that the agency rejected in making its findings." *Id.* at 79.

pension asset might bear on its amortization, the case is remanded for further proceedings consistent with this opinion.

CONCLUSION

For the reasons set forth above, the PSC's Amended Report and Order is affirmed in part and reversed in part, and the case is remanded for further proceedings consistent with this opinion.

Paul C. Wilson, Judge

All concur.

AFFIRMATION

I affirm, under the penalties for perjury, that the foregoing representations are true.

Leja D. Courter

Leja D. Courter
Chief Technical Advisor
Indiana Office of Utility Consumer Counselor
Cause No.45761
Citizens Gas of Westfield, LLC

12/2/2022

Date

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing has been served upon the following parties of record in the captioned proceeding by electronic service on December 2, 2022.

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