Application No. 26-01-022
Exhibit No._____
Date: August 24, 2026
Witness: Dylan W. D'Ascendis, Gladys Farrow

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

BEAR VALLEY ELECTRIC SERVICE, INC.
REBUTTAL TESTIMONY
VOLUME ~~9~~12
ERRATA

COST OF CAPITAL

Prepared by:
BEAR VALLEY ELECTRIC SERVICE, INC.
42020 Garstin Drive
P.O. Box 1547
Big Bear Lake, California 92315-1547

August 2026

TABLE OF CONTENTS

CHAPTER 1

RETURN ON EQUITY

By Dylan W. D'Ascendis

I. INTRODUCTION AND PURPOSE

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

A. My name is Dylan W. D'Ascendis. My business address is 1820 Chapel Avenue W, Suite 300, Cherry Hill, NJ 08003. I am a Partner at ScottMadden, Inc.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of Bear Valley Electric Service, Inc. ("BVES", "Bear Valley", or the "Company"), before the California Public Utilities Commission ("CPUC" or "Commission").

Q. DID YOU FILE DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I did.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS PROCEEDING?

A. The purpose of my Rebuttal Testimony is two-fold. First, I update my return on common equity ("ROE") analyses to reflect current market data. Second, I respond to the direct testimonies of Dr. J. Randall Woolridge, witness for the Public Advocates' Office ("Cal Advocates") of the California Public Utilities Commission and Mr. William A. Monsen, witness for Snow Summit LLC ("Snow Summit"), collectively the ("Opposing Witnesses"), regarding their ROE recommendations.

II. SUMMARY

Q. PLEASE SUMMARIZE THE KEY ISSUES THAT YOU ADDRESS IN YOUR REBUTTAL TESTIMONY.

A. I have updated my ROE analyses as of August 3, 2026. Based on these updated analyses, my range of reasonable ROEs attributable to Bear Valley is between 9.83% and 11.18% (unadjusted) and 10.40% to 11.75% (adjusted). Given my updated analysis, I have maintained my specific ROE recommendation of 11.30%. In view of current markets and the updated results of my ROE models, recommended ROEs of 9.50% (Dr. Woolridge)[1] and 9.75% (Mr. Monsen)[2] are inadequate at this time.

My Rebuttal Testimony also supports the Company's requested capital structure, which contains 40.00% long-term debt and 60.00% common equity. Finally, my Rebuttal Testimony addresses the critiques of my Direct Testimony by the Opposing Witnesses.

Q. HAVE YOU PREPARED EXHIBITS IN SUPPORT OF YOUR RECOMMENDATION?

A. Yes. I have prepared Attachment 1, Exhibit No.___(DWD-1R) through Exhibit No.___(DWD-9R) were prepared by me or under my direction.

Q. HOW IS THE REMAINDER OF YOUR REBUTTAL TESTIMONY ORGANIZED?

A. The remainder of my Rebuttal Testimony is organized as follows:

---

[1] Dr. Woolridge recommends an ROE of 9.00% if the Commission accepts the Company's proposed common equity ratio of 60.00%.

[2] While Mr. Monsen recommends an ROE of 9.75%, he does not conduct an independent, market-based analysis of the Company's required return. Testimony of W. Monsen Regarding Results of Operations on Behalf of Snow Summit LLC in Bear Valley Electric Service's General Rate Case Application 26-01-022 (Errata, Aug. 17, 2026)

- Section III – Summarizes my updated analytical models;
- Section IV – Responds to Cal Advocates Witness Dr. Woolridge;
- Section V – Responds to Snow Summit Witness Monsen; and
- Section VI – Presents my conclusions.

III. UPDATED ANALYSIS

Q. HAVE YOU UPDATED YOUR COST OF COMMON EQUITY ANALYSES FOR YOUR REBUTTAL TESTIMONY?

A. Yes, I have. Due to the passage of time since my Direct Testimony analysis (data as of September 12, 2025), I have updated my analysis using data as of August 3, 2026.

Q. HAVE YOU UPDATED YOUR UTILITY PROXY GROUP IN YOUR REBUTTAL TESTIMONY?

A. Yes, I have. I have added Duke Energy Corporation ("DUK") as they no longer are involved in any major merger or acquisition activity (i.e., one publicly-traded utility merging with or acquiring another). Duke Energy Corporation completed its sale of Piedmont Gas on March 31, 2026.

Q. HAVE YOU APPLIED ANY OF YOUR ROE MODELS DIFFERENTLY IN YOUR REBUTTAL TESTIMONY?

A. I have applied my ROE models in the same manner as I applied them in my initial analysis with one exception. In my updated analysis, I do not consider the projected return on the S&P 500 Index using the weighted DCF model.

Q. PLEASE SUMMARIZE YOUR UPDATED COST OF COMMON EQUITY RESULTS BASED ON YOUR UPDATED ANALYSIS.

A. Using data as of August 3, 2026, my updated results are presented on page 2 of Exhibit No.___(DWD-1R), and in Table 1, below.

Table 1: Summary of Common Equity Cost Rates

Discounted Cash Flow Model (DCF)	10.60%
Risk Premium Model ("RPM")	10.55% - 10.94%
Capital Asset Pricing Model (CAPM)	9.83% - 10.84%
Cost of Equity Models Applied to Comparable Risk, Non-Price Regulated Companies	10.33% - 11.18%
Indicated Range of Common Equity Cost Rates Before Adjustments for Company-Specific Risk	9.83% - 11.18%
Business Risk Adjustment	1.30%
Financial Risk Adjustment	-0.81%
Flotation Cost Adjustment	0.08%
Indicated Range of Common Equity Cost Rates after Adjustment	10.40% - 11.75%
Recommended Cost of Equity	11.30%

Given the unadjusted and adjusted ranges of ROEs, I maintain my recommended ROE of 11.30% for Bear Valley.

IV. RESPONSE TO CAL ADVOCATES WITNESS DR. WOOLRIDGE

Q. PLEASE BRIEFLY SUMMARIZE DR. WOOLRIDGE'S ANALYSES AND RECOMMENDATIONS.

A. Dr. Woolridge recommends a hypothetical capital structure consisting of 50.00% long-term debt at Bear Valley's requested embedded debt cost rate of 5.92% and 50.00% common equity at his recommended ROEs of 9.50%.[3] Regarding his ROE recommendation, Dr. Woolridge's models indicate Bear Valley's ROE is within a range of 8.45% (CAPM) to 9.90% (DCF), which he narrows to 9.00% to 9.75%, and within those ranges he provides a specific recommendation of 9.50%, which is based primarily on the results of his constant growth DCF model.[4] Dr. Woolridge recommends reducing the ROE to 9.00% if the Commission approves Bear Valley's requested capital structure in this proceeding.[5]

Q. WHAT ARE THE SPECIFIC AREAS IN WHICH YOU DISAGREE WITH DR. WOOLRIDGE' S ANALYSES AND RECOMMENDATIONS AS THEY RELATE TO BEAR VALLEY'S ROE?

A. There are several areas in which I disagree with Dr. Woolridge, including: (1) his recommended hypothetical capital structure; (2) his assessment of capital market conditions; (3) his interpretation of authorized ROEs on investor required returns; (4) his proxy group selection criteria; (4) his application of the DCF model; (5) his application of the CAPM; and (6) his failure to reflect the Company's increased business risk as compared to his proxy group.

---

[3] Woolridge Direct Testimony, at 4.
[4] Woolridge Direct Testimony, at 4.
[5] Woolridge Direct Testimony, at 5.

A. Capital Structure

Q. PLEASE SUMMARIZE DR. WOOLRIDGE'S RECOMMENDED CAPITAL STRUCTURE.

A. Dr. Woolridge proposes a hypothetical capital structure, which consists of 50.00% long-term debt and 50.00% common equity based on the average authorized common equity ratios for electric utilities in recent years.[6]

Q. DR. WOOLRIDGE GENERALLY POINTS TO MEASURES OF CENTRAL TENDENCY (E.G., MEAN, MEDIAN) OF THE EQUITY RATIOS OF HIS PROXY GROUPS OR AUTHORIZED EQUITY RATIOS TO SUPPORT HIS RECOMMENDED CAPITAL STRUCTURE.[7] WHY DOES THE APPROXIMATE HIGH-END OF THE RANGE OF PROXY GROUP EQUITY RATIOS MORE ACCURATELY REFLECT THE COMPANY'S FINANCIAL SITUATION THAN THE AVERAGE?

A. As noted in Company Witness Gladys Farrow's rebuttal testimony,[8] the Company's requested ratemaking capital structure approximates the average capital structure expected during the period 2027-2030. As discussed in my Direct Testimony, since BVES would be perceived to have less financial risk than the Utility Proxy Group due to its higher equity ratio, I made a downward adjustment to the Utility Proxy Group's indicated ROE.[9] If the Commission approves Dr. Woolridge's hypothetical capital structure for Bear Valley, it would be a significant departure from the Company's observed and proposed capital structure, which may present challenges for the Company in attracting capital with

6 Woolridge Direct Testimony, at 4.
7 Woolridge Direct Testimony, at 27-28.
8 Farrow Rebuttal Testimony, at 2.
9 D'Ascendis Direct Testimony, at 7.

reasonable terms and maintaining compliance with restrictive debt covenants contained in BVES's credit facility and long-term note agreements as discussed by Ms. Farrow. In addition, it would warrant the removal of any downward ROE adjustment.

Q. DR. WOOLRIDGE CLAIMS YOUR FINANCIAL RISK ADJUSTMENT USES MARKET VALUE CAPITAL STRUCTURES.[10] IS THAT CLAIM ACCURATE?

A. No, it is not. As shown on Exhibit No.__(DWD-12), I compare the high-end book capital structure maintained by Utility Proxy Group with the Company's proposed book capital structure. In view of this, Dr. Woolridge's claim should be dismissed.

B. <u>Capital Market Observations and Authorized ROEs</u>

Q. PLEASE SUMMARIZE DR. WOOLRIDGE'S TESTIMONY REGARDING THE CAPITAL MARKET ENVIRONMENT.

A. Dr. Woolridge describes movements in interest rates, utility dividend yields, utility market-to-book ("M/B") ratios, and inflation over the last several years, and reviews Federal Reserve ("Fed") activities since 2022. He observes that authorized ROEs by regulatory commissions do not move in lock-step with interest rates.[11]

Q. IN HIS TESTIMONY, DR. WOOLRIDGE NOTES THAT AUTHORIZED ROES DO NOT MOVE TO THE SAME EXTENT AS INTEREST RATES. IS THIS TO BE EXPECTED?

A. Yes. There is an inverse relationship between interest rates and equity risk premiums. This means that as interest rates rise, equity risk premiums fall, but not to the same extent. This results in authorized ROEs increasing or decreasing slower than movements in interest

[10] Woolridge Direct Testimony, at 7-8.
[11] Woolridge Direct Testimony, at 15-17.

rates which is consistent with the work of Harris and Marston (2001) and Brigham, Dilip, Shome, and Vinson (1985), as discussed in my Direct Testimony.[12]

Q. PLEASE SUMMARIZE DR. WOOLRIDGE'S REVIEW OF AUTHORIZED ROES.

A. Dr. Woolridge observes national historical authorized ROEs for electric and gas utilities since 2000, noting that authorized ROEs tend to move in the same direction as interest rates, albeit at a slower pace.[13] Dr. Woolridge also observes recent authorized ROEs as approved by the Commission since 2010.[14]

Dr. Woolridge uses these observations in conjunction with a working paper by Werner and Jarvis to justify his recommended ROE, which is far below recent average authorized ROEs for gas utilities in California.

Q. PLEASE DISCUSS THE APPLICABILITY OF HISTORICALLY AUTHORIZED ROES FOR COST OF CAPITAL PURPOSES.

A. While authorized ROEs may be reasonable benchmarks of acceptable ROEs, they do not reflect the current cost of common equity. The reason why historical authorized returns do not reflect the investor-required return is because authorized ROEs are a lagging indicator of investor-required returns, i.e., authorized ROEs are based on market data presented in an evidentiary record, which spans a period before the decision, sometimes lasting over a year in some cases. Simply put, historical authorized returns do not completely reflect current levels of investor-required return because the economic conditions in the past are not necessarily representative of economic conditions now.

---

[12] D'Ascendis Direct Testimony, at 30, citing the work of Harris and Marston (2001) and Brigham, Dilip, Shome, and Vinson (1985).

[13] Woolridge Direct Testimony, at 14-15.

[14] Woolridge Direct Testimony, at 19.

A useful way to use historical authorized ROEs for cost of capital purposes would be to determine whether a relationship between authorized ROEs (or equity risk premiums) and interest rates exists so that one can determine an expectational ROE or equity risk premium given a specific interest rate. Dr. Woolridge notes that in the period he studied, authorized ROEs did not move in lock-step with interest rates,[15] which indicates an inverse relationship between equity risk premiums and interest rates (i.e., as interest rates move, equity risk premiums move in the opposite direction, but not to the extent of the interest rate move).

As shown on page 30 of Exhibit No.___(DWD-1R), using historical authorized ROEs and interest rate data in regression analyses produces statistically significant inverse relationships between interest rates and equity risk premiums, which can be used to determine expectational investor-required returns. Given an expectational A2-rated Public Utility bond yield of 5.75%, an equity risk premium of 4.74% is calculated using electric utility historical ROE data. Adding the expectational A2-rated public utility bond yields to that equity risk premium results in an indicated ROE of 10.49%.

Q. IS THERE ANY DATA PROVIDED BY DR. WOOLRIDGE REGARDING AUTHORIZED ROES THAT WOULD BE APPLICABLE TO THIS PROCEEDING?

A. Yes. Dr. Woolridge uses a current 30-year Treasury bond yield of 5.00% in his CAPM analysis.[16] The last time 30-year Treasury bond yields were around this level was during 2010 (as shown in Dr. Woolridge's Figure 1). As shown on Dr. Woolridge's Table 3,

[15] Woolridge Direct Testimony, at 14-16.
[16] Woolridge Direct Testimony, at 56.

authorized electric ROEs in 2010 were 10.29%.[17] While I do not recommend that the Commission directly use this historical authorized ROE data in its determination of the ROE for Bear Valley in this proceeding, it is a directional indicator that the ROE should be set at a higher level than what was recently approved and that Dr. Woolridge's recommendations are severely understated.

Q. PLEASE COMMENT ON DR. WOOLRIDGE'S REFERENCE TO A RECENT ARTICLE TITLED "RATE OF RETURN REGULATION REVISITED" IN SUPPORT OF HIS RECOMMENDED ROE THAT HE ADMITS IS "BELOW OTHER AUTHORIZED ROES".[18]

A. Dr. Woolridge notes that one of the key questions the paper seeks to address is "to what extent are utilities being allowed to earn excess returns on equity by their regulators"?[19] Despite attempting to answer this question, the only measure of ROE considered by the paper was authorized ROE. The authors do not try to distinguish between the ROE authorized by regulators and the ROEs earned by utilities, instead basing the premise of their paper on the notion that every utility earns exactly their authorized ROE, which is not the case.

Dr. Woolridge notes the paper states that authorized ROEs have been "0.50% - 5.50%" above the cost of equity estimates selected (ROE spreads to Corporate bonds, ROE spreads to US Treasurys, CAPM low/high results, and ROEs authorized by the Office of Gas and Electricity Markets ("Ofgem") in the U.K.).[20] While I appreciate that the authors

[17] Woolridge Direct Testimony, at 15.
[18] Woolridge Direct Testimony, at 17-19.
[19] Woolridge Direct Testimony, at 18.
[20] Woolridge Direct Testimony, at 18.

attempted to compare past ROEs to multiple measures of the cost of equity, only the CAPM is an actual cost of equity model used and recognized by regulatory commissions. As discussed in my Direct Testimony,[21] the use of multiple models adds reliability to the estimated cost of equity. Looking specifically at the inputs to the CAPM models used, the authors provided little to no support for their low and high Beta coefficients ("beta") of 0.6 and 0.9 or their MRP of 6% and 8%. Nor, despite recognizing the forward-looking nature of the cost of equity, do the authors consider projected Treasury rates.

I disagree with the other benchmarks used as cost of equity estimates. By comparing the spread of authorized ROEs to US Treasury bonds and corporate bonds in 1995, the authors acknowledge that an equity risk premium exists, which I support. However, as discussed previously, the equity risk premium is not constant over time, and movements reflect changes in risk of both debt and equity.

Turning to the published authorized electric and gas ROEs by Ofgem, the authors of the paper do not produce any comparison of macroeconomic factors, regulatory environments, or operational risks that may affect utilities operating in the U.S. compared to the U.K. Without a thorough comparison, it is difficult to make a true apples-to-apples comparison of returns between the two countries.

I also note that in the article's Table 2, which supports the claimed "0.50% - 5.50%" ROE gap, the table notes that the "gap percentage figures are a weighted average across utilities, weighted by rate base." As the authors do not provide the same table without weighting by rate base, it is difficult to determine the extent to which larger utilities skew the data. Lastly, while the 2020 values in the table may approximate the 0.50% - 5.50%

[21] D'Ascendis Direct Testimony, at 18.

range, the long-term average (i.e., 1985-2020) variance range approximates -1.25% to 3.30%, with the 3.30% value being based on the "low" CAPM results. This variance is close to the long-term standard deviation of approved ROEs of 2.40% (Electric) and 2.24% (Natural Gas) as presented in the paper's Table 1. Due to the shortcomings of their study discussed above, the Commission should disregard this study and its purported findings.

C. Proxy Group

Q. PLEASE DISCUSS THE PROXY GROUPS DR. WOOLRIDGE SELECTED FOR HIS COST OF COMMON EQUITY ANALYSIS.

A. Dr. Woolridge used two proxy groups in his analysis: (1) my Utility Proxy Group from my Direct Testimony; and (2) a proxy group of 25 electric utility companies.[22]

Q. DO YOU HAVE ANY CONCERNS WITH DR. WOOLRIDGE'S SECOND PROXY GROUP?

A. Yes, I do. His use of revenues instead of earnings attributable to regulated electric operations unnecessarily increases the number of companies in his proxy group without increasing the comparability of his proxy group to that of the Company.

Q. WHAT ARE YOUR CONCERNS WITH DR. WOOLRIDGE'S USE OF REVENUE, RATHER THAN INCOME, AS A SCREENING CRITERION?

A. Measures of income are far more likely to be considered by the financial community in making credit assessments and investment decisions than are measures of revenue. From the perspective of credit markets, measures of financial strength and liquidity are focused on cash from operations, which is directly derivative of earnings, as opposed to revenue. As part of its rating methodology, for example, Moody's Investor Service ("Moody's")

[22] Woolridge Direct Testimony, at 21.

assigns a 40.00% weight to measures of financial strength and liquidity, of which 22.50% specifically relates to the ability to cover debt obligations with cash from operations.[23]

Just as rating agencies focus on measures of cash from operations, equity analysts rely on measures of income in assessing equity valuation levels; common measures of relative value include the price-to-earnings ratio, and the ratio of Enterprise Value to earnings before interest, taxes, depreciation, and amortization ("EBITDA"). Revenue, however, may be several steps removed from the earnings and cash flows that form the basis of equity valuations. Focusing on revenue may mislead the analyst into assuming a given operating unit is the primary driver of expected growth, when the majority of earnings and cash flows are derived from other business segments. Here, we are considering whether the underlying utility is the principal source of long-term growth, and as such, focusing on revenue may obscure important elements of the analysis.

Q. HAVE YOU ASSESSED THE PERCENTAGE ASSETS AND NET OPERATING INCOME ("NOI") ATTRIBUTABLE TO Electric OPERATIONS FOR DR. WOOLRIDGE'S Electric PROXY GROUP?

A. Yes, I have. Table 2 below presents the percentages of assets and NOI attributable to electric operations for Dr. Woolridge's Electric Proxy Group. As shown, not all of the companies derive at least 70% of either measure from electric operations. Given that all of the consolidated Bear Valley assets are devoted to electric service and their NOI is solely derived by regulated electric operations, the full list of companies in Table 2 below are not representative of the risks Bear Valley faces and should not be considered comparable risk companies.

[23] *See*, Moody's Investors Service, Rating Methodology, Regulated Electric and Gas Utilities, June 23, 2017, at 4.

Table 2: Percentage of NOI and Assets Attributable to Electric Operations for 2025 for Dr. Woolridge's Electric Proxy Group[24]

Company	Net Operating Income (%)	Assets (%)
Alliant Energy Corporation	84.75%	86.67%
Ameren Corporation	86.53%	82.86%
American Electric Power Co.	89.51%	92.69%
Avista Corporation	62.86%	68.92%
CMS Energy Corporation	64.08%	56.98%
Consolidated Edison, Inc.	73.61%	68.94%
Dominion Resources, Inc.	77.24%	80.68%
DTE Energy Company	70.56%	68.78%
Duke Energy Corporation	77.24%	80.68%
Edison International	101.63%	99.81%
Entergy, Inc.	95.95%	90.67%
Evergy, Inc.	100.00%	100.00%
Eversource Energy	60.24%	54.43%
Exelon Corporation	89.00%	87.81%
FirstEnergy Corp.	73.04%	71.73%
IDACORP, Inc.	97.77%	97.46%
NextEra Energy, Inc.	64.23%	49.43%
OGE Energy Corp.	96.84%	99.07%
Pinnacle West Capital Corp.	100.00%	100.00%
Portland General Electric Company	100.00%	100.00%
PPL Corporation	83.27%	79.79%
Public Service Enterprise Group Inc.	55.88%	60.12%
The Southern Company	78.08%	72.72%
WEC Energy Group	51.85%	39.55%
Xcel Energy Inc.	90.99%	73.93%

Q. DOES DR. WOOLRIDGE'S USE OF A PROXY GROUP OF 25 ELECTRIC UTILITY COMPANIES ADD TO THE RELIABILITY OF HIS ANALYSIS.

A. No, it does not. As discussed in my Direct Testimony,[25] no group of companies will have equivalent risk to a target company, but one must be careful not to include additional

[24] Source: Company 10-K Data.

[25] D'Ascendis Direct Testimony, at 14.

companies solely to increase the size of the proxy group at the risk of reducing its comparability.

D. Application of the DCF Model

Q. PLEASE SUMMARIZE DR. WOOLRIDGE'S APPLICATION OF THE CONSTANT GROWTH DCF MODEL.

A. For the dividend yield, Dr. Woolridge uses a current annual dividend and then divides that by the 30-, 90-, and 180-trading day average stock prices to derive a range of dividend yields of 3.40 % and 3.30% using his electric proxy group and his D'Ascendis proxy group, respectively.[26] Dr. Woolridge reviewed a number of growth rates, including historical and projected dividends per share ("DPS"), book value per share ("BVPS"), and EPS growth rates as reported by *Value Line*; analysts' consensus EPS growth rate projections from Zacks and S&P Capital IQ; and an estimate of "sustainable growth" derived from data provided by *Value Line*.[27] Dr. Woolridge states that in arriving at his DCF estimates of 9.60% and 9.90% for both his electric proxy group and his D'Ascendis proxy group, respectively, he gave more weight to projected EPS growth rates[28] despite stating that analysts' projected growth rates in EPS are biased.[29]

Q. DO YOU AGREE WITH DR. WOOLRIDGE'S POSITION THAT ANALYSTS' EARNINGS GROWTH PROJECTIONS ARE CONSISTENTLY BIASED?

A. No, I do not. Dr. Woolridge argues analysts' earnings growth estimates are "overly

---

[26] Woolridge Direct Testimony, at 41-42.

[27] Woolridge Direct Testimony, at 43-44. Dr. Woolridge calculated his recommended growth rate by averaging the projected EPS, DPS, and BVPS growth rates with his sustainable growth rate, and then averaging that growth rate with his average analyst EPS growth rate.

[28] Woolridge Direct Testimony, at 52.

[29] Woolridge Direct Testimony, at 52.

optimistic and upwardly biased"[30] and asserts that "the DCF growth rate needs to be adjusted downward from the projected EPS growth rate"[31] as a result of that bias. Notably, despite his view that analysts' projected growth rates are biased, Dr. Woolridge arrived at his assumed growth rates by giving "more weight to the projected growth rates of Wall Street analysts."[32]

As a practical matter, the October 2003 Global Research Analyst Settlement required financial institutions to insulate investment banking from analysis, prohibited analysts from participating in "road shows," and required the settling financial institutions to fund independent third-party research.[33] I have reviewed the Letters of Acceptance, Waiver, and Consent signed by financial institutions that were party to the Global Settlement, and found no reference to misconduct by analysts following the utility sector.

Moreover, pursuant to Regulation AC, which became effective in April 2003, analysts must certify that " . . . the views expressed in the report accurately reflect his or her personal views, and disclose whether or not the analyst received compensation or other payments in connection with his or her specific recommendations or views."[34] I further understand industry practice is to avoid conflicts of interest by ensuring that compensation is not directly or indirectly linked to the opinions contained in those reports. Dr. Woolridge has not explained why any of the analysts covering our respective proxy companies, or the S&P 500 companies used in my market DCF, would bias their projections despite those

30 Woolridge Direct Testimony, at 48.
31 Woolridge Direct Testimony, at 50.
32 Woolridge Direct Testimony, at 52.
33 The 2002 Global Financial Settlement resolved an investigation by the U.S. Securities and Exchange Commission and the New York Attorney General's Office of a number of investment banks related to concerns about conflicts of interest that might influence the independence of investment research provided by equity analysts.
34 Securities and Exchange Commission, 17 CFR PART 242 [Release Nos. 33-8193; 34-47384; File No. S7-30-02], RIN 3235-AI60 Regulation Analyst Certification.

certification requirements. Considering that The Regulation Fair Disclosure and Global Analysts Research Settlements were more than 20 years ago, investors have been fully aware since then of the steps that have been taken to eliminate and prevent analysts' bias.

In addition, there is no empirical evidence that investors would disregard analysts' estimates of growth in EPS. *Do Analyst Conflicts Matter? Evidence from Stock Recommendations* examines whether conflicts of interest with investment banking "IB" and brokerage businesses induced sell-side analysts to issue optimistic stock recommendations and whether investors were misled by such biases. They conclude:

> *Overall, our findings do not support the view that conflicted analysts are able to systematically mislead investors with optimistic stock recommendations.*

Agrawal and Anup state:

> *Overall, our empirical findings suggest that while analysts do respond to IB and brokerage conflicts by inflating their stock recommendations, the market discounts these recommendations after taking analysts' conflicts into account. These findings are reminiscent of the story of the nail soup told by Brealey and Myers (1991), except that here analysts (rather than accountants) are the ones who put the nail in the soup and investors (rather than analysts) are the ones to take it out. Our finding that the market is not fooled by biases stemming from conflicts of interest echoes similar findings in the literature on conflicts of interest in universal banking (for example, Kroszner and Rajan, 1994, 1997; Gompers and Lerner 1999) and on bias in the financial media (for examples, Bhattacharya et al. forthcoming; Reuter and Zitzewitz 2006). Finally, while we cannot rule out the possibility that some investors may have been naïve, our findings do not support the notion that the marginal investor was systematically misled over the last decade by analysts' recommendations.*[35]

Finally, while Easton and Sommers' article, *Effect of Analysts' Optimism on Estimates of the Expected Rate of Return Implied by Earnings Forecasts,* does state that, on average, the difference between the estimate of the expected rate of return based on

[35] Anup Agrawal and Mark A. Chen, *Do Analysts' Conflicts Matter? Evidence from Stock Recommendations*, Journal of Law and Economics, August 2008, Vol. 51.

analysts' earnings forecasts and the estimates based on current earnings realizations is 2.84%, they also state that analysts' accuracy[36] and optimism[37] in the implied estimates of the expected rate of return differs with firm size:

> *...the mean scaled absolute forecast error, a measure of the accuracy of the forecasts, declines monotonically from 0.102 for the decile of smallest firms to 0.012 for the decile of largest firms. Similarly, the median absolute scaled forecast error declines monotonically from 0.042 to 0.006.*
>
> *Analysts' optimism, measured as the mean (median) scaled forecast error, declines monotonically from -0.075 (-0.023) for the decile of the smallest firms to -0.005 (-0.002) for the decile of the largest firms.*[38]

In plain language, as firm size increases, analyst accuracy increases and analyst optimism (i.e., bias) diminishes.

Q. HAVE YOU DETERMINED THE LEVELS OF FORECAST ERROR AND BIAS IN ANALYST-PROJECTED EPS GROWTH RATES FOR COMPANIES COMPARABLE IN SIZE TO THE UTILITY PROXY GROUP?

A. Yes, I have. Using market capitalizations as of August 3, 2026, both Dr. Woolridge's electric proxy group and D'Ascendis proxy group fall into the ninth deciles of market capitalizations, respectively, as shown on Table 3, Panel A of the Easton and Sommers article. Mean and median measures of forecast error (i.e., accuracy) of 0.015 and 0.007 for the ninth decile indicate a high level of analyst accuracy. The bias of analyst-projected EPS growth rates for companies comparable in size to the average company in both groups are -0.007 (mean) and -0.002 (median), indicating a low level of bias in analyst-projected EPS growth rates.

---

[36] As measured by the mean (median) absolute forecast error.

[37] As measured by the mean (median) forecast error.

[38] Peter D. Easton and Gregory A. Sommers, *Effect of Analysts' Optimism on Estimates of the Expected Rate of Return Implied by Earnings Forecasts*, Journal of Accounting Research, Vol. 45 No. 5 (December 2007), at 1007.

Furthermore, one of my MRPs used in my CAPM use projected market returns which are derived by calculating a weighted DCF for the component companies of the S&P 500. The component companies of the S&P also have an average market capitalization that corresponds with the ninth decile as provided by Table 3 Panel A of the Easton and Sommers article, which would indicate high levels of accuracy and low levels of bias.[39]

The analyst-projected EPS growth rates I used to derive my DCF results for my proxy group and my projected return on the market are confirmed to have high accuracy and limited bias.

In view of the foregoing, the use of analysts' forecasts of EPS growth should be used exclusively when estimating the cost rate of common equity capital, whether it be for my Utility Proxy Group or the market as a whole. Note that notwithstanding Dr. Woolridge's lengthy discussion about the bias and inaccuracy of security analysts' forecasts of EPS growth, he himself gave "more weight" to them in arriving at his conclusion of a DCF-derived cost rate.[40]

Q. IS THE USE OF ANALYSTS' EARNINGS GROWTH PROJECTIONS IN THE DCF MODEL SUPPORTED BY FINANCIAL LITERATURE?

A. Yes, it is. Myron Gordon, the "father" of the standard regulatory version of the DCF model widely utilized throughout the United States in rate base/rate of return regulation, recognized the significance of analysts' forecasts of growth in EPS in a speech he gave in

[39] Peter D. Easton and Gregory A. Sommers, *Effect of Analysts' Optimism on Estimates of the Expected Rate of Return Implied by Earnings Forecasts*, Journal of Accounting Research, Vol. 45 No. 5 (December 2007)., at 1004. Table 3, Panel A: Descriptive statistics. Market capitalization deciles are assumed to be equivalent to the Kroll Cost of Capital Navigator.

[40] Woolridge Direct Testimony, at 50.

March 1990 before the Institute for Quantitative Research and Finance,[41] stating on page 12:

> *We have seen that earnings and growth estimates by security analysts were found by Malkiel and Cragg to be superior to data obtained from financial statements for the explanation of variation in price among common stocks… estimates by security analysts available from sources such as IBES are far superior to the data available to Malkiel and Cragg.*
>
> * * *
>
> *Eq (7) is not as elegant as Eq (4), but it has a good deal more intuitive appeal. It says that investors buy earnings, but what they will pay for a dollar of earnings increases with the extent to which the earnings are reflected in the dividend or in appreciation through growth.*

Professor Gordon recognized that the total return is largely affected by the terminal price, which is mostly affected by earnings (hence price-to-earnings ("P/E") multiples).

Studies performed by Cragg and Malkiel[42] demonstrate that analysts' forecasts are superior to historical growth rate extrapolations. While some question the accuracy of analysts' forecasts of EPS growth, the level of accuracy of those analysts' forecasts well after the fact does not really matter. What is important is the forecasts reflect widely held expectations influencing investors at the time they make their pricing decisions, and hence, the market prices they pay.

In addition, Jeremy J. Siegel also supports the use of security analysts' EPS growth forecasts when he states:

> *For the equity holder, the source of future cash flows is the earnings of firms.*
>
> * * *

[41] Myron J. Gordon, *The Pricing of Common Stock*, Presented before the Spring 1990 Seminar, March 27, 1990 of the Institute for Quantitative Research in Finance, Palm Beach, FL.

[42] John G. Cragg and Burton G. Malkiel, Expectations and the Structure of Share Prices (University of Chicago Press, 1982) Chapter 4.

Some people argue that shareholders most value stocks' cash dividends. But this is not necessarily true.

* * *

Since the price of a stock depends primarily on the present discounted value of all expected future dividends, it appears that dividend policy is crucial to determining the value of the stock. However, this is not generally true.

* * *

> Since stock prices are the present value of future dividends, it would seem natural to assume that economic growth would be an important factor influencing future dividends and hence stock prices. However, this is not necessarily so. The determinants of stock prices are earnings and dividends on a *per-share* basis. Although economic growth may influence *aggregate* earnings and dividends favorably, economic growth does not necessarily increase the growth of per-share earnings of dividends. It is EPS that is important to Wall Street because per-share data, not aggregate earnings or dividends, are the basis of investor returns. (italics in original)[43]

Furthermore, over the long run, there can be no growth in DPS without growth in EPS. Earnings expectations have a more significant, but not sole, influence on market prices than dividend expectations. Thus, the use of earnings growth rates in a DCF analysis provides a better match between investors' market appreciation expectations implicit in market prices and the growth rate component of the DCF. Consequently, earnings expectations have a significant influence on market prices which affect market price appreciation, and hence, the "growth" experienced by investors. This should be evident even to relatively unsophisticated investors just by listening to financial news reports on radio, TV, or reading newspapers. In fact, Morin states:

Because of the dominance of institutional investors and their influence on individual investors, analysts' forecasts of long-run growth rates provide a sound basis for estimating required returns. Financial analysts exert a strong influence on the expectations of many investors who do not possess the resources to make their own forecasts, that is, they are a cause of g. The accuracy of these forecasts in the sense of whether they turn out to be correct is not at issue here, as long as

[43] Jeremy J. Siegel, Stocks for the Long Run – The Definitive Guide to Financial Market Returns and Long-Term Investment Strategies, McGraw-Hill 2002, pp. 90-94.

they reflect widely held expectations. As long as the forecasts are typical and/or influential in that they are consistent with current stock price levels, they are relevant. The use of analysts' forecasts in the DCF model is sometimes denounced on the grounds that it is difficult to forecast earnings and dividends for only one year, let alone for longer time periods. This objection is unfounded, however, because it is present investor expectations that are being priced; it is the consensus forecast that is embedded in price and therefore in required return, and not the future as it will turn out to be.

* * *

Published studies in the academic literature demonstrate that growth forecasts made by security analysts represent an appropriate source of DCF growth rates, are reasonable indicators of investor expectations and are more accurate than forecasts based on historical growth. These studies show that investors rely on analysts' forecasts to a greater extent than on historic data.[44]

However, while EPS is a significant factor influencing market prices, it is by no means the only factor that affects market prices, a fact recognized by Bonbright.[45]

In addition, studies performed by Cragg and Malkiel demonstrate that analysts' forecasts are superior to historical growth rate extrapolations. They state:

Efficient market hypotheses suggest that valuation should reflect the information available to investors. Insofar as analysts' forecasts are more precise than other types we should therefore expect their differences from other measures to be reflected in the market. It is therefore noteworthy that our regression results do support the hypothesis that analysts' forecasts are needed even when calculated growth rates are available. As we noted when we described the data, security analysts do not use simple mechanical methods to obtain their evaluations of companies. The growth-rate figures we obtained were distilled from careful examination of all aspects of the companies' records, evaluation of contingencies to which they might be subject, and whatever information about their prospects the analysts could glean from the companies themselves or from other sources. It is therefore notable that the results of their efforts are found to be so much more relevant to the valuation than the various simpler and more "objective" alternatives that we tried.[46]

---

[44] Roger A. Morin, Modern Regulatory Finance, (Public Utilities Report, Inc. 2021), at 371-373.

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

[46] John G. Cragg and Burton G. Malkiel, Expectations and the Structure of Share Prices (University of Chicago Press, 1982) Chapter 4.

In addition, Vander Weide and Carleton conclude:

> *. . . our studies affirm the superiority of analyst's forecasts over simple historical growth extrapolations in the stock price formation process. Indirectly, this finding lends support to the use of valuation models whose input includes expected growth rates.*[47]

Additionally, the level of accuracy of those analysts' forecasts does not matter. What matters is that they influence investors and hence the market prices they pay. Moreover, there is no empirical evidence that investors, consistent with the EMH, would discount or disregard analysts' estimates of growth in EPS. Since investors are aware of the accuracy of such projections, as well as the literature supporting the superiority of such projections, security analysts' earnings growth projections should be used exclusively in a cost of common equity analysis.

In addition to the empirical and academic support discussed previously in this Rebuttal Testimony regarding the superiority of analysts' EPS growth forecasts, there should be no concern about the use of analysts' forecasts in 2023. Burton G. Malkiel, the Chemical Bank Chairman's Professor of Economics at Princeton University, is the author of the widely read national bestseller book on investing entitled, A Random Walk Down Wall Street (2011). In testimony before the Public Service Commission of South Carolina ("PSC SC"), in November 2002, Malkiel affirmed his belief in the superiority of analysts' earnings forecasts when he testified:

> *With all the publicity given to tainted analysts' forecasts and investigations instituted by the New York Attorney General, the National Association of Securities Dealers, and the Securities & Exchange Commission, I believe the upward bias that existed in the late 1990s has indeed diminished. In summary, I believe that current analysts' forecasts are more reliable than they were during the late 1990s.*

[47] James H. Vander Weide and Willard T. Carleton, *Investor Growth Expectations: Analysts vs. History* (The Journal of Portfolio Management, Spring 1988) 78-82.

Therefore, analysts' forecasts remain the proper tool to use in performing a Gordon Model DCF analysis. (Rebuttal testimony, South Carolina Electric and Gas Co., pp. 16-17, Docket No. 2002-223-E) (italics added)

Q. ARE DIVIDEND AND BOOK VALUE GROWTH RATES APPROPRIATE INPUTS TO THE DCF MODEL?

A. No, they are not. First, earnings growth enables both dividend and book value growth. Under the strict assumptions of the constant growth DCF model, earnings, dividends, book value, and stock prices all grow at the same, constant rate in perpetuity.

Put simply, earnings are the fundamental driver of both book value and dividend growth. As noted earlier, book value increases with the amount of earnings not distributed as dividends (that is, retained earnings), and the price at which new equity is issued is a function of the EPS and the then-current P/E ratio. Similarly, the ability to pay dividends depends fundamentally on expected earnings.[48] Because dividend policy contemplates additional factors, including the disproportionately negative effect on prices resulting from dividend cuts, as opposed to dividend increases, in the short-run dividend growth may be disconnected from earnings growth.[49] In the long run, however, dividends cannot be increased without earnings growth.

Because investors often assess stock values on the basis of P/E ratios, it is important to consider whether the growth rates used in the DCF model are related to those valuations. Therefore, relying on DPS and BVPS as Dr. Woolridge has done is wholly inappropriate.

Q. IN REVIEWING THE FINANCIAL LITERATURE, DID YOU DISCOVER ANY PUBLICATIONS THAT SUPPORTED THE USE OF PROJECTED DPS OR

[48] Jing Liu, Doron Nissim, and Jacob Thomas, *Is Cash Flow King in Valuations?*, Financial Analysts Journal, Volume 63, Number 2, 2007.

[49] Servaes and Tufano, *Corporate Dividend Policy: The Theory and Practice of Corporate Dividend and Share Repurchase Policy*, Deutsche Bank, February 2006.

PROJECTED BOOK VALUE PER SHARE (BVPS) GROWTH RATES FOR USE IN A DCF MODEL?

A. No, I did not.

Q. LIKEWISE, ARE YOU AWARE OF ANY ADDITIONAL SOURCES OF DATA WHICH PROVIDE PROJECTED DPS OR BVPS GROWTH RATES TO INVESTORS OTHER THAN *VALUE LINE*?

A. No, I am not. *Value Line* is the only source of which I am aware that publishes projected DPS and BVPS growth rates. If investors indeed valued projected DPS and BVPS growth rates there would be a market for that data. As they are not relied on by investors to determine their required returns on investments, there is no such market. Conversely, projected EPS growth rates are widely available to investors through many sources.[50]

Q. HAVE YOU PERFORMED ANY ANALYSES TO DETERMINE WHICH MEASURES OF GROWTH ARE STATISTICALLY RELATED TO THE PROXY COMPANIES' STOCK VALUATION LEVELS?

A. Yes, I have. My analysis is based on the methodological approach used by Professors Carleton and Vander Weide, who compared the predictive capability of historical growth estimates and analysts' forecasts on the valuation levels of 55 utility companies.[51] I structured the analysis to understand whether projected earnings or dividend growth rates best explain utility stock valuations. In particular, my analysis examined the statistical relationship the price-to-earnings ("P/E") ratios of water, electric and gas utilities as classified by *Value Line*, and the projected EPS and DPS growth rates as reported by *Value*

[50] For example, I use projected EPS growth rates from *Value Line*, S&P Capital IQ, and Zacks.

[51] Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

Line. To determine which, if any, of those growth rates are statistically related to utility stock valuations, I performed a series of regression analyses in which the projected growth rates were explanatory variables and the trailing P/E ratio was the dependent variable. The results of those analyses are presented in Exhibit No.___(DWD-2R).

Q. WHAT DID THOSE ANALYSES REVEAL?

A. As shown in Exhibit No.___(DWD-2R), the only growth rate that was statistically significant and positively related to the trailing P/E ratio was the projected EPS growth rate.

Q. ARE HISTORICAL GROWTH RATES APPROPRIATE MEASURES OF EXPECTED GROWTH FOR THE DCF MODEL?

A. No, they are not. As to the applicability of historical growth rates, Dr. Woolridge himself points out that "to best estimate the cost of common-equity capital using the conventional DCF model, one must look to long-term growth rate expectations",[52] and I agree. The growth component of the constant growth DCF model is a forward-looking measure. To the extent historical growth influences investors' expectations of future growth, it already will be reflected in analysts' consensus earnings estimates. Professors Carleton and Vander Weide found "overwhelming evidence that consensus analysts' forecast of future growth is superior to historically oriented growth measures in predicting the firm's stock price."[53] Consequently, historical growth rates are not appropriate for the constant growth DCF model.

[52] Woolridge Direct Testimony, at 44.

[53] Vander Weide and Carleton, *Investor Growth Expectations: Analysts vs. History*, The Journal of Portfolio Management (Spring 1988).

Q. DO YOU AGREE WITH DR. WOOLRIDGE'S USE OF A RETENTION GROWTH RATE?

A. No, I do not. Morin discusses the sustainable growth model and shows that it relies on knowledge of several factors, including:

- "b": the fraction of earnings per share retained;
- "r": the rate of return on equity (ROE);
- "s": the growth rate in common equity due to the sale of stock; and
- "v": the fraction of a stock sale that increases existing book value.

Specifically, Morin states the following:

There are three problems in the practical application of the sustainable growth method:

(1) It may be even more difficult to estimate what b, r, s and v investors have in mind than it is to estimate what g they envisage. It would appear far more economical and expeditious to use available growth forecasts and obtain g directly instead of relying on four individual forecasts of the determinants of such growth. It seems only logical that the measurement and forecasting errors inherent in using four different variables to predict growth far exceed the forecasting error inherent in a direct forecast of growth itself.

(2) There is an element of circularity in estimating g by a forecast of b and ROE for the utility being regulated, since ROE is determined in large part by regulation. To estimate what ROE resides in the minds of investors is equivalent to estimating the market's assessment of the outcome of regulatory hearings. Expected ROE is exactly what regulatory commissions set in determining an allowed rate of return. In other words, the method requires an estimate of ROE before it can even be implemented. Common sense would dictate the inconsistency of a return on equity recommendation that is different than the expected ROE that the method assumes the utility will earn forever.

For example, using an expected return on equity of 11% to determine the growth rate and using that same growth rate to recommend a return on equity of 9% is inconsistent. It is not

reasonable to assume that this regulated utility company is expected to earn 11% forever, but estimate a 9% return on equity. The only way this utility can earn 11% is that rates be set by the regulator so that the utility will in fact earn 11%....

(3) The empirical finance literature discussed earlier demonstrates that the sustainable growth method of determining growth is not as significantly correlated to measures of value, such as stock price and price/earnings ratios, as other historical growth measures or analysts' growth forecasts. Other proxies for growth, such as historical growth rates and analysts' growth forecasts, outperform retention growth estimates. (emphasis added)[54]

The circular nature of the sustainable growth DCF is illustrated in the following steps:

1. The sustainable growth rate relies on an expected ROE on book common equity;
2. That expected ROE on book common equity is then used in a DCF analysis to establish an ROE cost rate related to the market value of the common stock; and
3. That market-related ROE, if authorized as the allowed ROE in a regulatory proceeding, becomes the expected ROE on book common equity.

Put simply, the estimated ROEs Dr. Woolridge used to derive his sustainable growth rate become the regulatory outcome of this proceeding, even as those ROEs are themselves based on regulatory outcomes.

Q. DO YOU HAVE ANY OTHER CONCERNS WITH THE USE OF THE SUSTAINABLE GROWTH RATE AS A MEASURE OF LONG-TERM GROWTH?

A. Yes. The sustainable growth rate assumes increasing retention ratios necessarily are associated with increasing future growth. The underlying premise is that future earnings will increase as the retention ratio increases. That is, if future growth is modeled as "b x

[54] Morin, at 383-384.

r" (where "b" is the retention ratio and "r" is the earned return on book equity), growth will increase as "b" increases. There are several reasons, however, why that may not be the case. Consequently, it is appropriate to determine whether the data supports the assumption that higher earnings retention ratios necessarily are associated with higher future earnings growth rates.

Q. DOES INDEPENDENT RESEARCH SUPPORT THE FINDING THAT FUTURE EARNINGS AND THE RETENTION RATIO ARE NOT POSITIVELY RELATED?

A. Yes. In 2006, for example, two articles in Financial Analysts Journal addressed the theory that high dividend payouts (i.e., low retention ratios) are associated with low future earnings growth.[55] Both articles cite a 2003 study by Arnott and Asness,[56] who found that over the course of 130 years of data, future earnings growth is associated with high, rather than low, payout ratios.[57] In essence, the findings of all three studies found that there is a negative, not a positive, relationship between the two.

Q. DID YOU PERFORM ANY ANALYSES TO TEST THAT ASSUMPTION?

A. Yes, I did. Using EPS and DPS data from *Value Line*, I calculated the historical dividend payout ratio, retention ratio, and subsequent five-year average earnings growth rate for the companies included in the *Value Line* electric and natural gas utility industry. I then performed a regression analysis in which the dependent variable was the five-year earnings growth rate, and the explanatory variable was the earnings retention ratio. The purpose of

---

[55] *See,* Ping Zhou, William Ruland, *Dividend Payout and Future Earnings Growth*, Financial Analysts Journal, Vol. 62, No. 3, 2006. *See also,* Owain ap Gwilym, James Seaton, Karina Suddason, Stephen Thomas, *International Evidence on the Payout Ratio, Earnings, Dividends and Returns*, Financial Analysts Journal, Vol. 62, No. 7, 2006.

[56] *See,* Robert Arnott, Clifford Asness, *Surprise: Higher Dividends = Higher Earnings Growth*, Financial Analysts Journal, Vol. 59, No. 1, January/February 2003.

[57] Because the payout ratio is the inverse of the retention ratio, the authors found that future earnings growth is negatively related to the retention ratio.

that analysis was to determine whether the data empirically supports the assumption that higher retention ratios necessarily produce higher earnings growth rates.

Q. WHAT DID THAT ANALYSIS REVEAL?

A. As shown on Exhibit No.___(DWD-3R) and Table 3, below, there was a statistically significant negative relationship between the five-year average earnings growth rate and the earnings retention ratio. That is, based on *Value Line* data, earnings growth actually decreased as the retention ratio increased. Those findings clearly call into question Dr. Woolridge's use of the sustainable growth rate as a proxy for the long-term growth rate in his analysis.

Table 3: Retention Ratio / Earnings Growth[58]

	Coefficient	Standard Error	t-Statistic
Intercept	0.143	0.010	14.064
Retention Ratio	-0.242	0.020	-12.305

Q. DO THOSE RESULTS MAKE PRACTICAL SENSE?

A. Yes, they do. As a practical matter, dividend-paying companies (such as utilities) are reluctant to reduce dividends, given the often-disproportionate stock price reaction. Consequently, a higher-than-expected dividend increase may signal management's confidence in higher future earnings and cash flow. That is, a near-term reduction in the retention ratio supporting a higher dividend increase may provide information or "signaling" content regarding future growth prospects.[59] In view of the foregoing, Dr. Woolridge's use of a sustainable growth rate DCF analysis is an exercise in circularity which ignores the basic principle of rate base/rate of return regulation.

[58] Exhibit No.___(DWD-3R)

[59] *See,* Eugene F. Brigham, Louis C. Gapenski, Financial Management, Theory and Practice, Seventh Ed., 1994, at 618.

Q. WHAT IS YOUR CONCLUSION OF THE APPROPRIATE GROWTH RATE FOR USE IN THE DCF MODEL?

A. In view of the above, I recommend the Commission rely solely on projected EPS growth rates when determining the indicated ROE for Bear Valley using the DCF model.

Q. DO YOU HAVE ANY CORRECTIONS TO DR. WOOLRIDGE'S DCF ANALYSIS?

A. Yes, I do. In his DCF analysis Dr. Woolridge used an approximate average dividend yield based on the 30-, 90-, and 180-day averages and projected growth rates of 6.10%, and 6.50% based on what he believes to be an acceptable range of 4.30% to 7.40% and 4.60% to 8.00% for his electric proxy group and his D'Ascendis proxy group, respectively.[60] Focusing solely on the average estimate of each of Dr. Woolridge's inputs ignores the range of individual DCF results. That is, Dr. Woolridge's approach does not consider the variability in the DCF results of the proxy companies. A more appropriate approach, which I have used in my DCF analysis, is to calculate the individual proxy company DCF results. Doing so shows that the individual proxy company DCF results are not necessarily clustered around a central point. Relying on the average of each input, as Dr. Woolridge does, obscures that finding. As such, I calculated the company-specific DCF results for Dr. Woolridge's and my proxy groups based on the 30-, 90-, and 180-day dividend yields and analysts' growth rates. The corrected DCF results for Dr. Woolridge's electric and D'Ascendis proxy groups range from 10.81% to 10.90% and 11.13% to 11.38%, respectively (see Exhibit No.___(DWD-4R)).

[60] Woolridge Direct Testimony, at 52-53.

E. Capital Asset Pricing Model

Q. PLEASE DESCRIBE DR. WOOLRIDGE'S CAPM ANALYSIS AND RESULTS.

A. Dr. Woolridge combines a risk-free rate of 5.00% and an MRP of 5.00% to the average *Value Line* and S&P Capital IQ beta of his electric proxy group (0.69) and his D'Ascendis proxy group (0.72).[61] In estimating his MRP of 5.00%, Dr. Woolridge reviews a series of studies that calculate the MRP using different methodologies; from which he places significant weight on the Kroll MRP (5.00%), KPMG MRP (5.50%), JP Morgan MRP (3.90%), Damodaran MRP (4.18%), Fernandez survey (5.30%), and Duke CFO Survey (4.80%).[62] His indicated ROE using these inputs is 8.45% for his electric proxy group and 8.60% for D'Ascendis proxy group.[63] Dr. Woolridge gives his CAPM results less weight in the determination of his ROE recommendation.[64]

Q. PLEASE DISCUSS YOUR CONCERNS WITH DR. WOOLRIDGE'S APPLICATION OF THE CAPM.

A. My concerns are (1) his use of a current risk-free rate; (2) his MRP based on academic and professional studies; and (3) his failure to employ the ECAPM.

Q. PLEASE SUMMARIZE DR. WOOLRIDGE'S RECOMMENDED MRP FOR USE IN HIS APPLICATION OF THE CAPM IN HIS DIRECT TESTIMONY.

A. In his direct testimony, Dr. Woolridge reviews a number of MRPs for his analysis, and places the most weight on the Kroll recommended MRP (5.00%), KPMG MRP (5.50%), JP Morgan MRP (3.90%), Damodaran MRP (4.18%), Fernandez survey (5.30%), and

---

61 Woolridge Direct Testimony, at 69.
62 Woolridge Direct Testimony, at 68; Exhibit JRW-6.
63 Woolridge Direct Testimony, at 69.
64 Woolridge Direct Testimony, at 37.

Duke CFO Survey (4.80%).[65] As discussed below, I do not believe any of the above are valid measures of the MRP and therefore they should be rejected by the Commission.

Q. WHAT IS YOUR POSITION ON THE 5.00% MRP QUOTED BY KROLL?

A. The determination of the MRP as calculated by Kroll is not transparent, especially in view of the historical MRP and supply side MRP presented in Kroll's 2023 SBBI® Yearbook: Stocks, Bonds, Bills, and Inflation ("SBBI–2023"), which is already well known by investors. Because of the transparency of the historical data and how to gather and use the components of the supply side model, both the historical MRP (using the long-term arithmetic mean return on large company stocks less the long-term arithmetic income returns on long-term Government bonds) and the supply side model are superior measures of the MRP, when compared to Kroll's simplistic and opaque MRP forecast.

Q. WHY IS THE KROLL MRP MORE OPAQUE THAN OTHER MEASURES OF THE MRP?

A. The MRP is calculated by subtracting a risk-free rate from the investor-required return on the market. Typically, the return on the market uses observable market measures (e.g., historical average returns), but the Kroll MRP does not define how they calculate their expected return on the market. Similarly, the risk-free rate is typically also based on market measures (e.g., historical interest rates, forecasted interest rates), but Kroll does not explain how they derive their 3.5% normalized risk-free rate. Because Kroll does not reveal how they derive their estimates, we do not know if they are indeed based on market measures.

[65] Woolridge Direct Testimony, at 68-69; Exhibit JRW-6.

Q. WHAT CONCERNS DO YOU HAVE REGARDING THE KPMG MRP?

A. Similar to the Kroll MRP, the KPMG MRP calculation is not transparent. Also, KPMG Corporate Finance & Valuations Netherland's Equity Market Risk Premium site clearly states limiting conditions to its calculation:

> Note: Other KPMG country practices may have a deviating view on the MRP, as it is dependent on other parameters of the cost of capital determination, which may differ from country to country. In addition, commonly applied local market practice or regulatory requirements may also lead to different conclusions on individual parameters such as the MRP.[66]

A further review of KMPG's report reveals that the MRP calculated by KPMG is a global MRP, not a U.S.-specific MRP. As noted in the summary of the report, KPMG gives more weight to "the S&P 500, FTSE and STOXX 600".[67] Dr. Woolridge has not provided any support for why a global MRP would be considered by U.S. investors. As a result of the lack of clarity of the MRP coupled with its limiting conditions and inapplicability to the U.S. market, the KPMG MRP should be rejected by the Commission.

Q. WHAT ARE YOUR CONCERNS WITH THE JP MORGAN MRP?

A. I have three concerns with the JP Morgan MRP: (1) the "long-term" capital market assumptions in the JP Morgan document are not consistent with a going concern; (2) the market return recommended by JP Morgan is an expected return, not a required return, which is the goal of cost of capital proceedings; and (3) the JP Morgan document is subject to similar limiting conditions and disclaimers as the KPMG MRP.

---

[66] https://indialogue.io/clients/reports/public/5d9da61986db2894649a7ef2/5d9da63386db2894649a7ef5 KPMG Corporate Finance & Valuations Netherlands, Equity Market Risk Premium – Research Summary, 30 June 2026, at 7.

Q. HOW LONG IS THE INVESTMENT TIME FRAME CONTEMPLATED IN JP MORGAN'S "LONG-TERM" CAPITAL MARKET ASSUMPTIONS?

A. In the forward, JP Morgan states its "long-term" expectations for risks and returns cover a period of 10 to 15 years.

Q. IS THAT PERIOD CONSISTENT WITH A GOING CONCERN INVESTMENT SUCH AS BEAR VALLEY?

A. No. An investment horizon of 10 to 15 years is not consistent with a going concern such as Bear Valley, whose equity is assumed to be outstanding in perpetuity.

Q. ARE EXPECTED RETURNS ON THE MARKET BY "FINANCIAL PROFESSIONALS" VALID FOR COST OF CAPITAL (I.E., REQUIRED RETURNS) PURPOSES?

A. No, they are not. Expected market returns from pension funds or investment houses try to predict what the market's earned return will be, not the return that investors require in order to invest, which is the subject of this proceeding. For example, a benefit plan asset manager will match the **expected returns** available from various asset classes to the expected liabilities that must be funded. An investor seeking to maximize their risk-adjusted return will only invest in a security if the expected return is equal to or greater than the **required return**. Because expected returns may or may not equal required returns, one cannot assume pension funding assumptions or expected returns from investment houses (that is, expected returns) may be viewed as a measure of investors' required returns.

Benefit plan managers develop asset allocation and investment decisions based on expected risks and returns for various asset classes subject to the investment objective or expected timing and nature of the liabilities being funded by those investments. In the

U.S., they must consider: (1) the diversification of the portfolio; (2) the liquidity and current return of the portfolio relative to the expected cash flow requirements under the plan; (3) the portfolio's projected return relative to the plan's funding objective; and (4) the return expected on alternative investments with similar risks.[68] Pension asset managers, therefore, are concerned with investing funds at an expected return to meet expected liabilities. As to the documents cited by Dr. Woolridge in his Exhibit JRW-8, several contain clearly stated limiting assumptions and disclaimers, which call into question their use for the purpose of setting the ROE in this proceeding. For example, J.P. Morgan notes:

> *Assumptions, opinions and estimates are provided for illustrative purposes only. They should not be relied upon as recommendations to buy or sell securities. Forecasts of financial market trends that are based on current market conditions constitute our judgment and are subject to change without notice. We believe the information provided here is reliable, but do not warrant its accuracy or completeness.*[69]

Similarly, BlackRock notes:

> *References to future returns are not promises or even estimates of actual returns a client portfolio may achieve. Assumptions, opinions and estimates are provided for illustrative purposes only. They should not be relied upon as recommendations to buy or sell securities. Forecasts of financial market trends that are based on current market conditions constitute our judgment and are subject to change without notice. We believe the information provided here is reliable, but do not warrant its accuracy or completeness.*[70]

Lastly, BNY Mellon notes:

> *This material should not be considered as investment advice or a recommendation of any investment manager or account arrangement, and should not serve as a primary basis for investment decisions… This is not investment research or a*

---

68 29 CFR 2509.908-1, Interpretive Bulletin Relating to Investing in Economically Targeted Investments, October 17, 2008.

69 J.P. Morgan Asset Management 2026 Long-Term Capital Market Assumptions, at 38.

70 BlackRock Investment Directions for Institutions 2026 at 13.

research recommendation for regulatory purposes as it does not constitute substantive research or analysis.[71]

Those limitations aside, the salient issue is whether investors rely on the sorts of broad market projections cited by Dr. Woolridge in establishing their return requirements, rather than those provided by the analysts that cover the individual stocks contained in the market indices.

Widely used finance texts recommend the use of multiple models in estimating the ROE, in particular the DCF, CAPM, and the RPM. To determine whether the use of broad market expected returns for the purposes of pension asset management also is an approach recommended by finance texts, I reviewed articles published in financial journals, as well as additional texts that speak to the methods used by analysts to estimate the ROE. An article published in Financial Analysts Journal surveyed financial analysts to determine the analytical techniques that are used in practice.[72] Regarding stock price valuation and cost of capital estimation, the author asked respondents to comment only on the DCF, CAPM, and Economic Value-Added models. Nowhere in that article did the author consider asking whether surveys of expected returns or pension fund assumptions are relevant to the determination of the cost of common equity.

Q. DOES THE JP MORGAN MRP HAVE LIMITING CONDITIONS?

A. Yes, like the KPMG MRP, the JP Morgan MRP document contains clearly stated limiting assumptions and disclaimers as noted above, which call into question their use for the purpose of setting the ROE in this proceeding.

---

[71] BNY Mellon – Global Economics and Markets Outlook Vantage Point, at 11.

[72] Stanley B. Block, *A Study of Financial Analysts: Practice and Theory*, Financial Analysts Journal, July/August, 1999.

Q. IS THERE ACADEMIC LITERATURE THAT SUPPORTS THE CONCLUSION THAT MRPS USING SURVEYS (SUCH AS THE FERNANDEZ SURVEY AND DUKE-CFO SURVEY)[73] ARE NOT WIDELY USED BY PRACTITIONERS?

A. Yes. Damodaran, who was cited by Dr. Woolridge throughout his direct testimony, states the following about the applicability of survey MRPs:

> While survey premiums have become more accessible, very few practitioners seem to be inclined to use the numbers from these surveys in computations and there are several reasons for this reluctance:
>
> 1. Survey risk premiums are responsive to recent stock prices movements, with survey numbers generally increasing after bullish periods and decreasing after market decline. Thus, the peaks in the SIA survey premium of individual investors occurred in the bull market of 1999, and the more moderate premiums of 2003 and 2004 occurred after the market collapse in 2000 and 2001.
>
> 2. Survey premiums are sensitive not only to whom the question is directed at but how the question is asked. For instance, individual investors seem to have higher (and more volatile) expected returns on equity than institutional investors and the survey numbers vary depending upon the framing of the question.[footnote omitted]
>
> 3. In keeping with other surveys that show differences across sub-groups, the premium seems to vary depending on who gets surveyed. Kaustia, Lehtoranta and Puttonen (2011) surveyed 1,465 Finnish investment advisors and note that not only are male advisors more likely to provide an estimate but that their estimated premiums are roughly 2% lower than those obtained from female advisors, after controlling for experience, education and other factors.[footnote omitted]
>
> 4. Studies that have looked at the efficacy of survey premiums indicate that if they have any predictive power, it is in the wrong direction. Fisher and Statman (2000) document the negative relationship between investor sentiment (individual and institutional) and stock returns.[footnote omitted] In other words, investors becoming more optimistic (and demanding a larger premium) is more likely to be a precursor to poor (rather than good) market returns.
>
> As technology aids the process, the number and sophistication of surveys of both individual and institutional investors will also increase. However, it is

[73] Exhibit JRW-6, Page 5. Confirmed.

> also likely that these survey premiums will be more reflective of the recent past rather than good forecasts of the future.[74]

As a result, Dr. Woolridge should not be relying on the IESE Business School Survey or Duke-CFO Survey in his MRP.

Q. PLEASE NOW RESPOND TO DR. WOOLRIDGE'S CONSIDERATION OF THE AVERAGE DAMODARAN 4.18% MRP.

A. Damodaran's method, which is a two-stage form of the DCF model, calculates the present value of cash flows over the five-year initial period, together with the terminal price (based on the Gordon Model), to be received in the last (i.e., fifth) year. The model's principal inputs include the following assumptions:

- Over the coming five years, the S&P 500 Index (the "Index") will appreciate at a rate equal to the compound growth rate in "Operating Earnings";
- Cash flows associated with owning the Index will be equal to the historical average Earnings, Dividends, and Buyback yields, applied to the projected Index value each year; and
- Beginning in the terminal year, the Index will appreciate, in perpetuity, at a rate equal to the 30-day average yield on 30-year Treasury securities.

In terms of historical experience, over the long-term the broad economy has grown at a long-term compound average growth rate of 6.10%.[75] Considered from another perspective, Kroll reports the long-term rate of capital appreciation on Large Company

[74] Aswath Damodaran, Stern School of Business, *Equity Risk Determinants, Estimation and Implications – The 2026 Edition*, Updated March 5, 2026, at 30-31.

[75] Source: Bureau of Economic Analysis for the years 1929 to 2025. *See also*, www.bea.gov/data/gdp/gross-domestic-product.

stocks to be 7.90%.[76] Using current data as of July 2026,[77] Damodaran's model assumes, however, that the market index will grow by just 4.47% over the coming five years.[78]

Dr. Woolridge has not explained why growth beginning five years in the future, and extending in perpetuity, will only be approximately 57% of long-term historical growth. Nowhere in his testimony has Dr. Woolridge explained the fundamental, systemic changes that would reduce long-term economic growth, or why they are best measured by the 30-day average long-term Treasury yield.

Further, research by the Federal Reserve Bank of San Francisco calls into question the relationship between interest rates and macroeconomic growth. As the authors noted, "[o]ver the past three decades, it appears that private forecasters have incorporated essentially no link between potential growth and the natural rate of interest: The two data series have a zero correlation."[79] In view of this, the Commission should reject Dr. Woolridge's Damodaran MRP.

Q. DID YOU CONDUCT A STUDY TO DETERMINE THE FORECAST ACCURACY OF THE RECOMMENDED RETURNS FROM KROLL, DAMODARAN, FERNANDEZ, AND THE DUKE CFO STUDY RELATIVE TO THE HISTORICAL MARKET RETURN?

A. Yes, I did. I have calculated the forecast bias[80] of the long-term historical average return and the implied market returns from Kroll from 2008-2025 to determine the most accurate

---

[76] SBBI-2023, at 137.

[77] From Damodaran Online, ERPJuly26 Spreadsheet.

[78] From Damodaran Online, ERPJuly26 Spreadsheet. Five-year growth rate = (Expected Terminal Value / Intrinsic Value) ^ (1/5) – 1 = (9,331.21 / 7499.36) ^ (1/5) - 1 = 4.47%.

[79] FRBSF Economic Letter, *Does Slower Growth Imply Lower Interest Rates?*, November 10, 2014, at 3.

[80] Forecast bias can be described as a tendency to either over-forecast or under-forecast a given variable.

measure of the following years' market return.[81] For example, the long-term average market return from 1926-2008 was used to determine the forecasted return for 2009. The result of this analysis is shown in Exhibit No.___(DWD-5R) and Table 4, below:

Table 4: Comparison of Forecast Bias for Various Measures 2009-2025

Year	Observed Market Return	Long-Term Average Return	Kroll Forecasted Market Return	Damodaran Forecasted Market Return	Fernandez Forecasted Market Return	Duke CFO Study Forecasted Market Return
2009	26.46%	11.67%	10.50%	8.64%	10.75%	NA
2010	15.06%	11.85%	10.08%	8.20%	10.25%	NA
2011	2.11%	11.88%	9.63%	8.49%	9.32%	NA
2012	16.00%	11.77%	10.00%	7.89%	7.96%	6.30%
2013	32.39%	11.82%	9.50%	7.54%	8.10%	5.70%
2014	13.69%	12.05%	9.00%	8.00%	8.81%	6.30%
2015	1.38%	12.07%	9.00%	7.95%	7.90%	7.20%
2016	11.96%	11.95%	9.50%	8.39%	7.60%	6.10%
2017	21.83%	11.95%	9.00%	8.14%	8.20%	5.70%
2018	-4.38%	12.06%	8.50%	7.49%	8.20%	7.16%
2019	31.49%	11.88%	9.00%	8.64%	8.30%	6.21%
2020	18.40%	12.09%	8.50%	7.12%	7.50%	6.81%
2021	28.71%	12.16%	8.00%	5.65%	7.30%	8.38%
2022	-18.11%	12.33%	8.00%	5.75%	8.30%	8.69%
2023	26.61%	12.02%	10.14%	9.82%	9.50%	8.40%
2024	25.62%	12.16%	10.03%	8.48%	9.60%	8.99%
2025	18.06%	12.30%	10.06%	8.91%	9.60%	9.59%
Sum	267.28%	204.01%	158.44%	135.10%	147.19%	101.53%
Forecast Bias[82]		**76.33%**	**59.28%**	**50.55%**	**55.07%**	**45.40%**

As shown in Table 4, the long-term arithmetic mean return is the most accurate predictor of the next year's return, as compared to the projected market returns put forth by Dr. Woolridge. While all measures understate the actual return (forecast bias values are under 100%), the forecasted market returns put forth by Dr. Woolridge significantly and consistently understate the actual return. This result is consistent with Campbell, who

[81] 2008 was selected as the starting year as it is the first year Kroll published its recommended MRP and risk-free rate.

[82] Calculated by dividing the sum of the forecast returns by the sum of the actual returns. The Duke CFO Study's forecast bias is calculated from 2012 to 2025.

states that when returns are serially uncorrelated, the arithmetic average represents the best forecast of future returns in any randomly selected future year.[83]

Q. DOES DR. WOOLRIDGE INCLUDE AN ECAPM ANALYSIS?

A. No, he does not.

Q. WHY DOESN'T DR. WOOLRIDGE EMPLOY THE ECAPM?

A. Dr. Woolridge does not employ the ECAPM for two reasons: (1) he claims that the ECAPM lacks theoretical or empirical validation; and (2) he believes that adjusted betas address any empirical issues within the CAPM, and thus the ECAPM is not necessary.[84]

Q. HAVE YOU PROVIDED ANY THEORETICAL OR EMPIRICAL VALIDATION OF THE ECAPM?

A. Yes, I have provided validation of the ECAPM on pages 32-34 of my Direct Testimony.

Q. IS THERE ADDITIONAL EVIDENCE THAT SUPPORTS THE VALIDITY OF THE ECAPM?

A. Yes, there is. The empirical issues with the CAPM have been present since the presentation of the model, as noted by Dianna R. Harrington in her text Modern Portfolio Theory & the Capital Asset Pricing Model:

> So far we have learned some very interesting things about the CAPM and reality. Some of the earliest work tested realized data (history) against data generated by simulated portfolios. Early studies by Douglas (1969) and Lintner (Douglas [1969]) showed discrepancies between what was expected on the basis of the CAPM and the actual relationships that were apparent in the capital markets. Theoretically, the minimal rate of return from the portfolios (the intercept) and the actual risk-free rate for the period should have been equal. They were not.
>
> * * *

[83] John Y. Campbell, "Forecasting US Equity Returns in the 21st Century," Social Security Administration, July 2001.

[84] Woolridge Direct Testimony, at 104.

Another study, now more famous than Lintner's was done by Black, Jensen, and Scholes (1972). Lintner had used what is called a cross-sectional method (looking at a number of stock returns during one time period), whereas Black, Jensen, and Scholes used a time-series method (using returns for a number of stocks over several time periods). To make their test, Black, Jensen, and Scholes assumed that what had happened in the past was a good proxy for the investor expectations (a frequent assumption in CAPM tests). Using historical data, they generated estimates using what we call the market model:

$$R_{jt} = \alpha_j + \beta_j (R_{mt}) + \varepsilon_j$$

Where:
R = total returns
β = the slope of the line (the incremental return for risk)
α = the intercept or a constant (expected to be 0 over time and across all firms)
ε = an error term (expected to be random, without information)
m = the market proxy
j = the firm or portfolio
t = the time period

Instead of using single stocks, they formed portfolios in an effort to wash out one source of error; because betas of single firms are quite unstable.

On the basis of the CAPM, they expected to find

1. That the intercept was equal to the risk-free rate (their proxy was the Treasury bill rate)
2. That the capital market line had a positive slope and that riskier (higher beta) securities provided higher return

Instead they found

1. That the intercept was different from the risk-free rate
2. That high-risk securities earned less and low-risk securities earned more than predicted by the model
3. That the intercept seemed to depend on the beta of any asset: high-beta stocks had a different intercept than low-beta stocks

* * *

Fama and MacBeth (1974) criticized the Black, Jensen, and Scholes study (hereafter called BJS). In a reformulation of the study, they supported the first of the BJS findings. They found that the intercept exceeded the risk-free proxy, but did not find the evidence to support the other BJS conclusions.[85]

Harrington discusses Black's potential solution to this phenomenon:

[85] Dianna R. Harrington, Modern Portfolio Theory & the Capital Asset Pricing Model – A User's Guide, Prentice-Hall, Inc. 1983, at 43-45.

> Black's replacement for the risk-free asset was a portfolio that had no covariability with the market portfolio. Because the relevant risk in the CAPM is systematic risk, a risk-free asset would be the one with no volatility relative to the market – that is, a portfolio with a beta of zero. All investor-perceived levels of risk could be obtained from various linear combinations of Black's zero-beta portfolio and the market portfolio… Since R_z (the rate of return of the zero-beta asset) and R_m are uncorrelated (as R_f and R_m were assumed to be in the simple CAPM), the investor can choose from various combinations of R_z and R_m. On segment R_mY, R_z, is sold short and proceeds are invested in R_m. On segment R_zR_m, portions of the zero-beta portfolio are purchased. At R_m, the investor is fully invested in the market portfolio. The equilibrium CAPM was rewritten by Black as follows:
>
> $$E(R_i) = (1 - \beta_i) E(R_z) + \beta_i E(R_m)$$
>
> Where:
> E indicates expected,
> $E(R_z)$ is less than $E(R_m)$, and
> R_z holdings over the whole market must be in equilibrium. That is, the number of short sellers and lenders of securities must be equal.
>
> Black's adaptation is intriguing. The result of using this model is a capital market line that has a less steep slope and a higher intercept than those of the simple CAPM. If Black's model is more correct in its description of investor behavior in the marketplace, then the use of the simple model would produce equity return predictions that would be too low for sticks with betas greater than one and too high for stocks with betas of less than one.[86]

As such, while I still find the CAPM to be appropriate, if Dr. Woolridge is of the opinion that the CAPM is not reliable,[87] he should have applied an ECAPM analysis. Further, as discussed below, the ECAPM is not simply a second adjustment to a company's beta.

Q. DOES THE USE OF ADJUSTED BETAS IN A CAPM ANALYSIS ADDRESS THE EMPIRICAL ISSUES WITH THE CAPM?

A. No, they do not. By increasing the expected returns for low beta stocks and decreasing the expected returns for high beta stocks, Dr. Woolridge concludes there is no need to use the

[86] Dianna R. Harrington, Modern Portfolio Theory & the Capital Asset Pricing Model – A User's Guide, Prentice-Hall, Inc. 1983, at 30-31.

[87] Woolridge Direct Testimony, at 37.

ECAPM.[88] To the contrary, using adjusted betas in a CAPM analysis is not equivalent to using the ECAPM nor is it a duplicative adjustment.

Betas are adjusted because of their general regression tendency to converge toward 1.0 over time, i.e., over successive calculations of beta. As also noted above, numerous studies have determined that the Security Market Line ("SML") described by the CAPM formula at any given moment in time is not as steeply sloped as the predicted SML. Morin states:

> *...some critics of the ECAPM argue that the use of Value Line adjusted betas in the traditional CAPM amounts to using an ECAPM. This is incorrect. The use of adjusted betas in a CAPM analysis is not equivalent to the ECAPM. Betas are adjusted because of the regression tendency of betas to converge toward 1.0 over time.*
>
> * * *
>
> *The use of an adjusted beta by Value Line is correcting for a different problem than the ECAPM. The adjusted beta captures the fact that betas regress toward one over time. The ECAPM corrects for the fact that the CAPM under-predicts observed returns when beta is less than one and over-predicts observed returns when beta is greater than one.*
>
> * * *
>
> *Another way of looking at it is that the Empirical CAPM and the use of adjusted betas comprise two separate features of asset pricing. Assuming arguendo a company's beta is estimated accurately, the CAPM will still understate the return for low-beta stocks. Furthermore, if a company's beta is understated, the Empirical CAPM will also understate the return for low-beta stocks. Both adjustments are necessary.*[89]

Moreover, the slope of the SML should not be confused with beta. As Brigham and Gapenski state:

---

[88] Woolridge Direct Testimony, at 103-104.

[89] Morin, at 223-224.

> *The slope of the SML reflects the degree of risk aversion in the economy – the greater the average investor's aversion to risk, then (1) the steeper is the slope of the line, (2) the greater is the risk premium for any risky asset, and (3) the higher is the required rate of return on risky assets.*[12]
>
> [12]*Students sometimes confuse beta with the slope of the SML. This is a mistake. As we saw earlier in connection with Figure 6-8, and as is developed further in Appendix 6A, beta does represent the slope of a line, but not the Security Market Line. This confusion arises partly because the SML equation is generally written, in this book and throughout the finance literature, as ki = RF + bi(kM – RF), and in this form bi looks like the slope coefficient and (kM – RF) the variable. It would perhaps be less confusing if the second term were written (kM – RF)bi, but this is not generally done.*[90]

As noted in Appendix 6A of Brigham and Gapenski's textbook, beta, which accounts for regression bias, is not a return adjustment but rather is based on the slope of a different line.

A 1980 study by Litzenberger, et al. found the CAPM underestimates the ROE for companies, such as public utilities, with betas less than 1.00. In that study, the authors applied adjusted betas and still found the CAPM to underestimate the ROE for low-beta companies. Similarly, The Brattle Group's ("Brattle") Risk and Return for Regulated Industries supports the use of adjusted betas in the ECAPM:

> *Note that the ECAPM and the Blume adjustment are attempting to correct for different empirical phenomena and therefore both may be applicable. It is not inconsistent to use both, as illustrated by the fact that the Litzenberger et.al (1980) study relied on Blume adjusted betas and estimated an alpha of 2% points in a short-term version of the ECAPM. This issue sometimes arises in regulatory proceedings.*[91]

Hence, using adjusted betas does not address the previously discussed empirical issues with the CAPM. In view of the foregoing, my use of adjusted betas in both the

---

[90] Eugene F. Brigham and Louis C. Gapenski, Financial Management: Theory and Practice, The Dryden Press, 1985, at 201-204.

[91] Bente Villadsen, *et. al*, Risk and Return for Regulated Industries (2017) at 95, endnote 147 of Chapter 4.

traditional and empirical applications of the CAPM is neither incorrect or inconsistent with the financial literature, nor is it a duplicative adjustment.

Q. HAVE OTHER JURISDICTIONS CONSIDERED THE ECAPM?

A. Yes, it has been accepted in Alaska, Minnesota, Mississippi, Nevada, New York, and Virginia.[92]

Q. PLEASE SUMMARIZE THIS SUBSECTION.

A. Dr. Woolridge's application of the CAPM is fatally flawed due to his use of MRPs that are not applicable for cost of capital purposes. The use of these MRPs, which understate the required return on the market, serve to artificially reduce the indicated ROE using the CAPM for Dr. Woolridge's proxy groups. Given all of the above, I recommend the Commission reject Dr. Woolridge's CAPM.

[92] The Regulatory Commission of Alaska, Docket P-97-7, Order Rejecting 1997, 1998, 1999 and 2000 Filed TAPS Rates; Setting Just and Reasonable Rates; Requiring Refunds and Filings; and Outlining Phase II Issues, November 27, 2002, at 146; Minnesota Public Utilities Commission, MPUC Docket No. G011/GR-15-736, In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota, Findings of Fact, Conclusions of Law, and Recommendation, August 19, 2016, at 29; Mississippi Public Service Commission, Docket No. 01-UN-0548, Notice of Intent of Mississippi Power Company to Change Rates for Electric Service in its Certificated Areas in the Twenty-Three Counties of Southeast Mississippi, Final Order, December 3, 2001, at 19; Public Utilities Commission of Nevada, Docket No. 20-02023, Application of Southwest Gas Corporation for authority to increase its retail natural gas utility service rates for Southern and Northern Nevada, Order, September 23, 2020, at 35; New York Public Service Commission, Case 16-G-0058, Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of KeySpan Gas East Corporation d/b/a National Grid for Gas Service, Order Adopting Terms of Joint Proposal and Establishing Gas Rate Plans, December 16, 2016, at 32; In the Matter of Application of Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina, Docket No. E-22, Sub 562 Order Accepting Public Staff Stipulation in Part, Accepting CIGFUR Stipulation, Deciding Contested Issues, and Granting Partial Rate Increase, February 24, 2020, at 40.

F. Adjustments to the Cost of Common Equity

Q. DOES DR. WOOLRIDGE MAKE A SPECIFIC ADJUSTMENT TO REFLECT THE BUSINESS RISK OF THE COMPANY RELATIVE TO HIS PROXY GROUP?

A. No, he did not. In his relative risk analysis, Dr. Woolridge compares the Company's corporate parent, American States Water Company's ("AWR") issuer credit rating with that of his proxy groups, concluding that BVES' investment risk is in line with other electric utility companies.[93]

Q. IS DR. WOOLRIDGE'S COMPARISON OF AWR'S ISSUER CREDIT RATING WITH HIS PROXY GROUPS' CREDIT RATING MEANINGFUL IN THIS PROCEEDING?

A. No, it isn't. As described in detail in Ms. Farrow's rebuttal testimony, the Commission correctly treats each utility it regulates on a stand-alone basis, meaning that its capital structure and capital cost rates reflect that utility's specific risk, and not the risks of any affiliate companies or their corporate parent. For example, in the Southern California Edison Holding Company Decision, D.88-01-063, the Commission held that it must:

> [d]etermine the utility's capital structure and return on common equity on a stand-alone basis, independent of the operations of the nonutility affiliates. Because of the stand-alone approach, the capital ratios and return on equity will reflect only the risks and costs of the utility operation.[94]

Ms. Farrow discusses several other provisions the Commission makes regarding the separation between a utility and its corporate parent in her rebuttal testimony. Given

---

[93] Woolridge Direct Testimony, at 7.

[94] Southern Calif. Edison Co., D.88-01-063, 22 CPUC 2d 347, 356 (1988) ("Edison Holding Company Decision"); see generally, In re Pacific Gas & Elec. Co., D.99-04-068, 86 CPUC 2d 76 (Apr. 22, 1999); In re Pacific Gas & Elec. Co., D.96-11-017, 69 CPUC 2d 167 (Nov. 6, 1996) Re San Diego Gas and Elec. Co., D.86-03-090, 20 CPUC 2d 660 (1986).

the above guidance from the Commission, AWR's risks, including its issuer credit rating, would have no bearing on the risk on BVES, which should be evaluated on its own merits.

Q. DOES S&P COMMENT ON BVES' BUSINESS RISK IN ITS CREDIT RATINGS REPORT FOR AWR?

A. Yes, it does. At several places in its ratings report, S&P comments on BVES' unique risks due to its geographical isolation, wildfire risk, and its increased capital expenditures to attempt to mitigate its exposure to its wildfire risk. S&P states:

> That said, the company's electric utility, BVES, operates in a high-fire-threat district as determined by the CPUC and could potentially face litigation risk stemming from California courts' interpretation of inverse condemnation. Slightly offsetting this risk is that BVES holds a CPUC-approved safety certification, which aids in supporting its credibility if the utility experiences a wildfire event; also, the company has proactively invested in wildfire mitigation through system hardening and vegetation management. Overall, we view ASWC's wildfire risk exposure as unique and higher risk than its water utility peers without electric utility operations.
>
> ***
>
> **While BVES only comprised about 7% of ASWC's EBITDA in 2025, we believe its operations currently pressure the company's credit quality compared with investor-owned water utility peers.** BVES operates in the Big Bear Lake region, a high-fire-threat district as determined by the CPUC. In California, a utility can be held liable for the entirety of a wildfire's property damage and other associated costs without the utility being found negligent. In our view, this raises the risk for California's electric utilities by potentially exposing them to significant contingent liabilities. Slightly offsetting this risk is the CPUC-approved wildfire mitigation plan and safety certification, where if a utility holds a valid certification, it aids in supporting its credibility during legal proceedings related to a wildfire event. We assess these risks as pressuring ASWC's credit quality, despite BVES proactively investing in wildfire mitigation through system hardening and maintaining a valid CPUC-approved safety certification.
>
> ***
>
> Environmental factors are a negative consideration in our credit rating analysis of ASWC. This reflects its above-average physical risks due to the company's exposure to wildfires through its electric utility, BVES, which comprises about 7% of the consolidated company's total EBITDA. This risk

> is only partially mitigated by the company's CPUC-approved wildfire mitigation plan and valid safety certification.[95]

The statements from S&P in its ratings report are generally consistent with my discussion of the Company's business risks in my Direct Testimony.[96]

Q. DR. WOOLRIDGE CLAIMS YOU DID NOT PROVIDE ANY ANALYSIS TO SUPPORT YOUR BUSINESS RISK ADJUSTMENT.[97] PLEASE RESPOND.

A. Dr. Woolridge is mistaken. Regarding wildfire risk, I compared BVES' National Risk Index rankings with that of the Utility Proxy Group in Exhibit No.__(DWD-10). That showed that BVES' ranking of 99.9 substantially exceeded the average and median ranks of my Utility Proxy Group, whether it was measured as a proxy group average (60.47 average, 52.24 median) or weighted average by area served (62.13 average, 57.51 median). Likewise, regarding BVES' risk exposure due to increased capital expenditures, I compared the ratio of expected capital expenditures to current net plant for BVES and the Utility Proxy Group on Exhibit No.__(DWD-9). That Exhibit showed that BVES' accelerated capital expenditures outpace those of the Utility Proxy Group, exposing it to further risks. Finally, I compared the size of BVES with the size of the Utility Proxy Group in Exhibit No.__(DWD-11), showing that BVES is significantly smaller than the average company in the Utility Proxy Group. Notably, Dr. Woolridge does not challenge the relative National Risk Index Rankings or the relative capital expenditure ratios, nor does he disagree that wildfires or increased capital expenditures increase a utility's business risk.

---

95 S&P Global Ratings, Ratings Score Snapshot, American States Water Co., July 27, 2026. Emphasis in original.

96 D'Ascendis Direct Testimony, at 50-59.

97 Woolridge Direct Testimony, at 7.

Q. DR. WOOLRIDGE CLAIMS YOUR 1.30% BUSINESS RISK ADJUSTMENT IS BASED SOLELY ON THE COMPANY'S SMALL RELATIVE SIZE.[98] PLEASE RESPOND.

Dr. Woolridge's claim is misplaced. My 1.30% business risk adjustment is based on my analysis of the Company's various unique business risks as compared to my Utility Proxy Group as discussed in my Direct Testimony,[99] which includes the Company's small size. My recommended business risk adjustment of 1.30% is a conservative adjustment for the Company, given the indicated size adjustment of 4.14% as shown on Exhibit No.__(DWD-11).

Q. PLEASE RESPOND TO THE SUPPORT DR. WOOLRIDGE PROVIDES FOR HIS CLAIM THAT A SMALL SIZE ADJUSTMENT IS NOT APPROPRIATE FOR PUBLIC UTILITIES.[100]

A. Turning first to the academic study conducted by Professor Wong, in 2003 *The Quarterly Review of Economics and Finance* published an article authored by Thomas M. Zepp, which commented on the Wong article cited by Dr. Woolridge. Relative to Dr. Wong's results, Dr. Zepp concluded in the Abstract on page 1 of his article: "Her weak results, however, do not rule out the possibility of a small firm effect for utilities."[101] Dr. Zepp also noted on page 582 that: "Two other studies discussed here support a conclusion that smaller water utility stocks are more risky than larger ones. To the extent that water utilities are

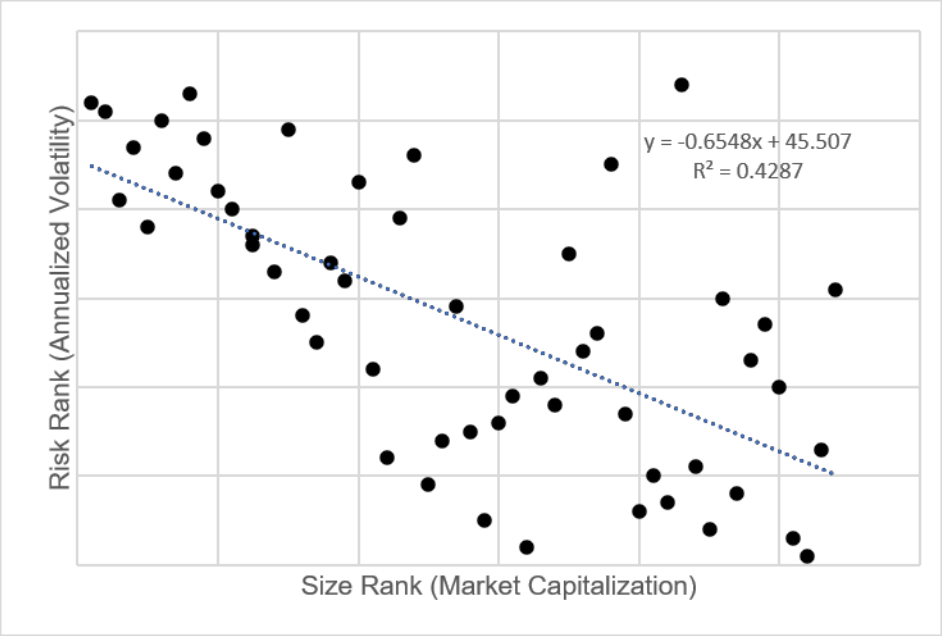
98 Woolridge Direct Testimony, at 7.
99 D'Ascendis Direct Testimony, at 50-59.
100 Woolridge Direct Testimony, at 106-107.
101 Thomas M. Zepp, "Utility Stocks and the Size Effect --- Revisited", The Quarterly Review of Economics and Finance, 43 (2003), at 578-582.

representative of all utilities, there is support for smaller utilities being more risky than larger ones."[102]

Q. HAVE YOU CONDUCTED STUDIES THAT SHOW SIZE AND RISK ARE LINKED FOR UTILITY COMPANIES?

A. Yes. I have performed two studies which link size and risk for utilities and show that utility companies become riskier as their size decreases. The first study included the universe of electric, gas, and water companies included in *Value Line* Standard Edition. From each of the utilities' *Value Line* Ratings & Reports, I calculated the annualized volatility (a measure of risk) and current market capitalization (a measure of size) for each company. After ranking the companies by size (largest to smallest) and risk (least risky to most risky), I made a scatter plot of the data, as shown on Chart 1, below:

Chart 1: Relationship Between Size and Risk for the Value Line Universe of Utility Companies[103]



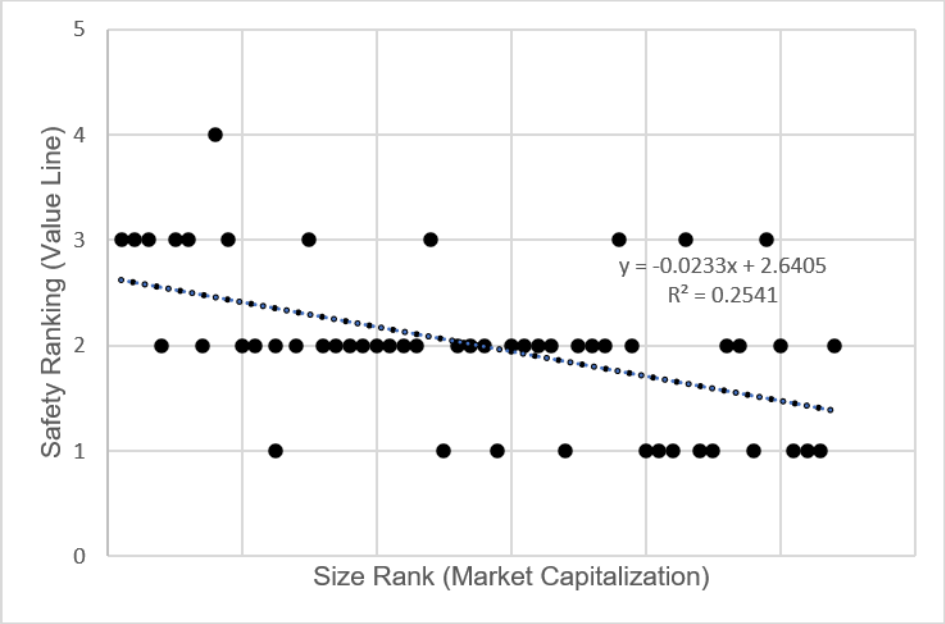
[102] Thomas M. Zepp, "Utility Stocks and the Size Effect --- Revisited", *The Quarterly Review of Economics and Finance*, 43 (2003), at 578-583.

[103] Source: *Value Line*.

As shown in Chart 1 above, as company size decreases (increasing size rank), the annualized volatility increases, linking size and risk for utilities, which is significant at 95.0% confidence level.

The second study used the same universe of companies, but instead of using annualized volatility, I used the *Value Line* Safety Ranking, which is another measure of total risk.[104] After ranking the companies by size and Safety Ranking, I made a scatterplot of those data, as shown on Chart 2, below.

Chart 2: Relationship Between Size and Safety Ranking for the Value Line Universe of Utility Companies



[104] *Value Line* also ranks stocks for Safety by analyzing the total risk of a stock compared to the approximately 1,700 stocks in the *Value Line* universe. Each of the stocks tracked in the *Value Line Investment Survey* is ranked in relationship to each other, from 1 (the highest rank) to 5 (the lowest rank). Safety is a quality rank, not a performance rank, and stocks ranked 1 and 2 are most suitable for conservative investors; those ranked 4 and 5 will be more volatile. Volatility means prices can move dramatically and often unpredictably, either down or up. The major influences on a stock's Safety rank are the company's financial strength, as measured by balance sheet and financial ratios, and the stability of its price over the past five years.

Similar to the first study, as company size decreases, Safety Ranking degrades, indicating a link between size and risk for utilities. This study is also significant at the 95% confidence level.

Q. WOOLRIDGE CITES DAMODARAN WHO OBSERVES THAT THE SIZE PREMIUM HAS LARGELY DISAPPEARED SHORTLY AFTER ITS DISCOVERY AND THAT THE PREMIUM TENDS TO COME AND GO OVER TIME. PLEASE RESPOND.

A. While Damodaran's observations may be correct, risk is not measured by the level of returns but the variance of those returns. A study by Clifford Ang detailed the returns and volatility of returns of companies by size, showing while larger companies out-performed smaller companies, smaller companies exhibited more risk.[105] Reviewing data from the same source as the Ang study, I replicated the study through December 2024. Table 5 presents the largest monthly gain and loss for each value-weighted decile for the period 1981 through December 2024. As shown in Table 5, small capitalization stocks exhibit more volatility (i.e., risk) in their returns than larger capitalization stocks.

Table 5: Size and Volatility of Returns[106]

Decile:	1	2	3	4	5	6	7	8	9	10
Largest Gain:	29.4%	25.3%	21.1%	20.0%	19.8%	16.9%	17.1%	14.5%	14.1%	13.4%
Largest Loss:	-28.8%	-30.2%	-28.8%	-29.7%	-27.8%	-26.3%	-26.0%	-23.9%	-22.5%	-19.8%

[105] Clifford S. Ang, "The Absence of a Size Effect Relevant to the cost of Equity", Business Valuation Review, Volume 37, No. 3, 2018.

[106] Deciles in ascending order with one (1) representing the smallest stocks by market capitalization. Source: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.

Further, SBBI-2023 shows that the total return of large-cap stocks over the 1926-2022 period had a standard deviation of 19.8%, compared to 31.2% for small-cap stocks, echoing the findings of Table 5.[107] The higher level of risk indicates a higher level of required return.

Q. DAMODARAN ALSO OPINES THAT THE SIZE PREMIUM MAY BE RELATED TO FACTORS STATISTICALLY RELATED TO SIZE (E.G., THE JANUARY EFFECT).[108] PLEASE RESPOND.

A. Simply, Dr. Woolridge is trying to cast doubt on the observable fact that smaller utilities tend to have higher returns than larger companies but does not have adequate support for his position. For example, regarding the January effect, simply demonstrating that the premium is largely produced in January does not negate the fact that the premium exists.

Q. DOES DR. WOOLRIDGE CONSIDER A FLOTATION COST ADJUSTMENT?

A. No, he does not. Denying recovery of issuance costs penalizes the investors that fund the utility operations. As shown on page 1 of Schedule DWD-13 of my Direct Testimony, because of flotation costs, an authorized return of 10.57% would be required to realize an ROE of 10.51% (i.e., a 6-basis point flotation cost adjustment). If flotation costs are not recovered, the growth rate falls and the ROE decreases to 11.24% (i.e., below the required return).[109]

---

[107] SBBI-2023, at 137. Note: Utility companies are included in this data set.

[108] Woolridge at 108.

[109] Direct Schedule DWD-10 is provided for illustrative purposes only. Please note that I have not relied on the results of the analysis in determining my recommended ROE or range.

Q. HAVE OTHER REGULATORY COMMISSIONS ALLOWED FLOTATION COSTS IN THE ALLOWED ROE?

A. Yes, they have. For example, in Peoples Gas System, Inc.'s ("PGS") 2023 rate proceeding, the Florida Public Service Commission stated the following regarding my proposed flotation cost adjustment:

> In PGS's last rate case in 2008, we did not make a specific adjustment for flotation costs, but in our order we stated that we have traditionally recognized a reasonable adjustment for flotation costs in the determination of the investor required return...We find witness D'Ascendis's method to determine the flotation cost is credible and provided persuasive evidence for his recommendation to include a flotation cost of 9 basis points.[110]

Given the above, I recommend this Commission also correctly include flotation costs in the allowed ROE.

G. Response to Dr. Woolridge's Critiques of the Company's Cost of Capital Testimony

Q. DID DR. WOOLRIDGE HAVE ANY CRITIQUES OF YOUR ANALYSES?

A. Yes, he did. Dr. Woolridge's critiques of my analyses are: (1) my exclusive use of projected EPS growth rates in my DCF analysis; (2) the use of historical MRPs and ERPs in my CAPM and RPM analyses; (3) my employment of the Predictive Risk Premium Model ("PRPM"); (4) the use of an ERP derived from authorized ROEs; (5) the level of required returns on the market used in my analyses; (6) my use of the ECAPM; (7) my use of Non-Price Regulated Proxy Groups in my analyses; and (8) my inclusion of a business risk adjustment and flotation cost adjustment.

[110] *In re: Petition for rate increase by Peoples Gas System, Inc.*, Docket No. 20230023-GU, Order Granting in Part and Denying in Part Peoples Gas System, Inc.'s Petition for a Rate Increase, at 68 (December 27, 2023).

I have already addressed critiques (1), (6), and (8) previously in my Rebuttal Testimony and will not address them again here. I will address the remaining critiques in turn below.

Q. DR. WOOLRIDGE CITES HIS DISCUSSION OF THE "PESO PROBLEM" OR U.S. STOCK MARKET SURVIVORSHIP BIAS, AS WELL AS WHAT HE TERMS "UNATTAINABLE RETURN BIAS," AS REASON TO REJECT THE USE OF HISTORICAL DATA TO CALCULATE PROSPECTIVE RISK PREMIUMS.[111] PLEASE RESPOND.

A. Ibbotson® SBBI® 2013 Valuation Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation 1926-2012 notes:

> *One common problem in working with financial data is properly accounting for survivorship. In working with company-specific historical data, it is important for researchers to include data from companies that failed as well as companies that succeeded before drawing conclusions from elements of that data.*
>
> *The same argument can be made regarding markets as a whole. The equity risk premium data outlined in this book represent data on the United States stock market. The United States has arguably been the most successful stock market of the twentieth century. That being the case, might equity risk premium statistics based only on U.S. data overstate the returns of equities as a whole because they only focus on one successful market?*
>
> *In a recent paper, Goetzmann and Jorion study this question by looking at returns from a number of world equity markets over the past century.[6] (footnote omitted) The Goetzmann-Jorion paper looks at the survivorship bias from several different perspectives. They conclude that once survivorship is taken into consideration the U.S. equity risk premium is overstated by approximately 60 basis points.[7] (footnote omitted) The non-U.S. equity risk premium was found to contain significantly more survivorship bias.*
>
> *While the survivorship bias evidence may be compelling on a worldwide basis, one can question its relevance to a purely U.S. analysis. If the entity being valued is a*

[111] Woolridge Direct Testimony, at 79.

U.S. company, then the relevant data set should be the performance of equities in the U.S. market. (italics added)[112]

Thus, given that the "entity being valued" is Bear Valley, a U.S. company, the relevant data should be the performance of the U.S. equity market.

Q. IN ADDITION TO SURVIVORSHIP BIAS, DR. WOOLRIDGE ALSO PROVIDES A LISTING OF "A MYRIAD OF EMPIRICAL PROBLEMS" WHICH PRODUCE "INFLATED ESTIMATES OF EXPECTED RISK PREMIUMS".[113] PLEASE COMMENT.

A. In addition to survivorship bias, which was addressed above, Dr. Woolridge mentions that the measure of central tendency; the historical time horizon; the change in risk and required return over time; the downward bias in bond historical returns; and unattainable return bias as his "myriad factors" that inflate the historical market return, and the risk premiums calculated from those returns. While he mentions them, he does not explain anything as to why these phenomena happen or how they affect the overall returns.

Regarding Dr. Woolridge's concern of the measure of central tendency (i.e., arithmetic versus geometric means) used in my MRP, I note that financial literature endorses the use of the arithmetic mean in several instances. John Y. Campbell of Harvard University states: "When returns are serially uncorrelated, the arithmetic average represents the best forecast of future return in any randomly selected future year."[114] As shown on pages 136 and 137 of SBBI-2023, returns on large stocks and equity risk

---

112 Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 62.
113 Woolridge Direct Testimony, at 79.
114 John Y. Campbell, Forecasting US Equity Returns in the 21st Century, July 2001.

premiums have serial correlations of 0.00 and 0.01, respectively, showing serial uncorrelatedness.

Only arithmetic mean return rates, equity risk premium, and yields are appropriate for cost of capital purposes because *ex-post* (historical) total returns and equity risk premiums differ in size and direction over time, indicating volatility, i.e., variance or risk. The arithmetic mean captures the prospect for variance in returns and equity risk premiums, providing the valuable insight needed by investors in estimating risk in the *future* when making a *current* investment. Absent such valuable insight into the potential variance of returns, investors cannot meaningfully evaluate prospective risk. The geometric mean of *ex-post* equity risk premiums provide no insight into the potential variance of future returns because the geometric mean relates the change over many time periods to a constant rate of change, rather than the year-to-year fluctuations, or variance, *critical to risk analysis.* Therefore, the geometric mean is of little to no value to investors seeking to measure risk. Moreover, from a statistical perspective, since stock returns and equity risk premiums are randomly generated, the arithmetic mean is expectational and consistent with the prospective nature of the cost of capital and ratemaking noted above.

The financial literature is quite clear that risk is measured by the variability of expected returns, i.e., the probability distribution of returns.[115] SBBI-2023[116] explains in detail why the arithmetic mean is the correct mean to use when estimating the cost of capital:

> *The equity risk premium data presented in this book are arithmetic average risk premiums as opposed to geometric average risk premiums. The arithmetic average equity risk premium can be demonstrated to be most appropriate when discounting*

[115] Eugene F. Brigham, Fundamentals of Financial Management, (The Dryden Press, 1989), at 639.
[116] SBBI-2023, at 193.

future cash flows. For use as the expected equity risk premium in either the CAPM or the building-block approach, the arithmetic mean or the simple difference of the arithmetic means of stock market returns and riskless rates is the relevant number.

This is because both the CAPM and the building-block approach are additive models, in which the cost of capital is the sum of its parts. The geometric average is more appropriate for reporting past performance because it represents the compound average return. [117]

In addition, Weston and Brigham provide the standard financial textbook definition of the riskiness of an asset when they state:

The riskiness of an asset is defined in terms of the likely variability of future returns from the asset. (emphasis added)[118]

Furthermore, Morin states:

The geometric mean answers the question of what constant return you would have had to achieve in each year to have your investment growth match the return achieved by the stock market. The arithmetic mean answers the question of what growth rate is the best estimate of the future amount of money that will be produced by continually reinvesting in the stock market. It is the rate of return which, compounded over multiple periods, gives the mean of the probability distribution of ending wealth. (emphasis added)[119]

In addition, Brealey and Myers note:

The proper uses of arithmetic and compound rates of return from past investments are often misunderstood... Thus the arithmetic average of the returns correctly measures the opportunity cost of capital for investments... Moral: If the cost of capital is estimated from historical returns or risk premiums, use arithmetic averages, not compound annual rates of return. (italics in original)[120]

As previously discussed, investors gain insight into relative riskiness by analyzing expected *future* variability. This is accomplished using the arithmetic mean of a random

---

117 SBBI-2023, at 193.

118 J. Fred Weston and Eugene F. Brigham, Essentials of Managerial Finance, 3rd Edition (The Dryden Press, 1974), at 272.

119 Morin, at 151.

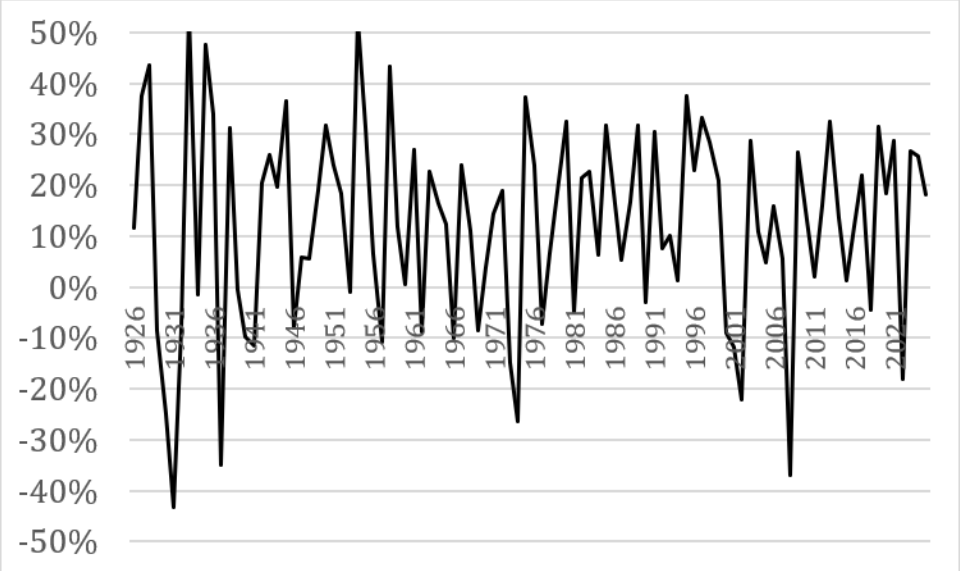
120 Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance (McGraw-Hill Book, 1996), at 146-147.

distribution of returns/premiums. Only the arithmetic mean considers all the returns/premiums over a period of time, hence, providing meaningful insight into the variance and standard deviation of those returns/premiums.

Q. CAN IT BE DEMONSTRATED THAT THE ARITHMETIC MEAN TAKES INTO ACCOUNT ALL OF THE RETURNS AND, THEREFORE, IS THE ONLY APPROPRIATE MEAN TO USE WHEN ESTIMATING THE COST OF CAPITAL?

A. Yes. Exhibit No.___(DWD-6R) graphically demonstrates this. Page 1 charts the returns on large company stocks for every year from 1926 through 2025 from the Kroll Cost of Capital Navigator and Kroll. It is clear from looking at the year-to-year variation of these returns that stock market returns and, hence, MRPs vary (see Chart 3, below).

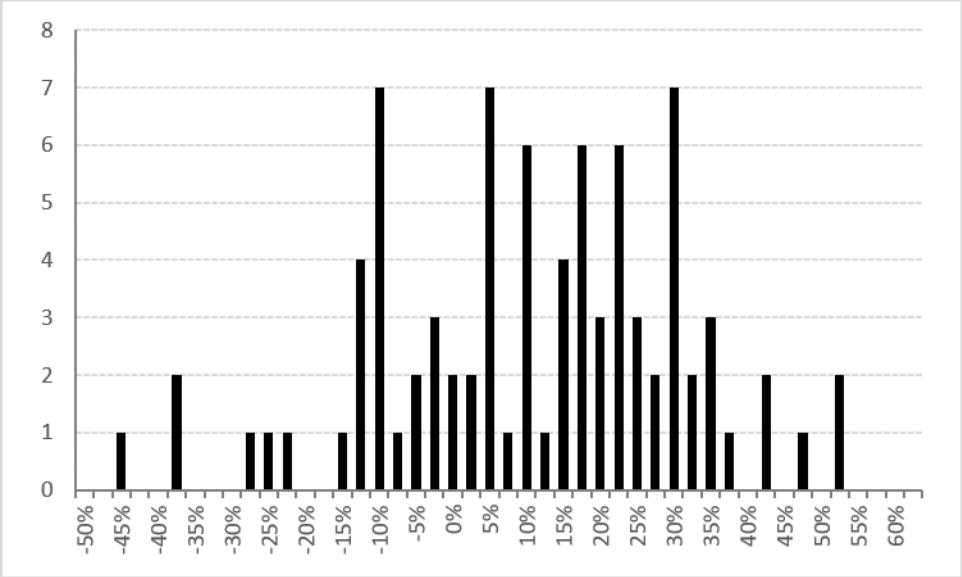
Chart 3: U.S. Large Company Stock Returns 1926-2025[121]



[121] SBBI-2023 at Appendix A-1 (248-250); Kroll.

The distribution of each of those returns for the period from 1926 through 2025 is shown on page 1 of Exhibit No.___(DWD-6R) and Chart 4, below.

Chart 4: Frequency Distribution of Observed Market Returns, 1926 - 2025[122]



There is a bell-shaped pattern to the probability distribution of returns, an indication that they are randomly generated and not serially correlated. The arithmetic mean of this distribution of returns considers each and every return in the distribution. In doing so, the arithmetic mean takes into account the standard deviation or likely variance which may be experienced in the future when estimating the rate of return based on such historical returns.

In contrast, the geometric mean considers only two of the returns, the initial and terminal years, which, in this case, are 1926 and 2025. Based on only those two years, a constant rate of return is calculated by the geometric average. That constant return is graphically represented by a flat line showing no year-to-year variation for the entire 1926 to 2025 time period. This is obviously unrealistic, based on the histogram shown in Chart 4 above.

[122] Exhibit No.___(DWD-6R).

Q. DO ANY OF DR. WOOLRIDGE'S OTHER CONCERNS REGARDING THE USE OF HISTORICAL DATA HAVE ANY MERIT?

A. No, they do not. Turning to the change in risk and required return over time, the downward bias in bond historical returns, and unattainable return bias, those are all a function of the historical time horizon. As to the appropriate time horizon to use in a historical MRP or ERP calculation, it is appropriate to use the entire historical period as discussed by SBBI-2023, cited previously.

Dr. Woolridge cites the downward bias in bond historical returns, which references the 1940s and the immediate post-war period, when the Federal Reserve artificially held down government bond yields, increasing historical MRPs for that period. It could be argued that in the period between 2008 and 2015, and from onset of the COVID-19 pandemic until 2022, the Fed did the same (artificially held down lending rates) to spur growth. As Kroll stated above, without a view of the prior period, it would be improbable for an analyst to predict future events during similar circumstances. As far as unattainable return bias (that market returns cannot achieve the average return), such comments are meaningless given that the large company common stocks have consistently earned over the 12.30% long-term average market return recently. Specifically, out of the last ten years, large company stocks have earned over 12.30% in seven of those years and averages 16.02%, as shown in Table 6, below.

Table 6: Large Capitalization Stocks Total Return from 2016-2025[123]

Year	Return
2016	11.96%
2017	21.83%
2018	-4.38%
2019	31.49%
2020	18.40%
2021	28.71%
2022	-18.11%
2023	26.61%
2024	25.62%
2025	18.06%
Average	16.02%

In view of all of the foregoing, it is indeed appropriate to use long-term historical equity risk premiums derived from the arithmetic mean long-term historical return on large company common stocks, and the arithmetic mean long-term historical income return on long-term U.S. government securities, for cost of capital purposes.

Q. PLEASE SUMMARIZE DR. WOOLRIDGE'S CONCERNS WITH YOUR PRPM ANALYSIS.

A. Dr. Woolridge has the following concerns with my PRPM, specifically that: (1) the PRPM uses historical risk premiums to calculate prospective risk premiums; (2) he believes the PRPM has not been accepted by a regulatory commission; and (3) it is a "black box" method that cannot be calculated without proprietary software. I addressed critique (1) above and will not repeat that discussion here. I will address Dr. Woolridge's additional concerns below.

[123] SBBI–2023, at 248-250; Kroll Cost of Capital Navigator.

Q. DR. WOOLRIDGE HAS STATED THAT THE PRPM HAS NOT BEEN ACCEPTED BY THE REGULATORY COMMUNITY.[124] HAS THE PRPM BEEN IMPLICITLY ACCEPTED BY OTHER REGULATORY COMMISSIONS?

A. Yes. In Docket No. 2017-292-WS, the PSC SC accepted Blue Granite Water Company's entire requested ROE, which included the PRPM. The relevant portion states:

> *The Commission finds Mr. D'Ascendis' arguments persuasive. He provided more indicia of market returns, by using more analytical methods and proxy group calculations. Mr. D'Ascendis' use of analysts' estimates for his DCF analysis is supported by consensus, as is his use of the arithmetic mean. The Commission also finds that Mr. D'Ascendis' non-price regulated proxy group more accurately reflects the total risk faced [by] price regulated utilities and CWS. Furthermore, there is no dispute that CWS is significantly smaller than its proxy group counterparts, and, therefore, it may present a higher risk. An appropriate ROE for CWS is 10.45% to 10.95%. The Company used an ROE of 10.5% in computing its Application, a return on the low end of Mr. D'Ascendis' range, and the Commission finds that ROE is supported by the evidence.*[125]

In addition, in Docket No. W-354, Subs 363, 364 and 365, the State of North Carolina Utilities Commission ("NCUC") approved my RPM and CAPM analyses, which used PRPM analyses as presented in this proceeding. The relevant portion of the order states:

> *In doing so the Commission finds that the DCF (8.81%), Risk Premium (10.00%) and CAPM (9.29%) model results provided by witness D'Ascendis, as updated to use current rates in D'Ascendis Late-Filed Exhibit No. 1, as well as the risk premium (9.57%) analysis of witness Hinton, are credible, probative, and are entitled to substantial weight as set forth below.*[126]

---

124 Woolridge Direct Testimony, at 83.

125 PSC SC Docket No. 2017-292-WS - Order No. 2018-345, at 14. (May 17, 2018).

126 NCUC Docket No. W-354, Sub 363, 364, 365, *Order Granting Partial Rate Increase and Requiring Customer Notice*, at PDF 72 (March 31, 2020).

Q. IS THE PRPM IN LIMITED USE?

A. No, it is not. As discussed in my Direct Testimony, the PRPM is based on the research of Dr. Robert F. Engle, dating back to the early 1980s, and is well represented in the academic literature and textbooks specializing in utility cost of capital.[127]

Q. WHAT DO TEXTBOOKS THAT SPECIALIZE IN THE COST OF CAPITAL FOR UTILITIES SAY ABOUT THE PRPM?

A. On the subject of the PRPM, Pratt and Grabowski state:

> Empirical testing of this new model has yielded data allowing a comparison of results with other techniques including the DCF and CAPM. The results- combined with the stability of PRPM estimates- suggests that the model is robust when applied to electric, natural gas, combination electric and gas, and water utility companies.[128]

In addition, Morin states:

> PRPM cost of capital estimates then began to proliferate based on extensive work published in the Journal of Regulatory Economics, The Electricity Journal, and Energy Policy Journal. It is only a matter of time before the technique becomes even more mainstream in regulatory proceedings.
>
> ***
>
> It is well known that security markets exhibit periods of relative calm and periods of high volatility for a variety of reasons. The GARCH technique does not explain the volatility but *models* its clustering. Investment analysts and financial institutions typically use models such as GARCH to estimate the volatility of returns for stocks, bonds, and market indices. They use the resulting information to help determine pricing decisions and judge which assets will potentially provide higher returns, as well as to forecast the returns. At its core, GARCH is a statistical modeling technique used in analyzing time-series data where the variance error is believed to be serially autocorrelated, and is used to help predict the volatility of returns on financial assets.[129]

---

127 D'Ascendis Direct Testimony, at 27-28.

128 Shannon Pratt, Roger Grabowski, The Lawyer's Guide to The Cost of Capital: Understanding Risk and Return for Valuing Businesses and Other Investments, American Bar Association, 2015, at 421.

129 Morin, at 139-142.

Q. DR. WOOLRIDGE CLAIMS THE PRPM IS A "BLACK BOX" METHOD, WHICH CAN ONLY BE PERFORMED USING YOUR PROPRIETARY SOFTWARE. IS THAT TRUE?[130]

A. No, it is not. The GARCH methodology is available in various statistical packages such as EViews®, SAS, RATS, S-Plus and JMulti, which are not cost-prohibitive and provide instructions for using the various statistical methodologies in their software. I provided all parties in this proceeding the backup data to run their own GARCH models. While the software I used in this proceeding costs approximately $2,450 for a single user commercial license,[131] JMulti is a free downloadable software with GARCH estimation applications.

Q. DR. WOOLRIDGE DISAGREES WITH YOUR USE OF AUTHORIZED ROES IN DEVELOPING AN EQUITY RISK PREMIUM ESTIMATE. PLEASE RESPOND.

A. Dr. Woolridge notes four issues with the use of authorized ROEs in determining an equity risk premium: (1) authorized ROEs measure commission behavior but not investor behavior; (2) corporate bond yields are never forecasted to decline, resulting in an inflated estimate; (3) gas utility stocks are selling above book value, which indicates that authorized ROEs are above required ROEs; and (4) authorized ROEs overstate the cost of capital as evidenced by Werner and Jarvis.[132] I have already addressed (4) previously and will not repeat that discussion. I will address the remaining items below.

130 Woolridge Direct Testimony, at 82.
131 http://www.eviews.com/general/prices/prices.html
132 Woolridge Direct Testimony, at 101-103.

Q. DO YOU AGREE THAT AUTHORIZED ROES ARE NOT REPRESENTATIVE OF INVESTOR BEHAVIOR?

A. No, I do not. It is widely accepted that the concept of utility regulation as a substitute for competition, i.e., the authorized ROE, is intended to be equivalent to the investor required return. The CRRA Guide, which is the training manual for SURFA states:

> In a sense, the "visible hand of public regulation was (created) to replace the invisible hand of Adam Smith in order to protect consumers against exorbitant charges, restriction of output, deterioration of service, and unfair discrimination."[footnote omitted]
>
> ***
>
> As indicated above, regulation of public utilities reflects a belief that the competitive mechanism alone cannot be relied upon to protect the public interest. Essentially, it is theorized that a truly competitive market involving utilities cannot survive and, thereby, will fail to promote the general economic welfare. But this does not mean that regulation should alter the norm of competitive behavior for utilities. On the contrary, the primary objective of regulation is to produce market results (*i.e.,* price and quantity supplied) in the utility sectors of the economy closely approximating those conditions which would be obtained if utility rates and services were determined competitively.[133]

Additionally, in Principles of Public Utility Rates, Bonbright states:

> Lest the reader of this chapter gain the impression that it is intended to deny the relevance of any tests of reasonable rates derived from the theory or the behavior of competitive prices, let me state my conviction that no such conclusion would be warranted. On the contrary, a study of price behavior both under assumed conditions of pure competition and under actual conditions of mixed competition is essential to the development of sound principles of utility rate control. Not only that: any good program of public utility rate making must go a certain distance in accepting competitive-price principles as guides to monopoly pricing. For rate regulation must necessarily try to accomplish the major objectives that unregulated competition is designed to accomplish; and the similarity of purpose calls for a considerable degree of similarity of price behavior.
>
> Regulation, then, as I conceive it, is indeed a substitute for competition; and it is even a partly imitative substitute. But so is a Diesel locomotive a partly imitative substitute for a steam locomotive, and so is a telephone message a partly imitative substitute for a telegraph message. What I am trying to emphasize by these crude analogies is that the very nature of a monopolistic public utility is such as to preclude an attempt to make the emulation of

[133] David C. Parcell, Cost of Capital Manual, Society of Utility and Regulatory Financial Analysts, 2020 Edition, at 3-4.

> competition very close. The fact, for example, that theories of pure competition leave no room for rate discrimination, while suggesting a reason for viewing the practice with skepticism, does not prove that discrimination should be outlawed. And a similar statement would apply alike to the use of an original-cost or a fair value rate base, neither of which is defensible under the theory or practice of competitive pricing.[134]

Finally, Phillips states in The Regulation of Public Utilities:

> Public utilities are no longer, if they were ever, isolated from the rest of the economy. It is possible that the expanding utility sector has been taking too large a share of the nation's resources, especially of investment.[footnote omitted] At a minimum, regulation must be viewed in the context of the entire economy – and evaluated in a similar context. Public utilities have always operated within the framework of a competitive system. They must obtain capital, labor and materials in competition with unregulated industries. Adequate profits are not guaranteed to them. Regulation then, should provide incentives to adopt new methods, improve quality, increase efficiency, cut costs, develop new markets and expand output in line with customer demand. In short, regulation is a substitute for competition and should attempt to put the utility sector under the same restraints competition places on the industrial sector.[135]

In view of the above, regulation is indeed a substitute for competition and ROEs determined by regulatory commissions would be perceived by investors as the required cost of capital.

Q. ARE PROJECTED BOND YIELDS ALWAYS HIGHER THAN CURRENT BOND YIELDS?

A. No, they are not. In this proceeding, Dr. Woolridge uses a current 30-year Treasury bond yield of 5.00% in his CAPM analysis. In my updated CAPM analysis, the projected 30-year Treasury bond yield I use is 4.84%. Dr. Woolridge's concern should be dismissed.

---

134 James C. Bonbright, Principles of Public Utility Rates, Columbia University Press, 1961, at 106-107.

135 Charles F. Phillips, The Regulation of Public Utilities, Public Utility Reports, Inc., 1993, at 173.

Q. DO MARKET-TO-BOOK ("M/B") RATIOS GREATER THAN ONE INDICATE THAT AUTHORIZED ROES ARE GREATER THAN REQUIRED ROES?

A. No. Market values can diverge from book values for a myriad of reasons including, but not limited to, EPS and dividends per share expectations, merger / acquisition expectations, interest rates, etc. As noted by Phillips:

> Many question the assumption that market price should equal book value, believing that 'the earnings of utilities should be sufficiently high to achieve market-to-book ratios which are consistent with those prevailing for stocks of unregulated companies.[136]

As discussed by Bonbright, it is very clear that the market prices of public utility common stocks are influenced by factors which are beyond the direct influences of the regulatory process:

> In the first place, commissions cannot forecast, except within wide limits, the effect their rate orders will have on the market prices of the stocks of the companies they regulate. In the second place, *whatever the initial market prices may be, they are sure to change not only with the changing prospects for earnings, but with the changing outlook of an inherently volatile stock market.* In short, market prices are beyond the control, though not beyond the influence of rate regulation. Moreover, even if a commission did possess the power of control, any attempt to exercise it ... would result in harmful, uneconomic shifts in public utility rate levels (emphasis added).[137]

Q. DR. WOOLRIDGE BELIEVES THAT YOUR MRP ESTIMATES DERIVED FROM *VALUE LINE*, BLOOMBERG AND S&P CAPITAL IQ DATA USE EXCESSIVE GROWTH RATES. PLEASE RESPOND.

A. I disagree with Dr. Woolridge's statement. The implied expected market returns using *Value Line,* Bloomberg and S&P Capital IQ data are only two out of five measures. The average implied market return for my Direct (13.15%) and Rebuttal Testimonies (12.71%)

---

136 Charles F. Phillips, The Regulation of Public Utilities, Public Utility Reports, Inc., 1993, at 395.

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

both represent approximately the 47th percentile, of actual returns observed from 1926 to 2025, as shown on page 1 of Exhibit No.___(DWD-6R) and are comparable to the average historical market return of 12.36%. Moreover, because market returns historically have been volatile, my market return estimates are statistically indistinguishable from the long-term arithmetic average market return data.[138]

Q. DR. WOOLRIDGE CRITIQUES YOUR MARKET DCF BY COMPARING YOUR IMPLIED GROWTH RATE WITH GDP GROWTH, IMPLYING THAT THEY ARE EQUIVALENT MEASURES.[139] DO YOU AGREE?

A. No, I do not. The goal of the market DCF is to calculate an investor-required return on the market, and market returns are not correlated with GDP growth (0.13).[140] Because GDP growth and market returns are not related, Dr. Woolridge's concerns should be dismissed.

Q. PLEASE SUMMARIZE YOUR IMPLIED MARKET RETURNS, ERPS, AND MRPS AS COMPARED WITH OBSERVED VALUES.

A. As shown on Table 7 below, my implied market returns, ERPs and MRPs in my initial and updated analyses compare favorable to historical experience.

Table 7: Percentile Rank of Implied Market Returns, ERPs, and MRPs[141]

Measure	Indicated Value	Percentile Rank
Market Return – Initial	13.15%	47.00%
Market Return – Updated	12.71%	46.70%
Equity Risk Premium – Initial	5.01%	48.20%
Equity Risk Premium Updated	4.88%	48.00%
Market Risk Premium – Initial	8.54%	48.70%
Market Risk Premium - Updated	7.87%	44.40%

138 SBBI-2023, at 248-250.

139 Woolridge Direct Testimony, 91-101.

140 Correlations range from negative one to positive one. The closer the correlation is to zero, the weaker the relationship. Positive values indicate a positive correlation, where the values of both variables tend to move in the same direction.

141 Exhibit No.___(DWD-6R)

As shown above, all of my market returns and associated premiums are consistent with historical experience. As such, the Commission should ignore Dr. Woolridge's concerns about the level of my prospective market returns and associated risk premiums.

Q. DO YOU AGREE WITH DR. WOOLRIDGE'S SUGGESTION THAT COMPETITIVE FIRMS COMPARABLE TO UTILITIES DO NOT EXIST?

A. No, I do not. As I discussed in my Direct Testimony, competitive firms of comparable risk to utilities do exist. The selection criteria for my Non-Utility Proxy Group was based on ranges of two measures of risk, the unadjusted beta of the Utility Proxy Group, which measures systematic, or market risk, and the standard error of the regression which gave rise to those betas, which measures non-systematic, or diversifiable risk. Systematic plus non-systematic risk is one definition of total risk. Each company I selected for my Non-Utility Proxy Group was required to have an unadjusted beta and a standard error of the regression within the ranges generated by the Utility Proxy Group, as explained in pages 46 and 47 of my Prepared Direct Testimony and in Direct Exhibit DWD-7. Business and financial risks may vary between companies and proxy groups, but if the collective average betas and standard errors of the regression of the group are similar, then the total, or aggregate, non-diversifiable market risks and diversifiable risks are similar, as noted in "Comparable Earnings: New Life for an Old Precept" provided in Exhibit No.___(DWD-7R). Thus, because the non-price regulated companies are selected based on analyses of market data, they are comparable in total risk (even though individual risks may vary) to my Utility Proxy Group. This is demonstrated clearly on page 273 of Jack C. Francis' Investments: Analysis and Management (page 3 of Exhibit No.___(DWD-8R)), which shows that total risk can be "partitioned into its systematic and unsystematic components."

Essentially, companies that have similar betas and standard errors of regression have similar total investment risk. Therefore, it is entirely appropriate to rely on the results of the application of the DCF, RPM and CAPM analyses to the Non-Price Regulated Proxy Group.

Q. IS THERE A SPECIFIC ADVANTAGE TO USING YOUR SELECTION CRITERIA, WHICH USES MEASURES OF SYSTEMATIC AND UNSYSTEMATIC RISK, INSTEAD OF USING THE COMBINATION OF BUSINESS AND FINANCIAL RISK?

A. Yes. Value Line unadjusted betas and the standard error of the regressions giving rise to those betas are measurable objective values, whereas total business risk and financial risk measures are more subjective.

Q. HAVE YOU USED OTHER MEASURES OF TOTAL RISK TO COMPARE YOUR UTILITY PROXY GROUP AND YOUR NON-PRICE REGULATED PROXY GROUP?

A. Yes. I compared the average and median Value Line Safety Ranking, the annualized volatility of stock returns, and the Coefficient of Variation ("CoV") of net profit Utility Proxy Group and Non-Price Regulated Proxy Group, as shown on Table 8 below:

Table -8: Risk Assessment of Non-Price Regulated Proxy Group and Utility Proxy Groups Using Value Line Safety Ranking

Group	Average Safety Rank	Median Safety Rank	Average CoV Net Profit	Median CoV Net Profit	Average Annualized Volatility	Median Annualized Volatility
Utility Proxy Group	1.54	1.00	0.11	0.11	20.20%	19.53%
Non-Price Reg. Proxy Group	1.60	2.00	0.14	0.10	21.90%	22.25%

As shown, the Safety Rankings, annualized volatility of their stock returns, and CoV of net profit of the Utility Proxy and the Non-Price Regulated Proxy Group are

comparable, indicating comparable total risk. This, in addition to all of the above, should lead the Commission to consider that competitive companies comparable in risk to utilities exist, and that the results of my Non-Price Regulated Proxy Group should be considered in determining Bear Valley's ROE in this proceeding.

V. RESPONSE TO SNOW SUMMIT WITNESS MR. MONSEN

Q. PLEASE BRIEFLY SUMMARIZE MR. MONSEN'S ANALYSES AND RECOMMENDATIONS.

A. Mr. Monsen recommends that the Commission adopt a lower ROE than BVES' proposed 11.30% ROE. Mr. Monsen does not present an independent cost of equity analysis but instead his recommendation relies on the Commission's recent authorization of a 9.75% ROE for Liberty Utilities (CalPeco) ("CalPeco").[142] He characterizes CalPeco as an excellent benchmark for BVES and concludes that the Commission's cost of capital decision for CalPeco is indicative of a reasonable ROE for BVES.

Q. MR. MONSEN CRITICIZES BVES'S ROE ANALYSIS BECAUSE CALPECO'S PULBICLY-TRADED PARENT COMPANY, ALGONQUIN POWER & UTILITIES CORP. ("AQN") WAS NOT INCLUDED IN YOUR UTILITY PROXY GROUP. PLEASE RESPOND.

A. AQN was not included in my Utility Proxy Group because it does not pass my selection criteria, specifically, it is not covered by *Value Line*. Notably, the other cost of capital expert, Dr. Woolridge, also did not consider AQN in his proxy group. Mr. Monsen's criticism is misplaced.

[142] Monsen Direct Testimony, at 18-19.

Q. MR. MONSEN CHARACTERIZES BEAR VALLEY' S PARENT COMPANY, AWR, A MUCH LARGER COMPANY THAN BEAR VALLEY.[143] DOES THE COMMISSION GENERALLY LOOK TO THE CORPORATE PARENT FOR GUIDANCE REAGRDING THE CAPITAL STRUCTURE OR COST OF COMMON EQUITY?

A. No, it does not. As discussed previously, the Commission evaluates the utilities it regulates on a stand-alone basis. As such, AWR's size would have no bearing on the risk on BVES, which should be evaluated on its own merits.

Q. DO YOU AGREE WITH MR. MONSEN' S CONCLUSION THAT THE AUTHORIZED RETURN FOR CALPECO PROVIDES AN APPROPRIATE BENCHMARK FOR DETERMINING BEAR VALLEY'S ROE?

A. No. As discussed previously, reliance on historical authorized ROEs to determine forward-looking ROEs is not appropriate and should be avoided.

Q. MR. MONSEN REVIEWS APPARENT SIMILARITIES BETWEEN BVES AND CALPECO FOR SUPPORT OF HIS RECOMMENDED ROE.[144] PLEASE RESPOND.

A. The characteristics observed by Mr. Monsen may establish certain similarities in the utilities' operations and customer bases, but they do not establish comparable investor risk.

For example, BVES is significantly smaller than CalPeco. Based on Mr. Monsen's Table 7 in his direct testimony, CalPeco's customer base is more than twice as large, its maximum coincident demand is approximately 2.6x the volume of BVES, has

143 Monsen Direct Testimony, at 17.
144 Monsen Direct Testimony, at 17.

approximately 3.4x the sales of BVES, and owns 8.6x more generation than BVES.[145] As discussed previously, size and risk are linked for utilities and should be reflected in the Company's ROE.

Q. MR. MONSEN STATES THAT BVES' REGULATORY MECHANISMS MITIGATE CERTAIN BUSINESS RISKS.[146] PLEASE RESPOND.

A. I do agree with Mr. Monsen's opinion that regulatory mechanisms available to Bear Valley would necessarily reduce the Company's risk relative to its peers because of the prevalence of similar mechanisms across jurisdictions. As shown in Exhibit No.___(DWD-9R), regulators in other jurisdictions have largely adopted various regulatory mechanisms for the operating subsidiaries of the Utility Proxy Group that are similar to that of Bear Valley. It is important to keep in mind that risk, as it relates to investor-required returns, is comparative. Because returns are based on the economic principle of opportunity costs, risk and return should be viewed in the context of alternative investments. That economic principle is consistent with the *Hope* and *Bluefield* "comparable risk" standard, under which the authorized return should be comparable to those available to firms of similar risk.

Consistent with those economic and regulatory principles, risk and return should not be viewed in isolation. Rather, the analytical issue is whether a regulatory mechanism would reduce a utility's risk relative to its peers such that investors would specifically and measurably reduce their required return for that utility. As discussed below, there is no reason to conclude equity investors would see the Company's regulatory mechanisms as

145 Monsen Direct Testimony, at 17.
146 Monsen Direct Testimony, at 17-18.

so risk-reducing relative to other utilities that they would accept a lower return in exchange for it.

VI. CONCLUSION

Q. WHAT IS YOUR RECOMMENDED ROE FOR BEAR VALLEY?

A. Given the indicated ROE ranges applicable to the Utility Proxy Group and Bear Valley, I conclude that an ROE of 11.30% is appropriate and conservative.

Q. IN YOUR OPINION, IS YOUR PROPOSED ROE OF 11.30% FAIR AND REASONABLE TO BEAR VALLEY AND ITS CUSTOMERS?

A. Yes, it is.

Q. IN YOUR OPINION, IS BEAR VALLEY'S REQUESTED CAPITAL STRUCTURE, WHICH CONTAINS 40.00% LONG-TERM DEBT AND 60.00% COMMON EQUITY, APPROPRIATE FOR RATEMAKING PURPOSES?

A. Yes, it is.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

CHAPTER 2

CAPITAL STRUCTURE RATIOS AND DEBT COST RATES

By Gladys Farrow

I. Overview

My direct testimony on the cost of capital issues is found in BVES Volume 4, pages 68-86. In that testimony, I addressed components used in the cost of capital calculation and BVES's request for an adjustment mechanism to be applied to the cost of capital components when market conditions change.

The cost of capital used to determine the authorized rate of return is comprised of three components. First is the cost of long-term debt; second is the cost of equity; and third is the amount of debt and equity that makes up the utility's capitalization (i.e., the cap structure). My testimony addressed the first and third components--the cost of long-term debt and the cap structure.[147]

In addition to the cost of debt and cap structure, my direct testimony also requests that the Commission authorize the cost of capital mechanism (CCM) that would allow for interim adjustments in the adopted rate of return during the four-year GRC cycle.

My direct testimony recommends that the Commission adopt a cost of long-term debt for BVES of 5.92%, and a cap structure comprised of 60% equity and 40% debt.[148] Lastly, my testimony requested the Commission authorize a CCM for BVES similar to the CCMs that have been authorized by the Commission for the larger investor-owned electric utilities in California (SCE, SDG&E, PG&E).[149]

[147] The third component of the cost of capital—the cost of equity—is addressed in the direct and rebuttal testimony of BVES witness Mr. D'Ascendis.
[148] BVES Exhibit Volume 4 Direct Testimony- Cost of Capital, Chapter 2.
[149] BVES Exhibit Volume 4 Direct Testimony- Cost of Capital, Chapter 2, Section V.

This rebuttal testimony addresses the same three issues as in my direct testimony, namely cost of debt, cap structure, and the CCM mechanism. As discussed below, Cal Advocates did not offer an alternative recommendation regarding the long-term cost of debt, opting to use the rate proposed by BVES in their recommendation. In addition, Cal Advocates did not oppose BVES's request for the CCM. The only disputed issue from my direct testimony is therefore the cap structure.

II. Cost of Long-Term Debt

The cost of long-term debt includes three components: the cost of existing debt, the anticipated retirement of any outstanding debt, and the projected cost of new debt to be issued. Pages 70-77 of my direct testimony describe my calculations for each of the three components of the long-term debt cost. The results of those calculations are summarized on page 77:

Based on the cost of BVES's current outstanding long-term debt combined with the expected future debt issuances and the expected cost of those issues, BVES requests the Commission adopt 5.92% as the weighted average cost of long-term debt for the period 2027-2030.

Cal Advocates did not address BVES's calculation of long-term debt costs at all. Although Cal Advocates proposed three different recommendations regarding the cost of equity based on different cap structures, there is no difference in their recommendation for the long-term cost of debt. As stated in their testimony: "Regardless of the capital structure choice, I am using BVES's proposed long term debt cost rate of 5.92%."[150]

The Commission should adopt BVES's recommendation of 5.92% for the long-term cost of debt.

[150] Exhibit CA-06, lines 8-9, pp. 29; lines 7-9, p. 112.

III. Cap Structure

BVES's currently authorized cap structure is 43% debt and 57% equity. For the 2027-2030 GRC cycle, BVES proposes a cap structure of 40% debt and 60% equity. As described in my direct testimony,[151] BVES's cap structure recommendation is based on its recorded capitalization as of year-end 2024, plus known debt issuances in 2025, forecasted debt issuances, equity infusions from BVES's parent, dividends paid to BVES's parent, and retained earnings for the period 2027-2030. The recommended 40% debt and 60% equity ratio represents the average cap structure for the four-year GRC cycle.

Cal Advocates has recommended multiple alternative cap structures for BVES.

Cal Advocates assert that BVES's proposed cap ratio at 40% debt and 60% equity has a much higher equity component than the proxy group of other electric utilities. This assertion is the basis for Cal Advocates' claim that BVES has less financial risk than the proxy group.

Cal Advocates' assertion is baseless and should be rejected. As shown below, Cal Advocates' finding that BVES has a much higher equity ratio than the proxy group is based on calculations that have been repeatedly rejected by the Commission in prior cost of capital proceedings.

IV. Cal Advocates' Recommendation

Cal Advocates testimony recommends three different capitalization ratios for BVES:

Recommendation I: 50% debt and 50% equity

Recommendation II: 43% debt and 57% equity

Recommendation III: 40% debt and 60% equity.[152]

[151] BVES Exhibit Volume 4 Direct Testimony- Cost of Capital, p.78.
[152] Exhibit CA-06, Table 2, p. 5.

Cal Advocates identified the first recommendation as their "primary recommendation". The second and third recommendations are equal to BVES's currently adopted cap structure reached in a settlement agreement in the last general rate case and BVES's recommended cap structure in this application, respectively.

As noted above, all three of Cal Advocates' cap structure recommendations incorporate BVES's recommended cost of long-term debt of 5.92%. With regards to the cost of equity, Cal Advocates proposes a different cost of equity for each of the three proposed cap structure recommendations. Cal Advocates' cost of equity recommendations are addressed in the Rebuttal Testimony of BVES witness Mr. Dylan D'Ascendis.

As discussed below, what undermines Cal Advocates' three recommendations is that none of them are remotely in line with Cal Advocates' own analysis and findings regarding the equity ratios for the proxy group.

V. Cal Advocates Analysis

Cal Advocates claim that the common equity component in the cap structure for the utilities in their electric proxy group is 38.1%. Cal Advocates imply that the 38.1% equity ratio is comparable to BVES's 60% equity recommendation: "As such, the average common equity ratio for the proxy group companies includes a much lower common equity ratio and much higher financial risk than BVES's proposed structure."[153]

Cal Advocates' equity ratio calculation--and therefore its comparison to BVES-- is flawed. Cal Advocates' calculation includes two critical errors. First, Cal Advocates use the equity ratio at the holding company level for companies in the proxy group; and second, Cal Advocates include

[153] Exhibit CA-06, lines 3-5, p. 24.

short-term debt in the debt component. Both aspects of Cal Advocates' calculation have been rejected by the Commission as discussed below.

With regards to the issue of calculating the equity ratio at the holding company level, Cal Advocates state:

It is appropriate to use the common equity ratios of the utility holding companies because the *holding companies* are publicly traded, and their stocks are used in the cost-of-equity capital studies. The equities of the *operating utilities* are not publicly traded, and hence their stocks cannot be used to compute the cost of equity capital for BVES.[154]

Commission decisions approving the creation of utility holding companies have clearly established the principle that the capital structure of the parent holding company is irrelevant to the question of the appropriate capital structure of the regulated utility. For example, in the Southern California Edison Holding Company Decision, D.88-01-063, the Commission held that it must:

[d]etermine the utility's capital structure and return on common equity on a stand-alone basis, independent of the operations of the nonutility affiliates. Because of the stand-alone approach, the capital ratios and return on equity will reflect only the risks and costs of the utility operation.[155]

The decision to form the AWR Holding Company (the parent company for BVES) has similar provisions,[156] including stipulations that the utility capital requirements shall be given priority by the Board[157], that the utility maintain the cap structure consistent with the Commission-

[154] Exhibit CA-06, lines 12-16, p. 24 (emphasis supplied).
[155] Southern Calif. Edison Co., D.88-01-063, 22 CPUC 2d 347, 356 (1988) ("Edison Holding Company Decision"); see generally, In re Pacific Gas & Elec. Co., D.99-04-068, 86 CPUC 2d 76 (Apr. 22, 1999); In re Pacific Gas & Elec. Co., D.96-11-017, 69 CPUC 2d 167 (Nov. 6, 1996) Re San Diego Gas and Elec. Co., D.86-03-090, 20 CPUC 2d 660 (1986).
[156] D.98-06-068.
[157] D.98-06-068, Attachment 1, Rule 11.

adopted levels[158], that the utility continue to issue its own debt[159], and that the utility not guarantee debt of the holding company without Commission approval[160]. In addition to the Holding Company decisions, the Commission has adopted Affiliate Transactions Rules prohibiting utilities like BVES from guaranteeing or securing debt of the parent or other affiliate.[161]

In conclusion, Cal Advocates' assertion that it is appropriate to use equity ratios of the holding companies ignores, and is in conflict with, well established Commission policy on this issue.

Regarding the inclusion of short-term debt in the cap structure, Cal Advocates states:

Short-term debt, like long-term debt, has a higher claim on the assets and earnings of the company and requires timely payment of interest and repayment of principal. Thus, in comparing the common equity ratios of the holding companies with BVES's recommendation, it is appropriate to include short-term debt when computing the holding company common equity ratios.[162]

The Commission has repeatedly denied the notion that short-term debt should be included in the utility cap structure. In every cost of capital application for the electric utility industry since at least 2002, the Commission has stated explicitly that the cap structure excludes short-term debt as noted below.[163]

D.02-11-027: "Capital structure consists of long-term debt, preferred stock, and common equity." FN "Excludes short-term debt" page 4

[158] D.98-06-068, Attachment 1, Rule 12.
[159] D.98-06-068, Attachment 1, Rule 13.
[160] D.98-06-068, Attachment 1, Rule 14.
[161] D.10-10-019, modified by D11-10-034 and D.12-01-042, Rule VII.
[162] Exhibit CA-06, lines 22-23, p. 24 and lines1-3, p. 25.
[163] See D.02-11-027, page 4; D.04-12-047, page 15; D.05-12-043, page 4; D.12-12-034, page 5; D.19-12-056, page 6; and D.25-12-043, page 5.

D.04-12-047: "Capital structure consists of long-term debt, preferred stock, and common equity." FN: "Excludes short-term debt, debt due within one year." Page 15

D.05-12-043: "Capital structure consists of long-term debt, preferred stock, and common equity." FN: "Debt due within one year, short-term debt, is excluded" page 4

D12-12-034: "Capital structure consists of long-term debt, preferred stock, and common equity." FN: "Debt due within one year, short-term debt, is excluded" page 5

D.12-12-056: "The capital structure of an investor owned utility (IOU) is the proportional authorization of shareholders' equity and debt that comprise a company's long-range financing or its capitalization. For the purposes of this proceeding, the capital structures of the applicants are comprised of distributions of long-term debt, preferred equity, and common equity." FN: "Debt due within one year, short-term debt, is excluded" Debt due within one year, short-term debt, is excluded." page 6

D.25-12-043: "The capital structure of an investor-owned utility (IOU) is the proportional authorization of shareholders' equity and debt that comprise a company's long range financing. For the purposes of this proceeding, the capital structures of the Applicants are comprised of distributions of long-term debt, preferred equity, and common equity." FN: "Debt due within one year (i.e., short-term debt) is excluded." Page 5

Data associated with Southern California Edison (SCE), which is one of the 25 companies in Cal Advocates' utility proxy group, illustrates the potential flaws in Cal Advocates' analysis. Table 5 in Cal Advocates' testimony presents authorized ROEs and common equity ratios for electric IOUs in California for the period 2020-2026[164]. The third line from the bottom on that table shows data for SCE. That data on that line shows that SCE currently has an adopted common

[164] Although Cal Advocates Table 5 indicates that the data on the Table is for the years 2010 – 2026, BVES did not find any results for years prior to 2020 on the Table. BVES believes that the title on Table 5 may contain a typo.

equity ratio of 52% based on their latest cost of capital decision. Despite the adopted common equity ratio of 52% shown on Table 5, Cal Advocates' calculation of the peer group common equity ratio uses a common equity ratio of 29% for EIX, SCE's *holding company*, rather than the adopted level of common equity for SCE, *the utility*. For the reasons already stated above, Cal Advocates' use of equity ratios of the holding company is contrary to well-established Commission precedent.

Unfortunately, SCE/EIX is the only California based entity in Cal Advocates' utility peer group so BVES was unable to discover other anomalies in Cal Advocates' analysis. But the example of SCE demonstrates that the combination of these two flaws in Cal Advocates' analysis is significant and, therefore, fundamentally undermines the results and the use of those results in comparison to BVES.

One final observation about Cal Advocates' analysis is that Cal Advocates doesn't appear to rely on their analytical results as the basis of their cap structure recommendations. As noted earlier in this testimony, Cal Advocates recommended three alternative cap structures, with three different equity ratios. The smallest equity ratio recommended by Cal Advocates is 50%, and the largest is 60%. None of their recommendations is close to the 38.1% equity ratio Cal Advocates asserted to be the average for the utility proxy group. By ignoring their own 38.1% figure in their final recommendations, Cal Advocates appear to be aware of the shortfalls of their analysis, suggesting they knew that number did not reflect a realistic capital structure for operating utilities. As previously noted, an equity ratio of 50% is Cal Advocates' "primary recommendation". Ultimately, an analysis that ignores its own data cannot produce reliable recommendations and should be dismissed altogether.

Lastly, Cal Advocates argue that utilities should maximize debt and lower equity ratios to minimize customer rates, emphasizing that equity is more expensive than debt. This argument oversimplifies the capital structure decision. Cal Advocates' analysis, which focuses solely on the impact of interest rates, completely ignores the critical balance of a multitude of factors that a utility must maintain to manage financing risks, protect investment-grade credit ratings, and ensure strict compliance with debt covenants.

While debt has a lower nominal pre-tax cost than equity, pushing an equity ratio below a reasonable threshold increases financial risk. Credit rating agencies, like Standard & Poor's (S&P), monitor cash flow-to-debt metrics closely. Although BVES is not separately rated by S&P, its capital structure is evaluated as part of AWR's consolidated capital structure, along with all of AWR's other subsidiaries. Consequently, Cal Advocates' proposal to reduce BVES's equity ratio and inject more debt would negatively impact AWR's consolidated credit ratings and harm BVES's customers. As discussed in my direct testimony, the Funds From Operations (FFO)-to-debt ratio is the core indicator used by credit rating agencies to evaluate a utility's leverage and long-term financial health.[165] Crucially for California utilities, S&P typically mandates higher FFO-to-debt thresholds to maintain investment-grade ratings due to heightened regional business risk. Forcing too much debt into the capital structure triggers credit downgrades, which directly increases the interest rates the utility must pay on future debt issuances. This erases any theoretical short-term savings for customers and threatens access to capital markets with reasonable terms during volatile times.

Furthermore, maintaining an equity ratio as requested by BVES in this proceeding is critical to ensuring BVES remains in strict compliance with its debt covenant requirements as

[165] Volume 4 Direct Testimony- Cost of Capital, p.83.

discussed in my direct testimony.[166] BVES's credit facility and long-term note agreements contain stringent affirmative and negative covenants, including the mandatory maintenance of a minimum interest coverage ratio of 3.0 times its interest expense. BVES cannot permit this interest coverage ratio to drop below 3.0-to-1.0 at the end of any fiscal quarter without triggering an immediate event of default under the agreements. Because BVES's operations are highly capital-intensive, the utility must continuously secure future financing for its required infrastructure capital projects. Future long-term financing must consist of a balanced mix of long-term debt and equity. Artificially inflating debt levels, as Cal Advocates proposes, would place a severe, unsustainable strain on this interest coverage covenant. Conversely, authorizing a 60% equity ratio provides BVES the necessary flexibility to raise equity capital, mitigate overall interest expenses, and safeguard continuous compliance with its vital financing agreements.

In summary, as a small electric utility operating in California, BVES faces unique constraints and limited flexibility when raising capital. BVES requires a robust equity ratio to offset the heightened business and financial risks associated with its smaller scale, catastrophic wildfire exposures, and significant capital expenditure requirements driven by state mandates. Reducing the equity ratio simply to take advantage of lower cost of debt, as recommended by Cal Advocates, escalates financial risk, threatens AWR's consolidated investment-grade credit ratings, jeopardizes compliance with restrictive debt covenants, and will ultimately drive up long-term borrowing costs for BVES's customers.

VI. Cal Advocates' Recommended Cap Structure

As noted above, Cal Advocates recommended three alternative cap structures for the Commission's consideration. Their "primary recommendation" is a cap structure of 50% debt and

[166] Volume 4 Direct Testimony- Cost of Capital, pp.81-82.

50% equity. The only justification for this recommendation offered by Cal Advocates is a graph[167] and their finding based on the graph that "while it has declined in recent years, the average authorized common equity ratio by state utility regulatory commissions has been in the 50% range for the past two decades."[168]

Cal Advocates' finding is hardly conclusive. Moreover, Cal Advocates' own testimony arguably undermines the applicability of their graph as a basis for establishing BVES's cap structure in this proceeding.

As discussed above, Table 5 on page 19 of Cal Advocates' testimony summarizes Commission adopted ROE and common equity ratios for all of the state's electric IOUs since 2020. The results for twenty-four decisions are shown on Cal Advocates Table 5.[169] Of the 24 results depicted there, the Commission adopted a common equity ratio below 52% *only one time*. In the most recent decisions, the Commission adopted a 52% common equity ratio for SCE, PG&E, SDG&E, and SoCalGas in December 2025, and a 52.5% ratio for Liberty Utilities in March 2026.

The Commission should disregard Cal Advocates' "primary recommendation" to adopt a cap structure for BVES that includes a smaller equity component than any of larger energy IOUs in the state. The next section will further explain why BVES's capital structure requires a higher equity layer than the utilities noted above. Cal Advocates' recommendation lacks foundation and is irrelevant as a valid benchmark for BVES's cap structure.

VII. BVES's Actual Cap Structure

BVES's recommendation is for the Commission to adopt a cap structure of 40% debt and 60% equity. BVES's current adopted cap structure is 43% debt and 57% equity reached in a

[167] Exhibit CA-06, Figure 5, p. 28.
[168] Exhibit CA-06, lines 5-7, p. 28.
[169] There are actually 25 results on Table 5. BVES excluded the one result for BVES's prior GRC.

settlement agreement in BVES's last general rate case. Settlement agreements are not precedential and do not set rules and guidance for future rate cases. This is largely due to the fact that parties typically must compromise many of their core positions in order to reach an overall settlement. BVES's current recorded cap structure (as of June 30, 2026) is 41% debt and 59% equity.

Because of BVES's relatively small size, BVES's opportunities to issue debt and/or equity are more limited than the state's larger energy IOUs. As a result, BVES has less flexibility to manage exactly to its adopted cap structure. Timing can affect the percentage of debt and/or equity in the recorded/actual cap structure at any point in time.

BVES has only been a stand-alone utility for six years. In 2020, when BVES was divested from GSWC as a stand-alone subsidiary of AWR, BVES's cap structure was 100% equity. In the six years since then, BVES has issued long-term debt twice and received equity from its parent company two times resulting in its current cap structure shown on the Table below.

	As of July 1, 2020 (1)	As of December 31, 2020	2021	2022	2023	2024	2025
Capital Structure:							
Long-Term Debt	0%	0%	0%	35%	33%	26%	42%
Equity	100%	100%	100%	65%	67%	74%	58%
Total	100%	100%	100%	100%	100%	100%	100%

(1) Effective date of when BVES became a stand-alone subsidiary of AWR.

BVES's current cap structure includes slightly more equity than the currently adopted ratio, but slightly less than the recommended ratio. However, the recorded level is much closer to either of those two ratios than to Cal Advocates' recommended 50% debt and 50% equity. The Commission should reject Cal Advocates' unreasonable cap structure and adopt BVES's well-reasoned recommendation.

VIII. Cost of Capital Adjustment Mechanism

BVES has requested a Cost of Capital Adjustment Mechanism (CCM). As explained in my direct testimony,

The purpose of the CCM is to allow for automatic annual adjustments to BVES's authorized Rate of Return on Rate Base for changes in interest rates during the 4-year rate cycle. If triggered, the CCM would adjust BVES's Return on Equity, embedded cost of debt and the Rate of Return on Rate Base, upward or downward, by 20% of the difference if there is a change of more than 100 basis points in the average of the Moody's utility bond rate as measured over the period October 1 through September 30.[170]

As noted in my direct testimony, the Commission recently authorized similar mechanisms to BVES's requested CCM for the larger investor-owned electric utilities.

Cal Advocates did not oppose BVES's CCM request. Cal Advocates did not provide any response to the request in their Report.

Given the lack of any testimony opposing the request, combined with the fact that the Commission has already authorized similar mechanisms for other utilities in the state, BVES requests that the Commission grant its request to authorize the CCM.

IX. Summary

In summary, BVES requests that the Commission:

Adopt the long-term debt rate of 5.92%.

Adopt a capital structure of 40% long term debt and 60% equity.

Authorize the proposed CCM.

[170] BVES Exhibit Volume 4 Direct Testimony- Cost of Capital, Chapter 2, Section V, p. 85.

APPENDIX A
EXHIBITS NO. DWD-1R THROUGH DWD-9R

Bear Valley Electric Service, Inc.
Table of Contents
Supporting Exhibits Accompanying the Rebuttal Testimony
of Dylan W. D'Ascendis, CRRA, CVA

Bear Valley Electric Service, Inc.
Recommended Capital Structure and Cost Rates
for Ratemaking Purposes

Type of Capital	Ratios(1)	Cost Rate		Weighted Cost Rate
Long-Term Debt	40.00%	5.92%	(1)	2.37%
Common Equity	60.00%	11.30%	(2)	6.78%
Total	100.00%			9.15%

Notes:
(1) Company-provided
(2) From page 2 of this Exhibit.

Bear Valley Electric Service, Inc.
Brief Summary of Common Equity Cost Rate

Line No.	Principal Methods	
1.	Discounted Cash Flow Model (DCF) (1)	10.60%
2.	Risk Premium Model (RPM) (2)	10.55% - 10.94%
3.	Capital Asset Pricing Model (CAPM) (3)	9.83% - 10.84%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	10.33% - 11.18%
5.	Indicated Common Equity Cost Rate before Adjustment for Unique Risk	9.83% - 11.18%
6.	Business Risk Adjustment (5)	1.30%
7.	Financial Risk Adjustment (6)	-0.81%
8.	Flotation Cost Adjustment (7)	0.08%
9.	Indicated Common Equity Cost Rate after Adjustment	10.40% - 11.75%
10.	Recommended Common Equity Cost Rate	11.30%

Notes:
(1) From page 7 of this Exhibit.
(2) From page 21 of this Exhibit.
(3) From pages 31 and 32 of this Exhibit.
(4) From page 37 of this Exhibit.
(5) Company-specific risk adjustments to reflect BVES' greater business risk relative to the proxy group as detailed in Mr. D'Ascendis' direct testimony.
(6) From page 46 and 47 of this Exhibit.
(7) From page 48 of this Exhibit.

Proxy Group of Thirteen Electric Companies
Capitalization and Financial Statistics (1)
2021 - 2025, Inclusive

	2025	2024	2023	2022	2021	5 YEAR AVERAGE
			(MILLIONS OF DOLLARS)			
Capitalization Statistics						
Amount of Capital Employed						
Total Permanent Capital	$48,841.006	$44,508.251	$41,818.327	$39,291.181	$37,087.129	
Short-Term Debt	$1,141.368	$1,120.188	$1,252.221	$1,370.295	$1,147.414	
Total Capital Employed	$49,982.374	$45,628.439	$43,070.548	$40,661.476	$38,234.543	
Indicated Average Capital Cost Rates (2)						
Total Debt	4.62 %	4.55 %	4.38 %	3.82 %	3.75 %	
Preferred Stock	3.91 %	3.79 %	3.44 %	4.72 %	7.12 %	
Capital Structure Ratios						
Based on Total Permanent Capital:						
Long-Term Debt	60.16 %	59.57 %	59.25 %	58.11 %	58.00 %	59.02 %
Preferred Stock	0.43	0.70	0.84	0.86	0.94	0.75
Common Equity	39.41	39.73	39.91	41.03	41.06	40.23
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Based on Total Capital:						
Total Debt, Including Short-Term Debt	61.08 %	60.66 %	60.43 %	59.32 %	59.30 %	60.16 %
Preferred Stock	0.41	0.68	0.82	0.83	0.90	0.73
Common Equity	38.51	38.66	38.75	39.85	39.80	39.11
Total	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Financial Statistics						
Financial Ratios - Market Based						
Earnings / Price Ratio	6.08 %	5.32 %	5.74 %	4.77 %	5.65 %	5.51 %
Market / Average Book Ratio	199.03	183.34	180.89	200.43	195.94	191.92
Dividend Yield	3.58	4.17	4.02	3.65	3.76	3.84
Dividend Payout Ratio	64.26	73.49	74.70	91.61	71.32	75.07
Rate of Return on Average Book Common Equity	11.64 %	9.76 %	10.01 %	9.14 %	10.85 %	10.28 %
Total Debt / EBITDA (3)	5.18 x	5.37 x	5.50 x	5.52 x	5.36 x	5.39 x
Funds from Operations / Total Debt (4)	13.43 %	14.14 %	12.48 %	9.96 %	5.45 %	11.10 %
Total Debt / Total Capital	61.08 %	60.66 %	60.43 %	59.32 %	59.30 %	60.16 %

Notes:
(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.
(2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.
(3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).
(4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Source of Information: Company Annual Forms 10-K.

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Thirteen Electric Companies
2021 - 2025, Inclusive

	2025	2024	2023	2022	2021	5 YEAR AVERAGE
Alliant Energy Corporation						
Long-Term Debt	62.12 %	58.44 %	57.14 %	56.27 %	55.16 %	57.83 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	37.88	41.56	42.86	43.73	44.84	42.17
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Ameren Corporation						
Long-Term Debt	58.65 %	58.95 %	58.18 %	56.87 %	57.07 %	57.94 %
Preferred Stock	0.39	0.43	0.47	0.52	0.56	0.48
Common Equity	40.96	40.62	41.35	42.61	42.37	41.58
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Duke Energy Corporation						
Long-Term Debt	62.72 %	61.68 %	60.51 %	59.08 %	56.43 %	60.08 %
Preferred Stock	0.70	0.74	1.58	1.63	1.73	1.28
Common Equity	36.58	37.58	37.91	39.29	41.84	38.64
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
American Electric Power Company, Inc.						
Long-Term Debt	60.31 %	61.28 %	61.39 %	59.85 %	59.86 %	60.54 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	39.69	38.72	38.61	40.15	40.14	39.46
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Edison International						
Long-Term Debt	66.36 %	66.73 %	64.78 %	62.85 %	58.66 %	63.87 %
Preferred Stock	3.80	7.16	8.08	8.23	9.01	7.26
Common Equity	29.84	26.11	27.14	28.92	32.33	28.87
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Entergy Corporation						
Long-Term Debt	63.73 %	64.50 %	62.66 %	66.13 %	68.58 %	65.12 %
Preferred Stock	0.65	0.74	0.85	0.81	0.58	0.73
Common Equity	35.62	34.76	36.49	33.06	30.84	34.15
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Evergy, Inc.						
Long-Term Debt	56.74 %	55.59 %	55.09 %	52.17 %	51.17 %	54.15 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	43.26	44.41	44.91	47.83	48.83	45.85
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FirstEnergy Corp.						
Long-Term Debt	67.84 %	65.45 %	69.91 %	67.95 %	73.33 %	68.90 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	32.16	34.55	30.09	32.05	26.67	31.10
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Thirteen Electric Companies
2021 - 2025, Inclusive

	2025	2024	2023	2022	2021	5 YEAR AVERAGE
IDACORP, Inc.						
Long-Term Debt	49.11 %	47.99 %	49.29 %	43.87 %	42.85 %	46.62 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	50.89	52.01	50.71	56.13	57.15	53.38
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
OGE Energy Corp.						
Long-Term Debt	51.89 %	52.13 %	49.03 %	50.75 %	52.57 %	51.27 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	48.11	47.87	50.97	49.25	47.43	48.73
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Pinnacle West Capital Corporation						
Long-Term Debt	58.19 %	56.74 %	57.67 %	56.30 %	54.46 %	56.67 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	41.81	43.26	42.33	43.70	45.54	43.33
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
The Southern Company						
Long-Term Debt	66.62 %	65.66 %	65.50 %	64.37 %	64.99 %	65.43 %
Preferred Stock	0.00	0.00	0.00	0.00	0.36	0.07
Common Equity	33.38	34.34	34.50	35.63	34.65	34.50
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Xcel Energy Inc.						
Long-Term Debt	57.80 %	59.28 %	59.11 %	58.97 %	58.91 %	58.81 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	42.20	40.72	40.89	41.03	41.09	41.19
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Thirteen Electric Companies						
Long-Term Debt	60.16 %	59.57 %	59.25 %	58.11 %	58.00 %	59.02 %
Preferred Stock	0.43	0.70	0.84	0.86	0.94	0.75
Common Equity	39.41	39.73	39.91	41.03	41.06	40.23
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information
Annual Forms 10-K

Bear Valley Electric Service, Inc.
Operating Subsidiary Company Capital Structures of the
Proxy Group of Thirteen Electric Companies

Company Name	Parent Company Ticker	2025 Common Equity	2025 Long-Term Debt	2025 Total Capital
Union Electric Company	AEE	50.59%	49.41%	100.00%
Ameren Illinois Company	AEE	55.46%	44.54%	100.00%
Appalachian Power Company	AEP	49.25%	50.75%	100.00%
AEP Texas Inc.	AEP	45.09%	54.91%	100.00%
Southwestern Electric Power Company	AEP	48.54%	51.46%	100.00%
Ohio Power Company	AEP	52.34%	47.66%	100.00%
Indiana Michigan Power Company	AEP	51.02%	48.98%	100.00%
Public Service Company of Oklahoma	AEP	49.61%	50.39%	100.00%
Kentucky Power Company	AEP	40.22%	59.78%	100.00%
Duke Energy Carolinas, LLC	DUK	51.12%	48.88%	100.00%
Duke Energy Florida, LLC	DUK	51.25%	48.75%	100.00%
Duke Energy Indiana, LLC	DUK	53.47%	46.53%	100.00%
Duke Energy Kentucky, Inc.	DUK	53.68%	46.32%	100.00%
Duke Energy Ohio, Inc.	DUK	57.13%	42.87%	100.00%
Duke Energy Progress, LLC	DUK	48.72%	51.28%	100.00%
Piedmont Natural Gas Company, Inc.	DUK	52.77%	47.23%	100.00%
Progress Energy, Inc.	DUK	50.24%	49.76%	100.00%
Southern California Edison Company	EIX	39.28%	60.72%	100.00%
Entergy Arkansas, LLC	ETR	45.91%	54.09%	100.00%
Entergy Louisiana, LLC	ETR	53.20%	46.80%	100.00%
Entergy Texas, Inc.	ETR	48.79%	51.21%	100.00%
Entergy Mississippi, LLC	ETR	49.17%	50.83%	100.00%
Entergy New Orleans, LLC	ETR	47.64%	52.36%	100.00%
Evergy Kansas Central, Inc.	EVRG	52.09%	47.91%	100.00%
Evergy Metro, Inc.	EVRG	50.90%	49.10%	100.00%
Evergy Missouri West, Inc.	EVRG	48.30%	51.70%	100.00%
Jersey Central Power & Light Company	FE	62.53%	37.47%	100.00%
The Cleveland Electric Illuminating Company	FE	63.08%	36.92%	100.00%
Monongahela Power Company	FE	52.95%	47.05%	100.00%
Ohio Edison Company	FE	44.23%	55.77%	100.00%
The Potomac Edison Company	FE	50.57%	49.43%	100.00%
The Toledo Edison Company	FE	45.20%	54.80%	100.00%
Idaho Power Company	IDA	48.18%	51.82%	100.00%
Interstate Power and Light Company	LNT	50.53%	49.47%	100.00%
Wisconsin Power and Light Company	LNT	52.70%	47.30%	100.00%
Oklahoma Gas and Electric Company	OGE	53.49%	46.51%	100.00%
Arizona Public Service Company	PNW	42.79%	57.21%	100.00%
Georgia Power Company	SO	54.44%	45.56%	100.00%
Alabama Power Company	SO	53.62%	46.38%	100.00%
Mississippi Power Company	SO	54.93%	45.07%	100.00%
Public Service Company of Colorado	XEL	54.83%	45.17%	100.00%
Northern States Power Company	XEL	50.48%	49.52%	100.00%
Southwestern Public Service Company	XEL	52.49%	47.51%	100.00%
Northern States Power Company	XEL	53.12%	46.88%	100.00%
	Average	50.82%	49.18%	
	Minimum	39.28%	36.92%	
	Maximum	63.08%	60.72%	

Source: S&P Capital IQ.

Bear Valley Electric Service, Inc.
Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for the
Proxy Group of Thirteen Electric Companies

Proxy Group of Thirteen Electric Companies	[1] Average Dividend Yield (1)	[2] Value Line Projected Five Year Growth in EPS (2)	[3] Zack's Five Year Projected Growth Rate in EPS	[4] S&P Capital IQ Projected Five Year Growth in EPS	[5] Average Projected Five Year Growth in EPS (3)	[6] Adjusted Dividend Yield (4)	[7] Indicated Common Equity Cost Rate (5)
Alliant Energy Corporation	2.91 %	6.00 %	7.90 %	8.39 %	7.43 %	3.02 %	10.45 %
Ameren Corporation	2.71	7.50	7.70	7.88	7.69	2.81	10.50
American Electric Power Company, Inc.	2.90	5.50	8.80	8.72	7.67	3.01	10.68
Duke Energy Corporation	3.46	6.50	6.80	6.69	6.66	3.58	10.24
Edison International	4.78	6.00	2.10	4.78	4.29	4.88	9.17
Entergy Corporation	2.28	11.50	13.30	12.66	12.49	2.42	14.91 (6)
Evergy, Inc.	3.30	6.50	9.10	9.24	8.28	3.44	11.72
FirstEnergy Corp.	3.95	5.50	7.60	7.57	6.89	4.09	10.98
IDACORP, Inc.	2.43	5.50	9.10	9.10	7.90	2.53	10.43
OGE Energy Corp.	3.54	6.00	5.60	7.05	6.22	3.65	9.87
Pinnacle West Capital Corporation	3.51	6.00	5.80	8.92	6.91	3.63	10.54
The Southern Company	3.22	5.00	11.40	8.12	8.17	3.35	11.52
Xcel Energy Inc.	2.98	8.00	9.40	9.11	8.84	3.11	11.95
						Average	10.67 %
						Median	10.52 %
					Average of Mean and Median		10.60 %

Notes:

(1) Indicated dividend at 8/3/2026 divided by the average closing price of the last 60 trading days ending 8/3/2026 for each company.
(2) From pages 8 through 20 of this Exhibit.
(3) Average of columns 2 through 4 excluding negative growth rates.
(4) This reflects a growth rate component equal to one-half the conclusion of growth rate (from column 5) x column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for Alliant Energy Corporation, 2.91% x (1+(1/2 x 7.43%)) = 3.02%.
(5) Column 5 + Column 6.
(6) Results were excluded from the final average and median as they were more than two standard deviations from the proxy group's mean.

Source of Information:
Value Line Investment Survey
www.zacks.com Downloaded on 8/3/2026
S&P Capital IQ

ALLIANT ENERGY NDQ-LNT

RECENT PRICE 73.95 | P/E RATIO 21.4 (Trailing: 23.2 Median: 21.0) | RELATIVE P/E RATIO 1.21 | DIV'D YLD 2.7% | VALUE LINE

TIMELINESS 4 Lowered 5/23/25
SAFETY 1 Raised 9/6/24
TECHNICAL 3 Lowered 6/5/26
BETA .80 (1.00 = Market)

18-Month Target Price Range

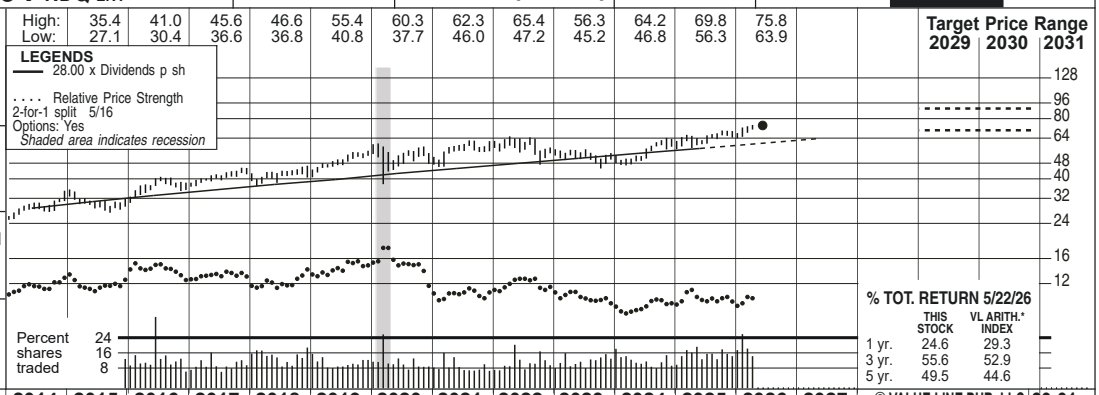
Low-High	Midpoint (% to Mid)
$64-$93	$79 (5%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(+20%)	8%
Low	70	(-5%)	2%

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	368	295	419
to Sell	290	244	329
Hld's(000)	231704	225767	272087



2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	© VALUE LINE PUB. LLC	29-31
15.40	16.51	13.94	14.77	15.10	14.34	14.58	14.62	14.97	14.89	13.67	14.65	16.74	15.72	15.51	16.99	*17.40*	*18.25*	Revenues per sh	*21.20*
2.60	2.75	2.95	3.34	3.49	3.45	3.43	3.97	4.32	4.59	4.92	5.25	5.40	5.38	5.70	6.45	*6.75*	*7.00*	"Cash Flow" per sh	*7.85*
1.38	1.38	1.53	1.65	1.74	1.69	1.65	1.99	2.19	2.33	2.47	2.63	2.73	2.78	2.69	3.14	*3.45*	*3.70*	Earnings per sh A	*4.55*
.79	.85	.90	.94	1.02	1.10	1.18	1.26	1.34	1.42	1.52	1.61	1.71	1.81	1.92	2.03	*2.15*	*2.28*	Div'd Decl'd per sh B ■ †	*2.72*
3.91	3.03	5.22	3.32	3.78	4.25	5.26	6.34	6.92	6.69	5.47	4.67	5.91	7.24	8.76	9.67	*8.00*	*8.00*	Cap'l Spending per sh	*7.00*
13.05	13.57	14.12	14.79	15.54	16.41	16.96	18.08	19.43	21.24	22.76	23.91	24.99	26.46	27.29	28.56	*29.70*	*31.25*	Book Value per sh C	*33.85*
221.79	222.04	221.97	221.89	221.87	226.92	227.67	231.35	236.06	245.02	249.87	250.47	251.14	256.10	256.69	256.77	*258.50*	*258.50*	Common Shs Outst'g D	*260.00*
12.5	14.5	14.5	15.3	16.6	18.1	22.3	20.6	19.1	21.2	21.2	21.2	21.4	18.8	20.1	20.2	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.5*
.80	.91	.92	.86	.87	.91	1.17	1.04	1.03	1.13	1.09	1.15	1.24	1.05	1.05	1.05			Relative P/E Ratio	*.95*
4.6%	4.3%	4.1%	3.7%	3.5%	3.6%	3.2%	3.1%	3.2%	2.9%	2.9%	2.9%	2.9%	3.5%	3.5%	3.2%			Avg Ann'l Div'd Yield	*3.7%*
3320.0	3382.2	3534.5	3647.7	3416.0	3669.0	4205.0	4027.0	3981.0	4362.0	*4500*	*4720*	Revenues ($mill)	*5510*
384.0	466.1	522.3	567.4	624.0	674.0	686.0	703.0	690.0	810.0	*885*	*955*	Net Profit ($mill)	*1185*
13.4%	12.5%	8.4%	10.8%	--	--	3.1%	.6%	.6%	2.0%	*2.0%*	*2.0%*	Income Tax Rate	*2.0%*
16.3%	10.7%	14.5%	16.3%	8.8%	3.7%	8.7%	14.2%	10.9%	11.0%	*11.0%*	*11.0%*	AFUDC % to Net Profit	*11.0%*
51.5%	47.8%	52.3%	50.6%	53.5%	52.9%	55.0%	54.8%	55.3%	59.9%	*61.5%*	*63.5%*	Long-Term Debt Ratio	*64.5%*
46.1%	49.8%	45.7%	47.6%	44.9%	47.1%	45.0%	45.2%	44.7%	40.1%	*38.5%*	*36.5%*	Common Equity Ratio	*35.5%*
8377.6	8392.8	10032	10938	12657	12725	13944	15002	15681	18288	*19850*	*22050*	Total Capital ($mill)	*24800*
9809.9	10798	12462	13527	14336	14987	16247	17157	18701	20344	*21150*	*21780*	Net Plant ($mill)	*23800*
5.6%	6.7%	6.3%	6.3%	5.9%	6.3%	6.1%	6.0%	5.8%	5.8%	*6.5%*	*6.0%*	Return on Total Cap'l	*6.5%*
9.5%	10.6%	10.9%	10.5%	10.6%	11.3%	10.9%	10.4%	9.9%	11.0%	*11.5%*	*12.0%*	Return on Shr. Equity	*13.5%*
9.7%	10.9%	11.2%	10.7%	10.8%	11.0%	10.9%	10.4%	9.9%	11.0%	*11.5%*	*12.0%*	Return on Com Equity E	*13.5%*
2.8%	4.0%	4.4%	4.2%	4.2%	4.3%	4.1%	3.6%	2.8%	3.9%	*4.0%*	*4.5%*	Retained to Com Eq	*5.0%*
72%	64%	62%	61%	62%	62%	62%	65%	71%	64%	*63%*	*62%*	All Div'ds to Net Prof	*60%*

CAPITAL STRUCTURE as of 3/31/26
Total Debt $11840 mill.
LT Debt $11007 mill. **LT Interest** $370 mill.
(LT interest earned: 2.8x)

Leases, Uncapitalized Annual rentals $3 mill.

Pension Assets-12/25 $747 mill.
Oblig $824 mill.

Pfd Stock None

Common Stock 258,277,037 shs.

MARKET CAP: $19.1 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (KWH)	-.4	-1.5	+2.3
Avg. Indust. Use (MWH)	11435	11161	11237
Avg. Indust. Revs. per KWH (¢)	8.47	8.53	9.20
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	5856	5638	5465
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.7	+.7	+.6
Fixed Charge Cov. (%)	NA	NA	NA

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	1.0%	2.0%	*2.5%*
"Cash Flow"	5.5%	5.0%	*2.0%*
Earnings	5.5%	4.5%	*6.0%*
Dividends	6.5%	6.0%	*6.0%*
Book Value	6.0%	5.5%	*4.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	1077	912	1077	961	4027
2024	1030	894	1081	976	3981
2025	1128	961	1210	1064	4362
2026	1184	*950*	*1335*	*1031*	*4500*
2027	*1200*	*1005*	*1415*	*1100*	*4720*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	.65	.64	1.02	.47	2.78
2024	.62	.34	1.15	.58	2.69
2025	.83	.68	1.09	.55	3.14
2026	.87	*.73*	*1.17*	*.68*	*3.45*
2027	*.84*	*.78*	*1.30*	*.78*	*3.70*

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.4275	.4275	.4275	.4275	1.71
2023	.4525	.4525	.4525	.4525	1.81
2024	.48	.48	.48	.48	1.92
2025	.508	.508	.508	.508	2.03
2026	.535	.535			

BUSINESS: Alliant Energy Corporation is the parent company of Interstate Power and Light Company (IPL) and Wisconsin Power and Light Company (WPL). Together, the utility subsidiaries serve approximately one million electric and 430,000 natural gas customers in Wisconsin and Iowa. Electric revenue: residential, 37%; commercial, 24%; industrial, 28%; wholesale, 8%; other, 3%. Generating sources: coal, 18%; gas, 41%; wind, 16%; other, 1%; purchased, 24%. Fuel costs: 19% of revenues. '25 reported depreciation rates: 3.0%-6.1%. Has 2,998 employees. President & CEO: Lisa M. Barton. Incorporated: Wisconsin. Address: 4902 North Biltmore Lane, Madison, Wisconsin 53718-2148. Telephone: 608-458-3311. Internet: www.alliantenergy.com.

Alliant Energy has inked another data-center power supply deal. Indeed, in April, the parent company of Interstate Power and Light (P&L) and Wisconsin P&L entered into a 370-megawatt electric service agreement with an undisclosed hyperscale customer in Iowa. According to management, full-power load ought to be reached by the end of 2030 and met by a simple-cycle natural gas-fired power plant that a high-quality counterparty has agreed to construct. With this latest deal, Alliant now has five, fully executed data center agreements in place, representing some 3.4 gigawatts of contracted demand.

Interstate Power's Iowa service area seems fertile ground for additional activity on the data center front. Importantly, the utility's service area encompasses a large amount of rural land that is zoned for industrial use. That, combined with a strong transmission network, means that the aforementioned project and future ones can be unobtrusively built outside population centers, thereby limiting the potential for "not in my backyard" outcry from citizen groups.

Leadership recently affirmed a 2026–2029 capital plan that envisions Alliant spending a total of $13.4 billion over the four-year stretch on new and existing power generation. On the docket is a new, 100-megawatt, natural gas-fired plant near the utility's Prairie Creek Generating Station in Cedar Rapids, Iowa, and upgrades to other facilities. Also on tap is a further buildout of energy storage, which will help Alliant better meet demand for electricity during sub-optimal periods for solar- and wind-power generation.

New debt and operating cash flow are expected to fund a majority of the utility's expansion plans. The remainder should come from the issuance of additional equity and the continued sale of renewable-energy tax credits. That said, there is the risk that those monetizable credits are ultimately phased out.

Alliant Energy shares remain a decent investment play on the proliferation of data centers tasked with handling energy-consuming AI workloads. Still, we suggest that most accounts wait for a better entry point.

Nils C. Van Liew *June 5, 2026*

(A) Diluted EPS. Excl. nonrecurring losses: '11, 1¢; '12, 8¢. '20 & '21 EPS don't sum due to rounding. Next earnings report due early Aug. **(B)** Dividends historically paid in mid-Feb., May, Aug., and Nov. ■ Dividend reinvestment plan avail. † Shareholder investment plan avail. **(C)** Incl. deferred charges. In '21: $1,980 mill., $7.91/sh. **(D)** In millions, adj. for split. **(E)** Rate base: Orig. cost. Rates all'd on com. eq. in IA in '20: various; in WI in '22: 10%; earned on avg. com. eq., '21: 11.3%. Regulatory Climate: Wisconsin, Above Average; Iowa, Average.

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

AMEREN NYSE-AEE

RECENT PRICE 111.29 | P/E RATIO 20.8 (Trailing: 21.2 Median: 20.0) | RELATIVE P/E RATIO 1.18 | DIV'D YLD 2.7% | VALUE LINE

TIMELINESS 4 Lowered 5/30/25
SAFETY 1 Raised 9/10/21
TECHNICAL 2 Raised 5/22/26
BETA .75 (1.00 = Market)

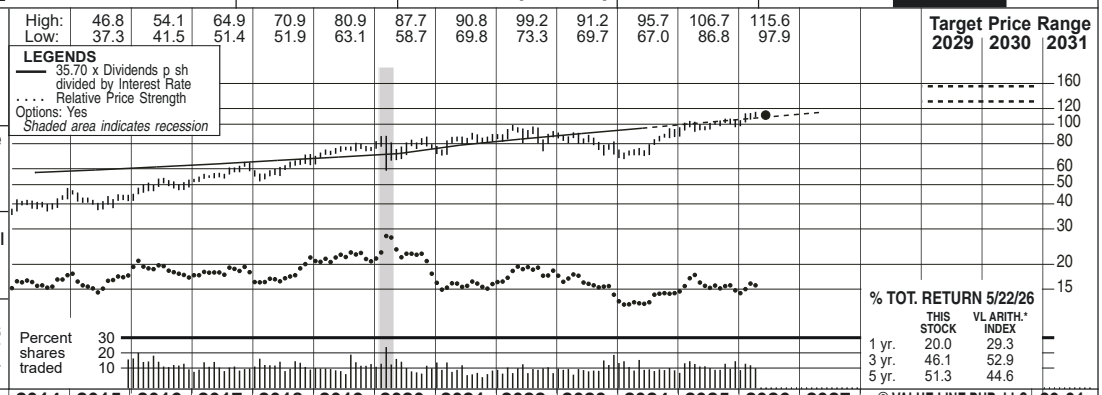
18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$86-$126 $106 (-5%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	155	(+40%)	*9%*
Low	130	(+15%)	*4%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	415	350	497
to Sell	284	238	294
Hld's(000)	234893	233568	269803



2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	© VALUE LINE PUB. LLC	29-31
31.77	31.04	28.14	24.06	24.95	25.13	25.04	25.46	25.73	24.00	22.87	24.81	30.37	28.10	28.56	31.83	***33.80***	***34.64***	Revenues per sh	***39.45***
6.33	5.87	5.87	5.25	5.77	6.08	6.59	6.80	7.64	7.83	8.08	8.89	9.59	9.99	10.49	***11.20***	***11.65***	***12.25***	"Cash Flow" per sh	***13.45***
2.77	2.47	2.41	2.10	2.40	2.38	2.68	2.77	3.32	3.35	3.50	3.84	4.14	4.37	4.59	5.03	***5.35***	***5.80***	Earnings per sh [A]	***7.15***
1.54	1.56	1.60	1.60	1.61	1.66	1.72	1.78	1.85	1.92	2.00	2.20	2.36	2.52	2.68	2.84	***3.00***	***3.20***	Div'd Decl'd per sh [B] ■	***3.57***
4.66	4.50	5.49	5.87	7.66	8.12	8.78	9.05	9.56	9.92	13.02	13.67	12.79	12.87	12.64	***12.80***	***12.85***	***12.90***	Cap'l Spending per sh	***13.00***
32.15	32.64	27.27	26.97	27.67	28.63	29.27	29.61	31.21	32.73	35.29	37.64	40.11	40.26	42.78	48.48	***48.50***	***48.50***	Book Value per sh [C]	***52.65***
240.40	242.60	242.63	242.63	242.63	242.63	242.63	242.63	244.50	246.20	253.30	257.70	262.00	267.00	266.93	276.40	***275.00***	***280.00***	Common Shs Outst'g [D]	***285.00***
9.7	11.9	13.4	16.5	16.7	17.5	18.3	20.6	18.3	22.1	22.2	21.4	21.5	18.8	17.1	19.2	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***20.0***
.62	.75	.85	.93	.88	.88	.96	1.04	.99	1.18	1.14	1.16	1.24	1.07	.95	1.07			Relative P/E Ratio	***1.10***
5.8%	5.3%	5.0%	4.6%	4.0%	4.0%	3.5%	3.1%	3.0%	2.6%	2.6%	2.7%	2.7%	3.3%	2.7%	2.9%			Avg Ann'l Div'd Yield	***3.0%***
6076.0	6177.0	6291.0	5910.0	5794.0	6394.0	7957.0	7500.0	7623.0	8799.0	***9300***	***9700***	Revenues ($mill)	***11250***
659.0	683.0	821.0	834.0	877.0	995.0	1074.0	1152.0	1182.0	1456.0	***1470***	***1625***	Net Profit ($mill)	***2040***
36.7%	38.2%	22.4%	17.9%	15.0%	13.6%	14.0%	12.0%	12.0%	8.5%	***12.0%***	***12.0%***	Income Tax Rate	***12.0%***
4.1%	5.6%	6.9%	5.8%	5.5%	6.0%	5.0%	6.0%	5.5%	***5.0%***	***5.0%***	***5.0%***	AFUDC % to Net Profit	***5.0%***
47.7%	49.2%	50.3%	52.1%	55.0%	56.1%	56.6%	55.7%	53.9%	***52.5%***	***52.0%***	***51.5%***	Long-Term Debt Ratio	***51.0%***
51.3%	49.8%	48.8%	47.1%	44.3%	43.3%	43.4%	43.8%	45.3%	***47.0%***	***47.5%***	***48.0%***	Common Equity Ratio	***48.5%***
13840	14420	15632	17116	20158	22391	24193	24847	25432	***26450***	***27100***	***28000***	Total Capital ($mill)	***29500***
20113	21466	22810	24376	26807	29261	31262	33776	36376	39313	***37500***	***38000***	Net Plant ($mill)	***38400***
6.0%	6.0%	6.4%	6.0%	5.3%	5.3%	5.4%	5.5%	5.5%	***5.8%***	***5.0%***	***5.0%***	Return on Total Cap'l	***6.0%***
9.1%	9.3%	10.6%	10.2%	9.7%	10.1%	10.2%	11.0%	11.0%	10.9%	***11.0%***	***10.5%***	Return on Shr. Equity	***10.0%***
9.2%	9.4%	10.7%	10.3%	9.7%	10.2%	10.2%	11.0%	11.0%	10.9%	***11.0%***	***10.5%***	Return on Com Equity [E]	***10.0%***
3.3%	3.4%	4.8%	4.4%	4.2%	4.4%	4.4%	5.0%	5.0%	4.5%	***5.0%***	***5.0%***	Retained to Com Eq	***4.0%***
64%	64%	56%	57%	57%	57%	57%	57%	56%	56%	***56%***	***57%***	All Div'ds to Net Prof	***60%***

CAPITAL STRUCTURE as of 3/31/26
Total Debt $21304 mill.
LT Debt $19003 mill. **LT Interest** $659 mill.
(LT interest earned: 3.8x)
Pension Assets-12/24 $4102 mill.
Oblig $3939 mill.
Pfd Stock $129 mill. **Pfd Div'd** $5 mill.
807,595 sh. $3.50 to $5.50 cum. (no par), $100 stated val., redeem. $102.176-$110/sh.; 487,508 sh. 4.00% to 5.16%, $100 par, redeem. $100-$104.30/sh.
Common Stock 276,751,616 shs.
as of 4/30/26
MARKET CAP: $30.8 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2022	2023	2024
% Change Retail Sales (KWH)	-5.6	+2.1	+3.2
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	291	325	334

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '22-'24 to '29-'31
Revenues	-1.5%	.5%	*4.5%*
"Cash Flow"	4.0%	6.5%	*4.5%*
Earnings	4.0%	8.0%	*7.5%*
Dividends	3.5%	5.0%	*5.0%*
Book Value	2.0%	5.5%	*3.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	2062	1760	2060	1618	7500
2024	1816	1693	2173	1941	7623
2025	2097	2221	2699	1782	8799
2026	2176	***2274***	***2950***	***1900***	***9300***
2027	***2275***	***2400***	***3025***	***2000***	***9700***

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	1.00	.90	1.87	.60	4.37
2024	.98	.97	1.87	.77	4.59
2025	1.07	1.01	2.17	.78	5.03
2026	1.28	***1.05***	***2.20***	***.82***	***5.35***
2027	***1.10***	***1.40***	***2.20***	***1.10***	***5.80***

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.59	.59	.59	.59	2.36
2023	.63	.63	.63	.63	2.52
2024	.67	.67	.67	.67	2.68
2025	.71	.71	.71	.71	2.84
2026	.75				

BUSINESS: Ameren Corporation is a holding company formed through the merger of Union Electric and CIPSCO. Has 1.2 million electric and 127,000 gas customers in Missouri; 1.2 million electric and 813,000 gas customers in Illinois. Discontinued nonregulated power-generation operation in '13. Electric revenue breakdown: residential, 36%; commercial, 26%; industrial, 6%; other, 32%. Generating sources: coal, 68%; nuclear, 14%; hydro & other, 9%; purchased, 9%. Fuel costs: 25% of revenues. Has approximately 9,250 employees. Chairman, President & CEO: Martin J. Lyons, Jr. Incorporated: Missouri. Address: One Ameren Plaza, 1901 Chouteau Ave., P.O. Box 66149, St. Louis, MO 63166-6149. Telephone: 314-621-3222. Internet: www.ameren.com.

Ameren started off 2026 on a high note. The company posted first-quarter earnings of $1.28 a share, well above our estimate and the year-ago result, on a better-than-expected 3.8% top-line improvement. Ameren's fortunes were boosted by infrastructure investments aimed at improving system reliability, resilience, and service quality for its Ameren Missouri and Illinois electric and natural gas customers. March-period results were tempered a bit by lower Ameren Missouri electric retail sales (due to warmer-than-normal winter temperatures) as well as by higher interest expense. All told, leadership remains confident in its 2026 earnings guidance of $5.25 to $5.45 a share, and as a result, we are maintaining our earnings estimate of $5.35 a share for this year, with an 8% bottom-line advance likely in the cards for the next year.

The company's longer-term prospects seem strong. Indeed, Ameren's multi-year earnings growth is expected to be boosted by $31.8 billion on infrastructure investments, underpinning projected rate base growth of approximately 10.6% compounded annually from 2025 through 2030. What's more, regulatory approvals are progressing nicely, including authorization for the 800 MW Big Hollow Energy Center and expanded battery storage deployment.

Dividend growth remains reliable and well supported. In early February, the company's board of directors upped Ameren's quarterly dividend payout by 5.6%, to $0.75 a share. As a result, the annual dividend now stands at $3.00 a share. The current payout ratio is comfortably within management's stated range of 50%-60%. And dividend growth should remain sustainable well into the coming decade, thanks to expected rate base expansion.

So what about the stock? The issue is best suited for conservative, income-seeking investors, as it carries our Highest (1) rank for Safety and scores perfect marks for Price Stability and Earnings Predictability. However, the equity carries an uninspiring Timeliness rank (4) and its capital appreciation potential three to five years hence is well below the average selection under our review.

Kenneth A. Nugent *June 5, 2026*

(A) Diluted EPS. Excl. nonrec. (losses): '10, ($2.19); '11, (32¢); '12, ($6.42); '17, (63¢); gain (loss) from discontinued ops.: '13, (92¢); '15, 21¢. Next earnings report due early Aug.
(B) Div'ds paid late Mar., June, Sept., & Dec. ■ Div'd reinvest. plan avail.
(C) Incl. intang. In '25: $1.94 billion, or $7.01/sh. **(D)** In mill.
(E) Rate base: Orig. cost depr. Rate allowed on com. eq. in MO in '25: elec. & gas, none specified; in IL: electric, varies; in '25: gas, 9.60%; earned on avg. com. eq., '25: 10.48%.

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

AMERICAN ELEC. PWR. NDQ-AEP

RECENT PRICE **131.59** | P/E RATIO **20.7** (Trailing: 21.7 Median: 18.0) | RELATIVE P/E RATIO **1.17** | DIV'D YLD **2.9%** | **VALUE LINE**

TIMELINESS 4 Lowered 5/22/26
SAFETY 1 Raised 3/17/17
TECHNICAL 2 Lowered 6/5/26
BETA .70 (1.00 = Market)

18-Month Target Price Range
Low-High **Midpoint (% to Mid)**
$92-$151 $122 (-10%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	150	(+15%)	*3%*
Low	120	(-10%)	*1%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	894	809	960
to Sell	545	497	738
Hld's(000)	447994	446858	499973

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	© VALUE LINE PUB. LLC	29-31
High:	65.4	71.3	78.1	81.1	96.2	105.0	91.5	105.6	98.3	105.2	124.8	139.4								
Low:	52.3	56.8	61.8	62.7	72.3	65.1	74.8	80.3	69.4	75.2	89.9	112.5								
	30.01	31.27	30.77	31.48	34.78	33.51	33.31	31.35	32.84	31.49	30.04	33.30	38.20	36.08	37.01	40.45	***43.80***	***44.95***	Revenues per sh	***48.65***
	6.29	6.83	6.92	7.02	7.57	7.98	8.47	7.95	8.77	9.35	10.28	10.98	10.72	10.92	11.71	***12.20***	***12.80***	***13.50***	"Cash Flow" per sh	***15.90***
	2.60	3.13	2.98	3.18	3.34	3.59	4.23	3.62	3.90	4.08	4.42	4.96	5.09	5.24	5.61	5.96	***6.35***	***6.80***	Earnings per sh A	***7.50***
	1.71	1.85	1.88	1.95	2.03	2.15	2.27	2.39	2.53	2.71	2.84	3.00	3.17	3.37	3.57	3.74	***3.98***	***4.08***	Div'd Decl'd per sh B ■ †	***4.31***
	5.07	5.74	6.45	7.75	8.68	9.37	9.98	11.79	12.89	12.43	12.72	11.43	13.18	13.89	14.02	***14.10***	***14.10***	***14.00***	Cap'l Spending per sh	***14.00***
	28.33	30.33	31.37	32.98	34.37	36.44	35.38	37.17	38.58	39.73	41.38	44.49	46.60	48.46	50.63	***52.35***	***55.55***	***57.00***	Book Value per sh C	***60.90***
	480.81	483.42	485.67	487.78	489.40	491.05	491.71	492.01	493.25	494.17	496.60	504.21	513.87	526.18	532.91	540.86	***540.00***	***545.00***	Common Shs Outst'g D	***550.00***
	13.4	11.9	13.8	14.5	15.9	15.8	15.2	19.3	18.0	21.4	19.6	17.1	21.1	16.2	16.2	18.0	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***18.0***
	.85	.75	.88	.81	.84	.80	.80	.97	.97	1.14	1.01	.92	1.23	.93	.90	1.00			Relative P/E Ratio	***1.00***
	4.9%	5.0%	4.6%	4.2%	3.8%	3.8%	3.5%	3.4%	3.6%	3.1%	3.3%	3.5%	3.3%	4.5%	3.6%	3.5%			Avg Ann'l Div'd Yield	***3.3%***
	16380	15425	16196	15561	14919	16792	19640	18982	19721	21876	***23650***	***24500***	Revenues ($mill)	***26750***
	2073.6	1783.2	1923.8	2019.0	2200.1	2448.1	2307.2	2208.1	2967.1	3188.6	***3430***	***3705***	Net Profit ($mill)	***4125***
	26.8%	33.7%	5.8%	.7%	1.9%	4.6%	NMF	NMF	NMF	***21.0%***	***21.0%***	***21.0%***	Income Tax Rate	***21.0%***
	8.0%	8.0%	10.7%	12.7%	9.7%	7.8%	7.0%	7.0%	7.0%	***6.5%***	***6.0%***	***6.0%***	AFUDC % to Net Profit	***5.0%***
	50.0%	51.5%	53.2%	56.1%	58.5%	58.3%	58.5%	58.2%	58.1%	***58.0%***	***58.0%***	***58.0%***	Long-Term Debt Ratio	***57.5%***
	50.0%	48.5%	46.8%	43.9%	41.5%	41.7%	42.0%	42.0%	42.4%	***42.0%***	***42.0%***	***42.0%***	Common Equity Ratio	***42.5%***
	34775	37707	40677	44759	49537	53734	57520	62837	67528	***70730***	***72500***	***73500***	Total Capital ($mill)	***75900***
	45639	50262	55099	60138	63902	66001	71283	76693	82416	***81250***	***84250***	***85000***	Net Plant ($mill)	***87300***
	7.2%	5.9%	5.9%	5.6%	5.6%	5.6%	4.0%	3.6%	4.1%	***4.5%***	***4.5%***	***4.5%***	Return on Total Cap'l	***5.0%***
	11.9%	9.8%	10.1%	10.3%	10.7%	11.1%	9.7%	8.7%	11.0%	10.2%	***10.0%***	***10.5%***	Return on Shr. Equity	***11.0%***
	11.9%	9.8%	10.1%	10.3%	10.7%	11.1%	9.7%	8.7%	11.0%	10.2%	***10.0%***	***10.5%***	Return on Com Equity	***11.0%***
	5.5%	3.2%	3.5%	3.4%	3.8%	4.3%	2.9%	2.4%	3.2%	3.9%	***4.0%***	***4.0%***	Retained to Com Eq	***4.5%***
	54%	67%	65%	67%	65%	61%	70%	63%	63%	63%	***63%***	***62%***	All Div'ds to Net Prof	***61%***

CAPITAL STRUCTURE as of 3/31/26
Total Debt $51109 mill.
LT Debt $46850 mill. **LT Interest** $1616 mill.

Leases, Uncapitalized Annual rentals $119.6 mill.

Pfd Stock None

Common Stock 544,104,955 shs.

MARKET CAP: $71.6 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2022	2023	2024
% Change Retail Sales (KWH)	- -	+3.0	- -
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.0	NA	NA
Fixed Charge Cov. (%)	243	272	285

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '22-'24 to '29-'31
Revenues	.5%	-.5%	*4.0%*
"Cash Flow"	5.0%	5.5%	*5.0%*
Earnings	5.0%	4.0%	*5.5%*
Dividends	5.0%	5.0%	*3.5%*
Book Value	3.5%	3.5%	*3.5%*

QUARTERLY REVENUES ($ mill.) E

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	4690	4373	5342	4577	18982
2024	5026	4579	5420	4696	19721
2025	5464	5087	6010	5315	21876
2026	6020	***5580***	***6550***	***5500***	***23650***
2027	***6300***	***6150***	***6500***	***5550***	***24500***

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	1.11	1.13	1.77	1.23	5.24
2024	1.27	1.25	1.85	1.24	5.61
2025	1.54	1.43	1.80	1.19	5.96
2026	1.64	***1.48***	***1.95***	***1.28***	***6.35***
2027	***1.74***	***1.60***	***2.10***	***1.36***	***6.80***

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.78	.78	.78	.83	3.17
2023	.83	.83	.83	.88	3.37
2024	.88	.88	.88	.93	3.57
2025	.93	.93	.93	.95	3.74
2026	.95	.95			

BUSINESS: American Electric Power Company Inc. (AEP), through 10 operating utilities, serves approximately 5.5 million customers in Arkansas, Kentucky, Indiana, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia, & West Virginia. Has a transmission subsidiary. Electric revenue breakdown: residential, 43%; commercial, 23%; industrial, 18%; wholesale, 10%; other, 6%. Sold commercial barge operation in '15. Generating sources not available. Fuel costs: 33% of revenues. '25 reported depreciation rates (utility): 2.6%-12.5%. Has approximately 16,330 employees as of 12/25. Chief Executive Officer: William J. Fehrman. Incorporated: New York. Address: 1 Riverside Plaza, Columbus, Ohio 43215-2373. Telephone: 614-716-1000. Internet: www.aep.com.

American Electric Power started out 2026 on a high note. Notably, operating earnings of $1.64 a share were well above our estimate and the year-ago figure, on a 10.2% top-line improvement, which was driven by a 15.8% increase in commercial load, largely the result of ongoing growth in the data center sector. And management recently reaffirmed its 2026 operating earnings guidance of $6.15 to $6.45 a share and its annual operating earnings growth rate of 7% to 9% through 2030. All told, we have upped our 2026 earnings call by a nickel, to $6.35 a share, with at least a 7% uptick in the bottom line likely in the coming year.

The company's long-term growth prospects continue to expand. Following 7 gigawatts (GW) of new load agreements signed during the March quarter, American Electric Power's incremental load is now expected to increase to 63 GW by 2030, with all commitments backed by signed agreements with industrial customers, hyperscalers, and data-center developers. Moreover, the company continues to experience hefty system demand in key growth states, such as Indiana, Ohio, Oklahoma, and Texas. In order to support this growth, American Electric increased its five-year capital plan to $78 billion, up from $72 billion, due to newly approved transmission investments and new natural-gas fired generation in Indiana.

American Electric Power's finances remain strong. The utility has an impressive Financial Strength (A) rating, a perfect score for Price Stability (100), and a relatively low Beta coefficient (.70). What's more, the dividend yield, which remains a hallmark of AEP's investment appeal, now stands at 2.9%. Finally, leadership continues to target a 60%-70% payout ratio, which supports dividend growth even as capital investments are on the rise.

So what is an investor to do? AEP stock is pegged to lag the broader market over the year ahead. What's more, at the recent quotation, the issue offers uninspiring capital appreciation potential three to five years hence. Hence, the equity is best suited for conservative, income-seeking investors, as its dividend likely remains the stock's most notable feature.

Kenneth A. Nugent *June 5, 2026*

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	45
Earnings Predictability	90

(A) Diluted EPS. Excl. nonrec. gains (losses): '10, (7¢); '11, 89¢; '12, (38¢); '13, (14¢); '16, ($2.99); '17, 26¢; '19, (20¢); gain (losses) from disc. ops.: '15, 58¢; '16, (1¢); '22, (58¢); '23, (34¢). Next earnings report due early Aug. **(B)** Div'ds paid early Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. † Shareholder invest. plan avail. **(C)** Incl. intang. In '25: $4.9 million, or $0.90/per share. **(D)** In mill. **(E)** Rev. may not sum due to rounding.

DUKE ENERGY NYSE-DUK

RECENT PRICE 128.83 | P/E RATIO 19.1 (Trailing: 19.9 Median: 18.0) | RELATIVE P/E RATIO 1.07 | DIV'D YLD 3.4% | VALUE LINE

TIMELINESS 4 Lowered 6/6/25
SAFETY 1 Raised 8/22/25
TECHNICAL 3 Lowered 7/10/26
BETA .65 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$114-$159	$137 (5%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	175	(+35%)	*11%*
Low	145	(+15%)	*6%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	1186	1018	1302
to Sell	824	809	917
Hld's(000)	539229	536818	621800

High:	90.0	87.8	91.8	91.4	97.4	103.8	108.4	116.3	106.4	121.3	130.0	134.5
Low:	65.5	70.2	76.1	72.0	82.5	62.1	85.6	83.8	83.1	90.1	105.2	115.1

LEGENDS
28.6 x Dividends p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2029 2030 2031

Percent shares traded 15 10 5

% TOT. RETURN 7/27/26

	THIS STOCK	VL ARITH.* INDEX
1 yr.	11.2	23.1
3 yr.	53.0	52.8
5 yr.	46.9	47.8

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	© VALUE LINE PUB. LLC	29-31
32.22	32.63	27.88	34.84	33.84	34.10	32.49	33.66	33.73	34.21	31.04	32.64	37.36	37.69	39.12	41.44	*43.40*	*45.15*	Revenues per sh	*51.90*
8.49	8.68	6.80	8.56	9.11	9.40	9.20	10.01	11.05	12.12	12.04	12.60	12.86	13.45	14.15	16.21	*17.25*	*18.30*	"Cash Flow" per sh	*21.75*
4.02	4.14	3.71	3.98	4.13	4.10	3.71	4.22	4.72	5.06	5.12	5.24	5.27	5.56	5.90	6.31	*6.70*	*7.15*	Earnings per sh A	*8.80*
2.91	2.97	3.03	3.09	3.15	3.24	3.36	3.49	3.64	3.75	3.82	3.90	3.98	4.06	4.14	4.22	*4.30*	*4.42*	Div'd Decl'd per sh B ■	*5.30*
10.84	9.80	7.81	7.83	7.62	9.83	11.29	11.50	12.91	15.17	12.88	12.63	14.76	16.35	15.82	18.03	*20.25*	*22.50*	Cap'l Spending per sh	*31.75*
50.84	51.14	58.04	58.54	57.81	57.74	58.62	59.63	60.27	61.20	59.82	61.55	61.51	61.15	63.34	65.38	*68.00*	*70.80*	Book Value per sh C	*81.00*
442.96	445.29	704.00	706.00	707.00	688.00	700.00	700.00	727.00	733.00	769.00	769.00	770.00	771.00	776.00	778.00	*780.00*	*782.00*	Common Shs Outst'g D	*790.00*
12.7	13.8	17.5	17.4	17.9	18.2	21.3	19.9	17.0	17.7	17.1	18.9	19.8	16.9	17.8	18.8	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
.81	.87	1.11	.98	.94	.92	1.12	1.00	.92	.94	.88	1.02	1.14	.94	.93	.98			Relative P/E Ratio	*1.00*
5.7%	5.2%	4.7%	4.4%	4.3%	4.3%	4.3%	4.2%	4.5%	4.2%	4.4%	3.9%	3.8%	4.3%	4.0%	3.5%			Avg Ann'l Div'd Yield	*3.5%*
22743	23565	24521	25079	23868	25097	28768	29060	30357	32237	*33850*	*35300*	Revenues ($mill)	*41000*
2560.0	2963.0	3339.0	3747.0	3878.0	4133.0	4166.0	4391.0	4664.0	4967.0	*5275*	*5640*	Net Profit ($mill)	*7000*
31.0%	30.4%	14.1%	12.7%	.3%	5.1%	7.4%	9.2%	11.3%	11.2%	*11.0%*	*11.0%*	Income Tax Rate	*11.0%*
11.7%	12.3%	11.4%	8.0%	6.9%	5.9%	7.6%	9.1%	9.3%	10.3%	*10.0%*	*10.0%*	AFUDC % to Net Profit	*10.0%*
52.6%	54.0%	53.8%	54.0%	53.7%	55.1%	57.6%	59.6%	60.4%	60.7%	*61.0%*	*62.0%*	Long-Term Debt Ratio	*64.5%*
47.4%	46.0%	46.2%	44.1%	44.4%	43.1%	40.7%	38.8%	38.9%	38.6%	*38.0%*	*37.5%*	Common Equity Ratio	*35.0%*
86609	90774	94940	101807	103589	109744	116383	121564	126467	131950	*139200*	*148000*	Total Capital ($mill)	*183900*
82520	86391	91694	102127	106782	111408	111748	115315	123303	129959	*137500*	*146500*	Net Plant ($mill)	*184700*
4.0%	4.3%	4.6%	4.7%	4.8%	4.8%	4.6%	4.9%	5.0%	5.1%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
6.2%	7.1%	7.6%	8.0%	8.1%	8.4%	8.4%	8.9%	9.3%	9.6%	*10.0%*	*10.0%*	Return on Shr. Equity	*11.0%*
6.2%	7.1%	7.6%	8.3%	8.2%	8.5%	8.6%	9.1%	9.3%	9.7%	*10.0%*	*10.0%*	Return on Com Equity E	*11.0%*
.6%	1.2%	2.0%	2.4%	2.3%	1.9%	2.1%	2.4%	2.7%	3.2%	*3.5%*	*4.0%*	Retained to Com Eq	*4.5%*
91%	83%	74%	71%	73%	78%	76%	74%	71%	68%	*65%*	*62%*	All Div'ds to Net Prof	*61%*

CAPITAL STRUCTURE as of 3/31/26
Total Debt $90245 mill.
LT Debt $80477 mill. **LT Interest** $3660 mill.
Incl. $521 mill. finance leases.
(Total Interest Coverage: 2.6x)
Leases, Uncapitalized Annual rentals $256 mill.
Pension Assets-12/25 $7210 mill.
Oblig. $5871 mill.
Pfd Stock $973 mill. **Pfd Div'd** $56 mill.

Common Stock 779,596,217 shs.
as of 4/30/26

MARKET CAP: $100 billion (Mega Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (GWH)	-4.7%	+2.9%	+2.1
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (avg.)	+1.7	+1.8%	+1.9
Fixed Charge Cov. (%)	209	213	220

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	1.5%	3.5%	*4.5%*
"Cash Flow"	5.0%	4.5%	*6.5%*
Earnings	4.0%	3.5%	*6.5%*
Dividends	2.5%	2.0%	*4.0%*
Book Value	1.0%	1.0%	*4.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	7276	6578	7994	7212	29060
2024	7671	7172	8154	7360	30357
2025	8249	7508	8542	7938	32237
2026	9178	*7680*	*8970*	*8022*	*33850*
2027	*9570*	*8010*	*9350*	*8370*	*35300*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	1.20	.91	1.94	1.51	5.56
2024	1.44	1.18	1.62	1.66	5.90
2025	1.76	1.25	1.81	1.50	6.31
2026	1.93	*1.29*	*1.94*	*1.54*	*6.70*
2027	*1.96*	*1.40*	*2.11*	*1.68*	*7.15*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.985	.985	1.005	1.005	3.98
2023	1.005	1.005	1.025	1.025	4.06
2024	1.025	1.025	1.045	1.045	4.14
2025	1.045	1.045	1.065	1.065	4.22
2026	1.065	1.065	1.085		

BUSINESS: Duke Energy Corporation is a holding company for utilities with 8.7 mill. elec. customers in NC, FL, IN, SC, OH, and KY, and 1.8 mill. gas customers in OH, KY, NC, SC, and TN. Owns independent power plants & has 17.5% stake in National Methanol in Saudi Arabia. Acq'd Progress Energy 7/12; Piedmont Natural Gas 10/16; discontinued most int'l ops. in '16. Electric revenue breakdown: residential, 48%; commercial, 29%; industrial, 12%; other, 11%. Generating sources: gas, 33%; nuclear, 28%; coal, 15%; other, 2%; purchased, 22%. Fuel costs: 28% of revs. '25 reported deprec. rate: 3.1%. Has 26,440 employees. Chairman: Ted Craver. CEO: Harry Sideris. Inc.: DE. Addr.: 525 South Tryon St., Charlotte, NC 28202-1803. Tel.: 800-488-3853. Int.: www.duke-energy.com.

Duke Energy is off to a good start and should reliably post solid bottom-line growth this year. First-quarter earnings gains were driven by the recovery of infrastructure investments, along with higher demand from favorable weather. Increased operating and maintenance, including storm calls, plus rising depreciation and amortization expense were partial offsets. The company reaffirmed its 2026 earnings guidance of $6.55-$6.80 per share. Duke has been among the most consistent within the electric utility industry at generating profit growth. The 2026 campaign is apt to mark its tenth consecutive year of higher earnings per share.

More of the same for 2027 and thereafter seems likely. Duke should continue to benefit from load growth (higher long-term electric demand). An increase in the number of energy-thirsty data centers and reindustrialization in the southern states is a factor. So is population growth in the company's service area, which has been running at two to four times the national average of 0.5% due to steady migration to Florida and the Carolinas. These states draw retirees and employment seekers attracted to a relatively low cost of living, warm coastal climates, and decent job markets. All of this economic activity leads to a growing rate base and the recoupment of investments plus a regulated return on equity. Duke's annual EPS growth target of 5%-7% through 2030 appears feasible.

The dividend was recently raised. Duke lifted its quarterly dividend by about 2% to an annualized rate of $4.34 per share. This marked the 20th consecutive year that the company has increased the payout and the 100th straight year in which a dividend has been paid to shareholders. The payout ratio is normalizing towards the industry median of 60%. From 2028 on, we think its dividend growth rate will better match earnings gains.

Annual total return prospects of 6% to 11% to 2029-2031 are about average for an electric utility. We would like to see the midpoint of the bracket closer to 11% for new commitments. Duke typically trades at a slight premium to its peer group due to its consistency and Safety (1: Highest). Currently, its dividend yield is 20 basis points above the industry median.

Anthony J. Glennon *August 7, 2026*

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

(A) Dil. EPS. Excl. net nonrec. losses: '12, 64¢; '13, 22¢; '14, 59¢; '15, 5¢; '16, 60¢; '18, 96; '20, $3.40; '21, 30¢; '22, $2.10; '23, $2.02; '24, 19¢; net nonrec. gain: '17, 14¢. Qtly. EPS may not sum to year due to rnd'g. Next egs. report due Aug. 4th, then early Nov. **(B)** Div'ds paid mid-Mar., Jun., Sept., Dec. ■ Div'd reinv. plan avail. **(C)** Incl. intang. In '25: $42.92/sh. **(D)** In mill., **(E)** Rate base: Net orig. cost. Rate all'd on com. eq. in '24 in NC: 10.1%; in '24 in FL: 9.3%-11.3%; in '24 in IN: 9.75%. in '24 in SC: 9.99%; Regulat'y climate is avg. to above avg.

EDISON INTERNAT'L NYSE-EIX

RECENT PRICE **74.84** | P/E RATIO **12.3** (Trailing: 11.4 Median: 15.0) | RELATIVE P/E RATIO **0.67** | DIV'D YLD **4.9%** | **VALUE LINE**

TIMELINESS 3 Raised 5/2/25
SAFETY 3 Lowered 4/18/25
TECHNICAL 3 Lowered 7/10/26
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$39-$95	$67 (-10%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	125	(+65%)	*17%*
Low	80	(+5%)	*7%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	463	429	624
to Sell	366	279	360
Hld's(000)	334758	345955	403413

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	© VALUE LINE PUB. LLC	29-31
High:	69.6	78.7	83.4	71.0	76.4	78.9	68.6	73.3	74.9	88.8	81.0	76.2								
Low:	55.2	58.0	62.7	45.5	53.4	43.6	53.9	54.4	58.8	63.2	47.7	58.2								
	38.09	39.16	36.41	38.61	41.17	35.37	36.43	37.81	38.85	34.11	35.83	39.18	45.05	42.56	45.74	50.20	***48.95***	***50.25***	Revenues per sh	***55.55***
	8.41	9.03	9.63	8.80	9.95	10.35	10.43	11.03	4.69	9.39	9.80	10.59	11.51	11.80	12.59	14.96	***15.00***	***15.95***	"Cash Flow" per sh	***18.80***
	3.35	3.23	4.55	3.78	4.33	4.15	3.94	4.51	d1.26	4.70	4.52	4.59	4.63	4.76	4.91	6.53	***6.10***	***6.50***	Earnings per sh [A]	***7.60***
	1.27	1.29	1.31	1.37	1.48	1.73	1.98	2.23	2.43	2.48	2.58	2.69	2.84	2.99	3.17	3.36	***3.56***	***3.76***	Div'd Decl'd per sh [B] ■	***4.48***
	13.94	14.76	12.73	11.05	11.99	12.97	11.46	11.75	13.84	13.47	14.47	14.47	15.12	14.19	14.83	16.93	***18.55***	***19.20***	Cap'l Spending per sh	***21.75***
	32.44	30.86	28.95	30.50	33.64	34.89	36.82	35.82	32.10	36.75	37.08	36.57	35.70	36.02	36.18	44.39	***47.25***	***50.25***	Book Value per sh [C]	***60.60***
	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	361.99	378.91	380.38	382.21	383.93	384.78	384.79	***388.00***	***391.00***	Common Shs Outst'g [D]	***405.00***
	10.3	11.8	9.7	12.7	13.0	14.8	17.9	17.2	--	14.1	13.3	12.9	14.0	14.4	15.6	8.5	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***13.5***
	.66	.74	.62	.71	.68	.75	.94	.87	--	.75	.68	.70	.81	.80	.82	.44			Relative P/E Ratio	***.75***
	3.7%	3.4%	3.0%	2.8%	2.6%	2.8%	2.8%	2.9%	3.8%	3.7%	4.3%	4.5%	4.4%	4.4%	4.1%	6.0%			Avg Ann'l Div'd Yield	***4.4%***
	11869	12320	12657	12347	13578	14905	17220	16338	17599	19317	***19000***	***19650***	Revenues ($mill)	***22500***
	1422.0	1603.0	d290.0	1716.0	1818.0	1907.0	1977.0	2035.0	2162.0	2762.0	***2480***	***2655***	Net Profit ($mill)	***3200***
	11.1%	5.0%	--	1.2%	5.0%	18.0%	12.5%	14.9%	10.6%	16.3%	***16.0%***	***16.0%***	Income Tax Rate	***16.0%***
	6.8%	7.2%	--	9.6%	9.6%	8.8%	9.6%	11.4%	12.4%	10.0%	***11.0%***	***11.0%***	AFUDC % to Net Profit	***11.0%***
	41.8%	45.6%	53.6%	53.5%	55.2%	57.6%	60.7%	62.8%	65.4%	65.2%	***65.5%***	***65.5%***	Long-Term Debt Ratio	***64.5%***
	49.2%	45.8%	38.3%	39.9%	39.5%	33.2%	30.6%	28.7%	27.1%	30.9%	***31.0%***	***31.0%***	Common Equity Ratio	***32.5%***
	24362	25506	27284	33360	35581	41959	44547	48260	51274	55329	***59075***	***62900***	Total Capital ($mill)	***75600***
	37000	39050	41348	44285	47839	50700	53486	56084	59254	63328	***67100***	***70850***	Net Plant ($mill)	***83700***
	6.9%	7.3%	.1%	6.4%	6.3%	5.6%	5.7%	5.8%	6.0%	6.4%	***5.5%***	***5.5%***	Return on Total Cap'l	***5.5%***
	10.0%	11.6%	NMF	11.1%	11.4%	10.7%	11.3%	11.3%	12.2%	14.3%	***12.0%***	***12.0%***	Return on Shr. Equity	***12.0%***
	10.8%	12.7%	NMF	12.0%	12.0%	12.5%	12.9%	13.1%	13.7%	14.8%	***13.0%***	***13.0%***	Return on Com Equity [E]	***12.5%***
	5.6%	6.6%	NMF	5.9%	5.4%	5.4%	5.2%	5.0%	5.1%	7.3%	***5.5%***	***5.5%***	Retained to Com Eq	***5.0%***
	53%	52%	NMF	54%	58%	61%	64%	66%	67%	55%	***60%***	***60%***	All Div'ds to Net Prof	***60%***

% TOT. RETURN 7/6/26

	THIS STOCK	VL ARITH.* INDEX
1 yr.	51.0	23.1
3 yr.	23.7	52.8
5 yr.	63.4	47.8

CAPITAL STRUCTURE as of 3/31/26
Total Debt $41549 mill.
LT Debt $37311 mill. **LT Interest** $1860 mill.
(Total Interest Coverage: 2.9x)
Leases, Uncapitalized Annual rentals $120 mill.

Pension Assets-12/25 $3720 mill.
Oblig. $3705 mill.

Pfd Stock $2177 mill. **Pfd Div'd** $121 mill.

Common Stock 384,793,941 shs.
as of 4/21/26
MARKET CAP: $28.8 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (KWH)	-5.9	+3.3	-3.9
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	21254	23861	21248
Annual Load Factor (%)	49.7	43.6	49.0
% Change Customers (yr-end)	+.7	+.8	+1.3
Fixed Charge Cov. (%)	166	153	209

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	1.5%	4.0%	*3.0%*
"Cash Flow"	2.5%	9.0%	*6.0%*
Earnings	1.5%	13.0%	*6.0%*
Dividends	7.5%	4.5%	*6.0%*
Book Value	1.0%	.5%	*7.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	3966	3964	4702	3706	16338
2024	4078	4336	5201	3984	17599
2025	3811	4543	5750	5213	19317
2026	4103	***4777***	***5590***	***4530***	***19000***
2027	***4250***	***4925***	***5800***	***4675***	***19650***

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	1.09	1.01	1.38	1.28	4.76
2024	1.13	1.23	1.50	1.05	4.91
2025	1.37	.97	2.34	1.85	6.53
2026	1.42	***1.23***	***1.95***	***1.50***	***6.10***
2027	***1.50***	***1.35***	***2.00***	***1.65***	***6.50***

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.70	.70	.70	.70	2.80
2023	.7375	.7375	.7375	.7375	2.95
2024	.78	.78	.78	.78	3.12
2025	.8275	.8275	.8275	.8275	3.31
2026	.8775	.8775	.8775		

BUSINESS: Edison International is a holding company for Southern California Edison Company (SoCal Edison), which supplies electricity to 5.39 mill. customers in a 50,000 sq. mi. area in central, coastal, & southern CA (excl. Los Angeles & San Diego). Edison Energy is an energy svcs. co. Disc. Edison Mission Energy (independent power producer) in '12. Elec. rev. breakdown: residential, 40%; commercial, 48%; industrial, 3%; other, 9%. Generating sources: nuclear, 9%; gas, 2%; hydroelectric, 6%; purchased, 83%. Power costs: 26% of revs. '25 reported depr. rate: 4.5%. Employs 13,725. Board Chair: Peter J. Taylor. President & CEO: Pedro J. Pizarro. Inc.: CA. Address: 2244 Walnut Grove Ave., P.O. Box 976, Rosemead, CA 91770. Tel.: 626-302-2222. Internet: www.edison.com.

Edison International shares have rebounded sharply from last year's sell-off, which was tied to the L.A. County wildfires. The likelihood that Edison's equipment was a source of ignition for the Eaton Fire, which is associated with billions of dollars of liability, quickly dropped the equity price from $81 in January of 2025 to a mid-year low of $48. Authorities believe that an electric charge jumped from active high-voltage wires into an adjacent idled line that sparked the blaze. The $21 billion California Wildfire Fund of 2019 (CWF) is expected to limit Edison's liability. The CWF serves as self insurance for the state's three investor-owned utilities (IOUs), Edison, PG&E, and Sempra. It is funded by the IOUs and their ratepayers. Under most circumstances, the CWF would prevent utilities from suffering major material losses beyond the first $1 billion of damages per incident. Given the likelihood that the CWF will be significantly depleted from Eaton lawsuits, the IOUs have committed to collectively fund $18 billion more, with ratepayers paying half of it. The clarity that the replenished CWF brought, plus some changes underway at the state level, have helped improve sentiment for EIX.

Regulatory decisions are key for this issue. There are going to be many lawsuits and investigations that will need to conclude before the question of who pays and how much for the Eaton Fire is answered. Those can take months to a few years to all play out. Ultimately, the California Public Utilities Commission (CPUC) will have to use the investigative reports and information from lawsuits to decide if the utility acted "prudently" in the time leading up to and during the start of the wildfire. If CPUC rules in the utility's favor, insurers likely pay $10-$15 billion, the CWF pays $10-$15 billion, and Edison perhaps pays $1-$3 billion. Under that scenario, EIX looks somewhat undervalued. If Edison is found to have been negligent, the CWF would pay nothing and the company could be responsible for $11-$18 billion. A compromise, where the CWF pays $8-$12 billion and Edison pays $3-$6 billion, may be a feasible outcome.

We don't think the risk versus reward is compelling enough for a purchase.

Anthony J. Glennon *July 17, 2026*

Company's Financial Strength	B++
Stock's Price Stability	75
Price Growth Persistence	15
Earnings Predictability	25

To subscribe call 1-800-VALUELINE

(A) Adj. (non-GAAP) EPS from 2019 on. Excl. gains/(losses): nonrecur.; '10, 54¢; '11, ($3.33); '13, ($1.12); '15, ($1.18); '17, ($1.37); '18, (14¢); '19, (92¢); '20, ($2.54); '21, ($2.59); '22, ($3.02); '23, ($1.34); '24, ($1.60); '25, $5.02; disc. ops.: '13, 11¢; '14, 57¢; '15, 11¢; '18, 10¢. Qtly. EPS may not sum due to rounding. Next egs. report due late July. **(B)** Div'ds paid Jan., Apr., Jul., & Oct. ■ Div'd reinv. plan avl. **(C)** Incl. def'd chgs. and intng. In '25: $37/sh. **(D)** In mill. **(E)** Rt. base: net org. cost. Rate all'd on com. eq. in '25: 10.03%; Reg. Climate: Avg.

ENTERGY CORP. NYSE-ETR

RECENT PRICE **112.40** | P/E RATIO **25.5** (Trailing: 28.7 Median: 15.0) | RELATIVE P/E RATIO **1.35** | DIV'D YLD **2.1%** | **VALUE LINE**

TIMELINESS 3 Raised 1/16/26
SAFETY 1 Raised 9/6/24
TECHNICAL 2 Lowered 6/5/26
BETA .75 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$94-$151	$123 (10%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	125	(10%)	*3%*
Low	105	(-5%)	*-2%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	573	487	663
to Sell	453	362	490
Hld's(000)	425912	434755	495700

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
High:	45.2	41.0	44.0	45.4	61.0	67.8	57.5	63.4	55.9	79.0	98.6	118.4						
Low:	30.6	32.7	34.8	36.0	41.6	37.6	42.9	47.5	43.6	48.1	74.8	90.9						

LEGENDS
33.00 x Dividends p sh
Relative Price Strength
2-for-1 split 12/24
Options: Yes
Shaded area indicates recession

Target Price Range 2029 2030 2031

% TOT. RETURN 5/22/26

	THIS STOCK	VL ARITH.* INDEX
1 yr.	41.8	29.3
3 yr.	148.0	52.9
5 yr.	151.7	44.6

© VALUE LINE PUB. LLC 29-31

32.13	31.84	28.97	31.93	34.86	32.27	30.27	30.67	29.12	27.31	25.25	28.97	32.59	28.46	27.65	28.62	*29.80*	*31.95*	Revenues per sh
8.27	8.77	7.99	8.12	8.84	8.85	9.36	8.35	8.25	8.60	9.10	8.95	7.75	8.61	9.32	8.97	*10.00*	*10.95*	"Cash Flow" per sh
3.33	3.78	3.01	2.48	2.89	2.91	3.44	2.60	2.94	3.15	3.45	3.44	2.69	3.39	3.66	3.91	*4.40*	*4.95*	Earnings per sh [A]
1.62	1.66	1.66	1.66	1.66	1.67	1.71	1.75	1.79	1.83	1.87	1.93	2.05	2.17	2.30	2.44	*2.60*	*2.80*	Div'd Decl'd per sh [B] ■ †
6.66	7.60	9.09	7.86	7.41	8.39	8.64	11.04	11.23	10.86	12.26	15.43	12.52	10.43	11.26	16.99	*17.95*	*19.25*	Cap'l Spending per sh
23.77	25.41	25.86	27.00	27.92	25.95	22.56	22.14	23.39	25.67	27.28	28.71	30.70	34.35	35.11	37.41	*38.30*	*40.10*	Book Value per sh [C]
357.49	352.71	355.62	356.74	358.48	356.78	358.26	361.04	378.11	398.30	400.49	405.31	422.35	425.70	429.58	452.34	*465.00*	*470.00*	Common Shs Outst'g [D]
11.6	9.1	11.2	13.2	12.9	12.5	10.9	15.0	13.8	16.5	15.3	15.0	21.1	15.0	16.1	22.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio
.74	.57	.71	.74	.68	.63	.57	.75	.75	.88	.79	.81	1.22	.83	.84	1.16			Relative P/E Ratio
4.2%	4.9%	4.9%	5.1%	4.5%	4.6%	4.6%	4.5%	4.4%	3.5%	3.6%	3.7%	3.6%	4.3%	3.9%	2.8%			Avg Ann'l Div'd Yield
10846	11074	11009	10879	10114	11743	13764	12116	11880	12947	*13850*	*15025*	Revenues ($mill)						*19650*
1249.8	950.7	1092.1	1258.2	1406.7	1402.8	1103.2	1437.5	1576.6	1758.3	*2030*	*2320*	Net Profit ($mill)						*3380*
11.3%	1.8%	--	--	--	16.1%	--	23.8%	24.3%	21.9%	*23.5%*	*23.5%*	Income Tax Rate						*23.5%*
8.1%	14.7%	17.5%	16.7%	12.2%	7.1%	2.5%	2.8%	3.3%	4.3%	*4.0%*	*4.0%*	AFUDC % to Net Profit						*4.0%*
63.6%	63.6%	63.2%	62.0%	65.5%	67.6%	64.2%	60.8%	63.5%	61.9%	*62.5%*	*62.0%*	Long-Term Debt Ratio						*60.5%*
35.5%	35.5%	35.9%	37.1%	33.7%	31.7%	35.2%	38.6%	36.0%	37.6%	*37.5%*	*37.5%*	Common Equity Ratio						*39.0%*
22777	22528	24602	27557	32386	36733	36810	37851	41917	45045	*47175*	*49750*	Total Capital ($mill)						*59325*
27921	29664	31974	35183	38853	42244	42477	43834	47423	52855	*55900*	*59100*	Net Plant ($mill)						*69900*
6.9%	5.7%	5.8%	5.9%	5.6%	4.9%	4.3%	5.2%	5.2%	5.5%	*6.0%*	*6.5%*	Return on Total Cap'l						*7.5%*
15.1%	11.6%	12.0%	12.0%	12.6%	11.8%	8.4%	9.7%	10.3%	10.3%	*11.5%*	*12.5%*	Return on Shr. Equity						*14.5%*
15.2%	11.7%	12.2%	12.1%	12.7%	11.9%	8.4%	9.7%	10.5%	10.9%	*11.5%*	*12.5%*	Return on Com Equity						*15.0%*
7.7%	3.9%	4.9%	5.2%	5.9%	5.2%	1.9%	3.4%	3.8%	3.9%	*4.5%*	*5.5%*	Retained to Com Eq						*7.5%*
50%	68%	61%	58%	55%	57%	78%	65%	63%	62%	*59%*	*57%*	All Div'ds to Net Prof						*50%*

CAPITAL STRUCTURE as of 3/31/26
Total Debt $32,676.1 mill.
LT Debt $31,150.9 mill. **LT Interest** $1,413.0 mill.
Incl. $221.2 mill. of securitization bonds.
(LT interest earned: 2.7x)
Leases, Uncapitalized Annual rentals $102.9 mill.
Pension Assets-12/25 $4,799.0 mill.
Oblig $4,584.3 mill.
Pfd Stock $219.4 mill. **Pfd Div'd** $18.3 mill.
200,000 shs. 6.25%-7.50%, $1,000 liquidation val.;
250,000 shs. 8.75%, $100 par; 1.4 mill. shs.
5.375%; all cum., without sinking fund.
Common Stock 457,832,070 shs.
MARKET CAP: $51.5 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (KWH)	-.2	+3.3	+4.1
Avg. Indust. Use (MWH)	1146	1268	1365
Avg. Indust. Revs. per KWH(¢)	6.00	5.60	5.92
Capacity at Peak (Mw)	23879	24479	NA
Peak Load, Summer (Mw)	26092	25686	NA
Annual Load Factor (%)	52.4	54.9	NA
% Change Customers (yr-end)	+.4	+.7	+.7
Fixed Charge Cov. (%)	262	266	221

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	-1.5%	.5%	*6.0%*
"Cash Flow"	.5%	.5%	*8.0%*
Earnings	3.0%	3.0%	*11.5%*
Dividends	3.5%	4.5%	*7.0%*
Book Value	3.0%	7.0%	*5.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	2950.1	2846.0	3595.5	2724.8	12116
2024	2794.6	2953.6	3389.1	2742.3	11880
2025	2846.9	3328.8	3812.0	2958.9	12947
2026	3187.6	*3525*	*4000*	*3137.4*	*13850*
2027	*3325*	*3850*	*4350*	*3500*	*15025*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	.57	.92	1.64	.26	3.39
2024	.54	.96	1.50	.66	3.66
2025	.82	1.05	1.53	.51	3.91
2026	.86	*1.15*	*1.65*	*.74*	*4.40*
2027	*.95*	*1.25*	*1.80*	*.95*	*4.95*

QUARTERLY DIVIDENDS PAID [B] ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.505	.505	.505	.535	2.05
2023	.535	.535	.535	.565	2.17
2024	.565	.565	.565	.60	2.30
2025	.60	.60	.60	.64	2.44
2026	.64	.64			

BUSINESS: Entergy Corporation generates, transmits, distributes, and sells electric power to more than 3 million customers through subsidiaries in various states and regions. Customers by region: Louisiana, 1.1 mill.; Arkansas, 738,000; Texas, 538,000; Mississippi, 459,000; New Orleans, 209,000. Owned/leased generating capability by fuel source (at 12/25): modern (natural) gas, 43%; legacy gas (oil), 25%; nuclear, 21%; coal, 8%; renewables, 3%. Fuel and purchased power costs were 27.8% of '25 revenues. Depreciation rate: 2.9% (12/25). Employs 12,233. Off. & dirs. own less than 1.0% of common; Vanguard, 11.4% (3/26 Proxy) Chrmn & CEO: Andrew Marsh. Inc.: DE. Addr.: 639 Loyola Ave., New Orleans, LA 70113. Tel.: 504-576-4000. Internet: www.entergy.com.

Entergy Corp.'s 2026 first-quarter results were driven by favorable regulatory actions and returns on ongoing grid investments. During the period, the company reported adjusted share earnings of $0.86, an increase from $0.82 in the prior-year period. The core utility business posted solid net earnings growth to $540 million, up from $490 million a year ago, primarily reflecting the net effect of regulatory actions and returns on construction work in progress. However, these gains were partly offset by higher depreciation, interest expenses, and other taxes.

The company is acting aggressively to meet hyperscale data center and industrial demand through targeted infrastructure expansion and partnerships. Recently, Entergy announced a 20-year electric service agreement in Louisiana with a subsidiary of Meta Platforms, which is expected to generate an estimated $2 billion in savings for retail customers, while locking in massive baseload demand. This proves that the Gulf South's combination of available land and relatively low power rates is highly attractive to major technology firms. As artificial intelligence integration drives unprecedented energy needs across the broader economy, Entergy is successfully positioning its service territory as a premier destination for hyperscale development, thereby adding a high-growth technology vector to a traditionally defensive sector.

The company has updated its four-year capital plan to $57 billion through 2029. This will support new generation and storage to serve data center and industrial loads. Strategies center on securing additional agreements in its 7 GW to 12 GW pipeline, advancing regulatory dockets for rate-base additions, and maintaining a balanced approach to grid resilience and cleaner energy resources by leveraging its nuclear fleet and investing in natural gas, renewables, and transmission. We think this will bear above-trend load growth, potentially supporting 8.5% annual revenue growth out to 2029.

The top-quality equity appears to be fairly valued at this juncture. Moreover, the dividend yield is below the sector median. Thus, investors will likely want to wait for a better entry point.

Collin Cicconi *June 5, 2026*

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	55
Earnings Predictability	60

(A) Adj. dil. egs. GAAP was used in 2022. Excl. nonrec. gain (losses): '12, (66¢); '13, (49¢); '14, (28¢); '15, ($3.40); '16, ($5.07); '17, ($1.45); '18, (63¢); '21, (66¢); '23, $2.16; '24, ($1.21); '26 Q1, (3¢). Quarterly figures may not sum to total due to rounding. Next egs. report due early August. **(B)** Div'ds historically paid in early Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. † Shareholder investment plan avail. **(C)** Incl. deferred charges. In '25: $7,215.7 mill. or $15.95/sh. **(D)** In mill.

EVERGY, INC. NYSE-EVRG

RECENT PRICE **83.94** | P/E RATIO **19.8** (Trailing: 21.2 Median: NMF) | RELATIVE P/E RATIO **1.12** | DIV'D YLD **3.3%** | **VALUE LINE**

TIMELINESS 4 Lowered 5/30/25
SAFETY 2 New 9/14/18
TECHNICAL 2 Raised 5/1/26
BETA .75 (1.00 = Market)

18-Month Target Price Range

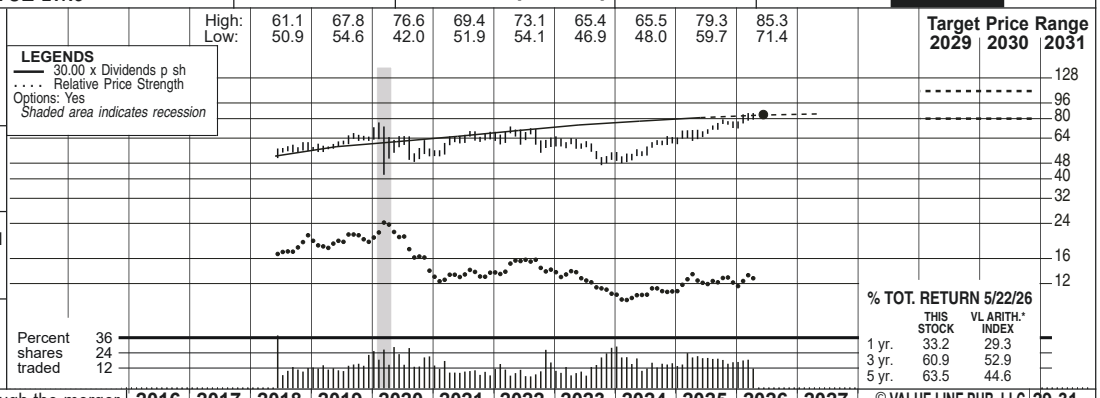
Low-High	Midpoint (% to Mid)
$73-$107	$90 (5%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	110	(+30%)	*10%*
Low	80	(-5%)	*2%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	422	337	455
to Sell	298	280	365
Hld's(000)	219597	213105	244939



Evergy, Inc. was formed through the merger of Great Plains Energy and Westar Energy in June of 2018. Great Plains Energy holders received .5981 of a share of Evergy for each of their shares, and Westar Energy holders received one share of Evergy for each of their shares. The merger was completed on June 4, 2018. Shares of Evergy began trading on the New York Stock Exchange one day later.

CAPITAL STRUCTURE as of 3/31/26
Total Debt $13.5 bill.
LT Debt $13.1 bill. **LT Interest** $.6 bill.

Leases, Uncapitalized Annual rentals $18.9 mill.

Pension Assets-12/25 $1427.1 mill.
Oblig $1698.4 mill.
Pfd Stock None

Common Stock 230,510,138 shs.

MARKET CAP: $19.3 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (KWH)	+3.1	+6.7	+1.0
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	6.94	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	350	382	387

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	- -	4.5%	*6.5%*
"Cash Flow"	- -	6.5%	*6.0%*
Earnings	- -	6.0%	*6.5%*
Dividends	- -	6.5%	*3.0%*
Book Value	- -	2.5%	*5.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	1297	1354	1669	1187	5508.2
2024	1331	1447	1811	1257	5847.3
2025	1374	1437	1809	1341	5961.6
2026	1444	*1330*	*2000*	*1426*	*6200*
2027	*1470*	*1500*	*2100*	*1530*	*6600*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	.62	.78	1.53	.24	3.17
2024	.53	.90	2.02	.34	3.79
2025	.55	.82	2.03	.42	3.83
2026	.69	*.90*	*2.15*	*.51*	*4.25*
2027	*.75*	*1.00*	*2.15*	*.65*	*4.55*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.5725	.5725	.5725	.6125	2.33
2023	.6125	.6125	.6125	.6425	2.48
2024	.6425	.6425	.6425	.6675	2.60
2025	.6675	.6675	.6675	.695	2.70
2026	.695	.695			

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	© VALUE LINE PUB. LLC	29-31
	--	--	16.75	22.71	21.66	24.36	25.52	23.98	25.42	25.89	*30.45*	*32.45*	Revenues per sh	*36.60*
	--	--	4.89	7.18	7.06	8.18	7.78	8.33	8.96	9.22	*10.40*	*10.95*	"Cash Flow" per sh	*12.40*
	--	--	2.50	2.79	2.72	3.83	3.26	3.17	3.79	3.83	*4.25*	*4.55*	Earnings per sh A	*5.30*
	--	--	1.74	1.93	2.05	2.18	2.33	2.48	2.60	2.70	*2.78*	*2.82*	Div'd Decl'd per sh B ■	*3.10*
	--	--	4.19	5.34	6.88	8.60	9.44	10.16	10.16	12.15	*16.70*	*17.20*	Cap'l Spending per sh	*19.65*
	--	--	39.28	37.82	38.50	40.32	41.32	42.06	43.29	44.39	*51.70*	*53.45*	Book Value per sh C	*57.75*
	--	--	255.33	226.64	226.84	229.30	229.55	229.73	229.98	230.26	*230.50*	*230.50*	Common Shs Outst'g D	*230.50*
	--	--	22.7	21.8	21.7	16.2	19.9	18.0	14.8	18.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
	--	--	1.23	1.16	1.11	.88	1.15	1.00	.77	.95			Relative P/E Ratio	*1.00*
	--	--	3.1%	3.2%	3.5%	3.5%	3.6%	4.3%	4.6%	3.9%			Avg Ann'l Div'd Yield	*3.3%*
	--	--	4275.9	5147.8	4913.4	5586.7	5859.1	5508.2	5847.3	5961.6	*6200*	*6600*	Revenues ($mill)	*7450*
	--	--	535.8	669.9	618.3	879.7	752.7	731.3	873.5	893.8	*865*	*925*	Net Profit ($mill)	*1080*
	--	--	9.8%	12.6%	14.1%	11.7%	5.9%	2.1%	3.3%	4.3%	*5.0%*	*5.0%*	Income Tax Rate	*5.0%*
	--	--	2.5%	2.5%	5.5%	5.0%	--	--	5.4%	6.0%	*6.0%*	*6.0%*	AFUDC % to Net Profit	*5.0%*
	--	--	40.0%	50.6%	51.3%	50.1%	51.1%	53.4%	54.3%	56.1%	*55.5%*	*54.5%*	Long-Term Debt Ratio	*52.5%*
	--	--	60.0%	49.4%	48.7%	49.9%	48.9%	46.6%	45.7%	43.9%	*44.5%*	*45.5%*	Common Equity Ratio	*47.5%*
	--	--	16716	17337	17924	18542	19389	20716	21764	23261	*23600*	*23900*	Total Capital ($mill)	*24700*
	--	--	18952	19346	20106	21150	22277	23729	24931	26302	*28400*	*30600*	Net Plant ($mill)	*35300*
	--	--	4.0%	4.8%	4.5%	5.7%	4.9%	4.7%	5.3%	5.2%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
	--	--	5.3%	7.8%	7.1%	9.5%	7.9%	7.6%	8.8%	8.7%	*8.0%*	*8.5%*	Return on Shr. Equity	*9.0%*
	--	--	5.3%	7.8%	7.1%	9.5%	7.9%	7.6%	8.8%	8.7%	*8.0%*	*8.5%*	Return on Com Equity E	*9.0%*
	--	--	.6%	2.4%	1.8%	4.1%	2.3%	1.7%	2.8%	2.7%	*3.0%*	*3.0%*	Retained to Com Eq	*4.0%*
	--	--	89%	69%	75%	57%	71%	78%	68%	69%	*65%*	*62%*	All Div'ds to Net Prof	*59%*

BUSINESS: Evergy, Inc. was formed through the merger of Great Plains Energy and Westar Energy in June of 2018. Through its subsidiaries (now doing business under the Evergy name), provides electric service to 1.7 million customers in Kansas and Missouri, including the greater Kansas City area. Electric revenue breakdown: residential, 37%; commercial, 33%; industrial, 11%; wholesale, 5%; other, 14%. Total capacity by fuel type: coal, 37%; wind, 29%; natural gas and oil, 27%; nuclear, 7%. Fuel costs: 24% of revenues. '25 reported deprec. rate: 3%. Has 4,691 employees. Chairman, President & CEO: David A. Campbell. CFO: W. Bryan Buckler. Inc.: Missouri. Address: 1200 Main Street, Kansas City, Missouri 64105. Tel.: 816-556-2200. Internet: www.evergy.com.

Evergy, Inc. registered better-than-expected first-quarter results. The adjusted bottom line rose roughly 25% year over year, to $0.69 per share, largely driven by the recovery of regulated investments. Furthermore, revenue contributions from a new large-load customer helped offset headwinds from mild winter weather and higher operating expenses.

The company secured a sizable new customer project within its Kansas Central service territory. The undisclosed customer is expected to operate under Evergy's Large Load Power Service (LLPS) tariff, under which new large-load customers pay premium rates designed to cover their share of both existing and future system costs, while helping maintain affordability for current customers.

Evergy Metro's electric rate case remains pending. The subsidiary is seeking about $140 million in additional retail revenue, based on a proposed 10.5% return on equity. If approved by the Missouri Public Service Commission, the new rates would take effect in January 2027.

Meanwhile, the utility anticipates strong long-term retail sales growth, as demand tied to data centers accelerates. The Kansas City region has increasingly attracted hyperscalers, including Google and Meta, amid the rapid expansion of artificial intelligence infrastructure and data-center development. In addition, Panasonic continues expanding electric-vehicle battery manufacturing operations in the area. These projects require substantial amounts of electricity, resulting in notable upward revisions to load-growth expectations. Evergy has nearly three gigawatts of steady-state peak-load commitments under contract, up from 1.9 gigawatts in the prior year. Of this total, about 2.5 gigawatts are tied to data-center projects under the LLPS structure, while roughly 0.45 gigawatts are associated with the Panasonic battery plant.

We estimate earnings per share will advance at a mid- to high-single-digit pace in the near term. For 2026 and 2027, we project share earnings of $4.25 and $4.55, respectively.

Shares of Evergy are untimely. But, the dividend yield remains above average for a utility.

Emma Jalees *June 5, 2026*

(A) Adjusted diluted earnings from 2025; prior egs. on GAAP. Excludes (loss)/gain: '25, ($0.17). Next earnings report due early August. **(B)** Dividends paid in mid-March, June, September, and December. ■ Dividend reinvestment plan available. **(C)** Incl. intangibles. **(D)** In millions. **(E)** Rate base: Original cost depreciated. Rate allowed on common equity in Missouri in '25: none specified; in Kansas in '25: 9.4%; earned on average common equity, '25: 9.7%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	30
Earnings Predictability	85

FIRSTENERGY NYSE-FE

RECENT PRICE **49.32** | P/E RATIO **17.9** (Trailing: 19.0 Median: 15.0) | RELATIVE P/E RATIO **1.00** | DIV'D YLD **3.9%** | **VALUE LINE**

TIMELINESS 4 Lowered 5/1/26
SAFETY 2 Raised 8/22/25
TECHNICAL 3 Lowered 6/26/26
BETA .70 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$42-$63	$53 (5%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(+40%)	*12%*
Low	55	(+10%)	*7%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	441	364	512
to Sell	304	240	311
Hld's(000)	513597	520182	593353

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	© VALUE LINE PUB. LLC	29-31
High:	41.7	36.6	35.2	39.9	49.1	52.5	41.8	48.8	43.3	45.0	48.2	52.3								
Low:	28.9	29.3	27.9	29.3	36.3	22.9	29.2	35.3	32.2	35.4	37.6	43.7								
	43.76	38.87	36.57	35.60	35.74	35.48	32.92	31.49	22.00	20.41	19.87	19.52	21.78	22.41	23.36	26.11	*27.20*	*28.00*	Revenues per sh	*30.40*
	8.50	5.75	6.05	6.30	6.26	7.04	7.04	6.54	5.19	4.80	4.59	5.41	4.71	4.78	5.13	5.33	*5.65*	*6.00*	"Cash Flow" per sh	*7.10*
	3.25	1.88	2.13	2.97	2.56	2.71	2.63	2.73	2.59	2.56	2.39	2.60	2.41	2.56	2.63	2.54	*2.75*	*2.95*	Earnings per sh [A]	*3.60*
	2.20	2.20	2.20	1.65	1.44	1.44	1.44	1.44	1.82	1.53	1.56	1.56	1.56	1.60	1.70	1.78	*1.86*	*1.94*	Div'd Decl'd per sh [B] ■	*2.24*
	6.44	5.45	7.09	6.90	8.42	6.83	6.93	6.38	5.23	4.93	4.89	4.29	4.82	5.84	6.99	8.14	*9.50*	*11.00*	Cap'l Spending per sh	*12.75*
	28.03	31.75	31.29	30.32	29.49	29.33	14.11	8.81	13.17	12.90	13.33	15.21	17.77	18.17	21.60	21.65	*22.75*	*24.25*	Book Value per sh [C]	*30.40*
	304.84	418.22	418.22	418.63	421.10	423.56	442.34	445.33	511.92	540.65	543.12	570.26	572.13	574.34	576.61	577.85	*585.00*	*595.00*	Common Shs Outst'g [D]	*625.00*
	11.7	22.4	21.1	13.1	13.2	12.6	12.7	11.4	13.6	17.1	15.7	14.1	17.0	14.9	15.2	16.7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.5*
	.74	1.41	1.34	.74	.69	.63	.67	.57	.73	.91	.81	.76	.98	.83	.79	.87			Relative P/E Ratio	*.95*
	5.8%	5.2%	4.9%	4.3%	4.3%	4.2%	4.3%	4.6%	5.2%	3.5%	4.2%	4.3%	3.8%	4.2%	4.2%	4.2%			Avg Ann'l Div'd Yield	*3.6%*
	14562	14022	11261	11035	10790	11132	12459	12870	13472	15090	*15900*	*16650*	Revenues ($mill)	*19000*
	1118.0	1213.0	1346.0	1380.0	1296.0	1419.0	1377.0	1468.0	1514.0	1471.0	*1610*	*1755*	Net Profit ($mill)	*2240*
	37.4%	37.2%	28.5%	19.8%	13.6%	20.6%	48.1%	16.2%	25.1%	18.7%	*19.0%*	*19.0%*	Income Tax Rate	*19.0%*
	9.2%	6.5%	4.8%	5.1%	5.9%	5.3%	6.1%	6.6%	8.8%	12.6%	*13.0%*	*13.0%*	AFUDC % to Net Profit	*13.0%*
	74.5%	84.3%	72.3%	73.8%	75.4%	71.9%	67.6%	68.7%	64.4%	67.1%	*68.0%*	*68.5%*	Long-Term Debt Ratio	*69.0%*
	25.5%	15.7%	27.4%	26.2%	24.6%	28.1%	32.4%	31.3%	35.6%	32.9%	*32.0%*	*31.5%*	Common Equity Ratio	*31.0%*
	24433	25040	24565	26593	29368	30923	31369	33322	34951	38018	*41700*	*46300*	Total Capital ($mill)	*61300*
	29387	28879	29911	31650	33294	34744	36285	38412	41102	44413	*48300*	*53000*	Net Plant ($mill)	*70400*
	6.6%	7.0%	7.4%	6.8%	6.0%	6.2%	5.9%	5.8%	5.7%	5.4%	*5.5%*	*5.5%*	Return on Total Cap'l	*5.5%*
	17.9%	30.9%	19.8%	19.8%	17.9%	16.4%	13.5%	14.1%	12.2%	11.8%	*12.0%*	*12.0%*	Return on Shr. Equity [E]	*12.0%*
	17.9%	30.9%	18.9%	19.7%	17.9%	16.4%	13.5%	14.1%	12.2%	11.8%	*12.0%*	*12.0%*	Return on Com Equity [E]	*12.0%*
	8.1%	14.6%	8.4%	8.1%	6.2%	6.6%	4.8%	5.4%	4.4%	3.6%	*4.0%*	*4.0%*	Retained to Com Eq	*4.5%*
	55%	53%	58%	59%	65%	60%	65%	62%	64%	69%	*68%*	*66%*	All Div'ds to Net Prof	*62%*

CAPITAL STRUCTURE as of 6/30/26
Total Debt $28983 mill.
LT Debt $27102 mill. **LT Interest** $1170 mill.
Incl. $10 mill. finance leases.
(Total Interest coverage: 2.5x)
Leases, Uncapitalized Annual rentals $72 mill.

Pension Assets-12/25 $5967 mill.
Oblig. $7280 mill.
Pfd Stock None

Common Stock 578,639,932 shs.
as of 6/30/26
MARKET CAP: $28.5 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (MWH)	-3.3	+2.8	+1.3
Residential Use (MWH)	52217	54631	56397
Commercial Use (MWH)	38179	39020	39734
Industrial Use (MWH)	52252	52951	52321
Tot. Electric Deliv'd (MWH)	142648	146602	148452
Peak Load Summer (Mw)	NA	NA	NA
% Change Customers (yr-end)	+.5	+.5	+.5
Fixed Charge Cov. (%)	225	261	254

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	-4.0%	3.0%	*4.0%*
"Cash Flow"	-2.5%	1.0%	*5.5%*
Earnings	-.5%	.5%	*5.5%*
Dividends	1.0%	.5%	*5.0%*
Book Value	-3.5%	9.5%	*6.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	3231	3006	3487	3146	12870
2024	3287	3280	3729	3176	13472
2025	3765	3380	4148	3797	15090
2026	4202	3678	*4195*	*3825*	*15900*
2027	*4335*	*3735*	*4590*	*3990*	*16650*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	.60	.47	.88	.62	2.56
2024	.55	.56	.85	.67	2.63
2025	.67	.52	.83	.53	2.54
2026	.72	.50	*.93*	*.60*	*2.75*
2027	*.77*	*.58*	*.96*	*.64*	*2.95*

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.39	.39	.39	.39	1.56
2023	.39	.39	.39	.41	1.58
2024	.41	.425	.425	.425	1.69
2025	.425	.445	.445	.445	1.76
2026	.445	.465			

BUSINESS: FirstEnergy Corp. is a holding company for Ohio Edison, Pennsylvania Power, Cleveland Electric, Toledo Edison, Metropolitan Edison, Penelec, Jersey Central Power & Light, West Penn Power, Potomac Edison, & Mon Power. Provides electric service to about 6.3 million customers in OH, PA, NJ, WV, MD, & NY. Acq'd Allegheny Energy 2/11. Electric revenue breakdown: residential, 59%; commercial, industrial & other, 41%. Purchases most of its power. Power costs: 34.7% of revenues. 2025 reported depreciation rate: 2.8%. Employs about 11,200. Chair, President, and Chief Executive Officer: Brian X. Tierney. Incorporated: Ohio. Address: 341 White Pond Drive, Akron, Ohio 44320-1119. Telephone: 800-736-3402. Internet: www.firstenergycorp.com.

At the midpoint of 2026, FirstEnergy is on track for respectable earnings growth this year. On the one hand, the electric utility reported revenue growth of 10.3% during the first two quarters, to an aggregate of $7.88 billion. The company's disciplined investment strategy and favorable distribution sales were catalysts. But, on the other hand, operating expenses (+11.0%) remain somewhat elevated, in particular purchased power, distribution, and transmission costs. On balance, FirstEnergy posted core operating earnings (non-GAAP) of $1.22 per share through June, compared with $1.19 in the like-2025 period. For full-year 2026, we expect revenues to expand 5%–6%, to $15.90 billion, and core operating earnings to improve 8%–9%, to $2.75 per share.

Leadership is focused on targeted investments and constructive regulatory momentum. The company's transmission and distribution plan, Energize365, is aiming for capital investments totaling roughly $36 billion from 2026 through 2030. Among the program's goals is to establish a culture of continuous improvement, enhance the organization's credit metrics, maintain investment-grade ratings, strengthen the balance sheet, and grow earnings. It made $2.6 billion of capital investments in the first half.

Our top- and bottom-line estimates for 2027 are largely intact. We look for revenues to advance 4%–5% next year, to $16.65 billion (previously $16.60 billion). Strong electricity demand and favorable transmission rates ought to drive results. Our updated 2027 estimate for core operating earnings, at $2.95 per share (previously $2.90), would represent a year-over-year gain of 7%–8%. Note that FirstEnergy has a targeted annual earnings growth rate of 6%–8% from 2026 to 2030.

FirstEnergy shares will primarily appeal to conservative, income-minded investors. The dividend yield of 3.9% is 70 basis points above the electric utility average, and payout coverage is sound, at 68% of our 2026 bottom-line forecast. Also note the stock's Above Average (2) Safety rank and perfect scores for Price Stability and Earnings Predictability. However, the issue is untimely and long-term total return potential is underwhelming.

Sharif Abdou *August 7, 2026*

(A) Dil. egs. excl. nonrc. losses: '14, $2.05; '15, $1.34; '16, $17.12; '17, $6.61; '18, $1.26; '19, 89¢; '20, 54¢; '21, 33¢; '22, $1.70; '23, 60¢; '24, 93¢; '25, 78¢; '26 1H, (2¢); gains/(losses) from disc. ops.: '18, 66¢; '20, 14¢; '21, 8¢; '23, (4¢). May not sum due to rnd'g. Next egs. rpt. due late Oct. **(B)** Div. pd. Mar., Jun., Sept., Dec. ■ Div'd reinv. avail. **(C)** Incl. intang. in '25: $11.16/sh. **(D)** In mill. **(E)** High ROE from large writeoffs. Rate base: Depr. orig. cost. Rates all'd on com. eq.: 9.5-10.45%; Reg. Climate: NJ/OH/PA Avg.; MD/WV Below Avg.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	45
Earnings Predictability	100

IDACORP, INC. NYSE-IDA

RECENT PRICE 151.09 | P/E RATIO 23.6 (Trailing: 25.1 Median: 20.0) | RELATIVE P/E RATIO 1.28 | DIV'D YLD 2.3% | VALUE LINE

TIMELINESS 4 Lowered 4/25/25
SAFETY 1 Raised 4/19/24
TECHNICAL 3 Lowered 7/17/26
BETA .70 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$131-$191	$161 (5%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	165	(+10%)	*5%*
Low	135	(-10%)	*Nil*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	244	178	268
to Sell	191	150	208
Hld's(000)	54574	56077	64119

	2019	2020	2021	2022	2023	2024	2025
High:	70.5	83.4	100.0	102.4	114.0	113.6	113.8	118.9	113.0	120.4	138.0	154.9
Low:	55.4	65.0	77.5	79.6	89.3	69.1	85.3	93.5	88.1	86.4	104.7	124.8

LEGENDS
32.00 x Dividends p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2029 2030 2031

% TOT. RETURN 7/6/26

	THIS STOCK	VL ARITH.* INDEX
1 yr.	33.7	23.1
3 yr.	59.6	52.8
5 yr.	79.5	47.8

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	© VALUE LINE PUB. LLC	29-31
20.97	20.55	21.55	24.81	25.51	25.23	25.04	26.76	27.19	26.70	26.77	28.86	32.51	34.90	33.85	33.05	***35.50***	***39.75***	Revenues per sh	***44.75***
5.35	5.84	5.93	6.29	6.58	6.70	6.86	7.50	7.85	8.07	8.19	8.41	8.55	9.11	9.59	10.61	***11.25***	***12.25***	"Cash Flow" per sh	***14.00***
2.95	3.36	3.37	3.64	3.85	3.87	3.94	4.21	4.49	4.61	4.69	4.85	5.11	5.14	5.50	5.90	***6.40***	***6.95***	Earnings per sh A	***7.50***
1.20	1.20	1.37	1.57	1.76	1.92	2.08	2.24	2.40	2.56	2.72	2.88	3.04	3.20	3.35	3.46	***3.65***	***4.00***	Div'd Decl'd per sh B ■ †	***4.35***
6.85	6.76	4.78	4.68	5.45	5.84	5.89	5.66	5.51	5.53	6.16	5.94	8.56	12.07	18.70	21.80	***25.50***	***25.50***	Cap'l Spending per sh	***25.00***
31.01	33.19	35.07	36.84	38.85	40.88	42.74	44.65	47.01	48.88	50.73	52.82	55.52	57.44	61.73	65.11	***69.25***	***72.25***	Book Value per sh C	***77.75***
49.41	49.95	50.16	50.23	50.27	50.34	50.40	50.42	50.42	50.42	50.46	50.52	50.56	50.62	53.96	54.86	***55.50***	***55.50***	Common Shs Outst'g D	***56.00***
11.8	11.5	12.4	13.4	14.7	16.2	19.1	20.6	20.5	22.3	19.9	20.8	21.0	19.9	18.0	20.4	***Bold figures are Value Line estimates***		Avg Ann'l P/E Ratio	***20.0***
.75	.72	.79	.75	.77	.82	1.00	1.04	1.11	1.19	1.02	1.12	1.21	1.11	.94	1.06			Relative P/E Ratio	***1.10***
3.4%	3.1%	3.3%	3.2%	3.1%	3.1%	2.8%	2.6%	2.6%	2.5%	2.9%	2.9%	2.8%	3.1%	3.4%	2.9%			Avg Ann'l Div'd Yield	***2.9%***
1262.0	1349.5	1370.8	1346.4	1350.7	1458.1	1644.0	1766.4	1826.6	1813.0	***1970***	***2200***	Revenues ($mill)	***2500***
198.3	212.4	226.8	232.9	237.4	245.6	259.0	261.2	289.2	323.5	***350***	***385***	Net Profit ($mill)	***420***
15.5%	18.6%	7.1%	9.5%	10.8%	13.1%	12.7%	9.4%	4.9%	13.0%	***13.0%***	***13.0%***	Income Tax Rate	***13.0%***
16.3%	13.9%	15.2%	16.2%	17.3%	17.7%	19.8%	8.8%	8.8%	8.0%	***8.0%***	***7.0%***	AFUDC % to Net Profit	***7.0%***
44.8%	43.7%	43.6%	41.3%	43.9%	42.8%	43.9%	48.8%	47.8%	49.8%	***48.0%***	***46.5%***	Long-Term Debt Ratio	***44.0%***
55.2%	56.3%	56.4%	58.7%	56.1%	57.2%	56.1%	51.2%	52.2%	50.2%	***52.0%***	***53.5%***	Common Equity Ratio	***56.0%***
3898.5	3997.5	4205.1	4201.3	4560.4	4669.1	5001.4	5683.4	6384.7	7119.6	***7350***	***7500***	Total Capital ($mill)	***7750***
4172.0	4283.9	4395.7	4531.5	4709.5	4901.8	5173.0	5745.2	6517.3	7647.9	***8775***	***9875***	Net Plant ($mill)	***11950***
6.1%	6.3%	6.4%	6.5%	6.1%	6.2%	6.1%	5.4%	5.6%	5.8%	***5.0%***	***5.0%***	Return on Total Cap'l	***5.5%***
9.2%	9.4%	9.6%	9.4%	9.3%	9.2%	9.2%	9.0%	8.7%	9.1%	***9.5%***	***9.5%***	Return on Shr. Equity	***9.5%***
9.2%	9.4%	9.6%	9.4%	9.3%	9.2%	9.2%	9.0%	8.7%	9.1%	***9.5%***	***9.5%***	Return on Com Equity E	***9.5%***
4.3%	4.4%	4.4%	4.2%	3.9%	3.7%	3.7%	3.4%	3.4%	3.8%	***4.0%***	***4.0%***	Retained to Com Eq	***4.0%***
53%	53%	54%	56%	58%	60%	60%	63%	61%	58%	***57%***	***58%***	All Div'ds to Net Prof	***58%***

CAPITAL STRUCTURE as of 3/31/26
Total Debt $3641.8 mill.
LT Debt $3641.8 mill. **LT Interest** $190.0 mill.

Pension Assets-12/25 $1023.4 mill.
Oblig $1039.0 mill.

Pfd Stock None

Common Stock 55,408,235 shs.
as of 4/24/26

MARKET CAP: $8.4 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (KWH)	+7.3	+2.9	+1.2
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	3615	3793	3793
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+2.4	+2.2	+2.3
Fixed Charge Cov. (%)	315	328	337

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	3.0%	5.0%	*4.5%*
"Cash Flow"	4.0%	4.0%	*6.0%*
Earnings	4.0%	3.5%	*5.5%*
Dividends	6.5%	5.5%	*4.5%*
Book Value	4.5%	4.5%	*4.0%*

QUARTERLY REVENUES($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	429.7	413.8	510.9	412.0	1766.4
2024	448.9	451.1	528.5	398.1	1826.6
2025	432.5	450.9	524.2	405.4	1813.0
2026	402.5	***545***	***615***	***407.5***	***1970***
2027	***450***	***550***	***620***	***580***	***2200***

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	1.11	1.35	2.07	.61	5.14
2024	.95	1.71	2.12	.70	5.50
2025	1.10	1.76	2.26	.78	5.90
2026	1.21	***1.80***	***2.45***	***.94***	***6.40***
2027	***1.30***	***1.90***	***2.70***	***1.05***	***6.95***

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.75	.75	.75	.79	3.04
2023	.79	.79	.79	.83	3.20
2024	.83	.83	.83	.86	3.35
2025	.86	.86	.88	.88	3.48
2026	.88	.88			

BUSINESS: IDACORP, Inc. is a holding company for Idaho Power Company, a regulated electric utility that serves 664,000 customers throughout a 24,000-square-mile area in southern Idaho and eastern Oregon (population: 1.4 million). Most of the company's revenues are derived from the Idaho portion of its service area. Revenue breakdown: residential, 38%; commercial, 22%; industrial, 15%; irrigation, 11%; other, 14%. Generating sources: hydro, 52%; steam fired, 21%; gas, 27%; purchased,33%. Fuel costs: 14% of revenues. '25 depreciation rate: 13.9%. Has 2,174 employees. Chairman: Dennis L. Johnson. President & CEO: Lisa A. Grow. Incorporated: Idaho. Address: 1221 W. Idaho St., Boise, Idaho 83702. Telephone: 208-388-2200. Internet: www.idacorpinc.com.

IDACORP posted a mixed first-quarter performance. Share earnings rose 10% from the year-ago period, to $1.21, despite a 7% decline in revenue, owing to lower electric utility sales. The bottom line benefited from recently approved general rate increases, continued customer growth, and other favorable regulatory factors.

The utility is also taking steps to streamline its operations. Idaho Power recently reached an agreement to sell its Oregon retail electric distribution business to Oregon Trail Electric Cooperative (OTEC) for $154 million. The transaction, which remains subject to regulatory approval and is expected to close in early 2027, will transfer about 20,000 customers in eastern Oregon to OTEC. Idaho Power will continue to own and operate its regional generation and transmission assets, allowing the company to maintain its core infrastructure while simplifying its retail service footprint.

IDACORP remains well positioned to capitalize on rising electricity demand across its service territory in the long run. Population growth and expanding operations from large-load industrial customers, including data centers and semiconductor manufacturing facilities, continue to support sizable increases in power demand. To accommodate this growth, the company is investing in major transmission projects, most notably the Boardman-to-Hemingway (B2H) transmission line, which is expected to enter service in late 2027. Management has also structured long-term customer agreements with large industrial users to help ensure that new infrastructure investments generate predictable returns while limiting risk to existing ratepayers.

Near-term share-profit growth prospects appear favorable. Management reaffirmed its 2026 earnings guidance of $6.25 to $6.45 per share, assuming normal weather conditions, realization of approved rate increases, and stable power supply costs. Supported by continued customer growth and regulatory relief, we estimate share earnings of $6.40 in 2026, followed by an advance to $6.95 in 2027.

Untimely shares of IDACORP have a subpar dividend yield for a utility.

Emma Jalees *July 17, 2026*

(A) Diluted EPS. Earnings may not sum due to rounding. Next earnings report due July 31st. **(B)** Dividends historically paid in late February, May, August, and November. ■ Dividend reinvestment plan available. † Shareholder investment plan available. **(C)** Incl. intangibles. In '25: $1427.8 mill., $26.03/sh. **(D)** In millions. **(E)** Rate base: Net original cost. Rate allowed on common equity in '12: 10% (imputed); Regulatory Climate: Above Average.

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	45
Earnings Predictability	100

OGE ENERGY CORP. NYSE-OGE

RECENT PRICE **48.54** | P/E RATIO **19.8** (Trailing: 21.6 Median: 17.0) | RELATIVE P/E RATIO **1.05** | DIV'D YLD **3.5%** | **VALUE LINE**

TIMELINESS 3 Raised 3/6/26
SAFETY 2 Raised 6/6/25
TECHNICAL 2 Lowered 6/5/26
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$42-$60	$51 (5%)

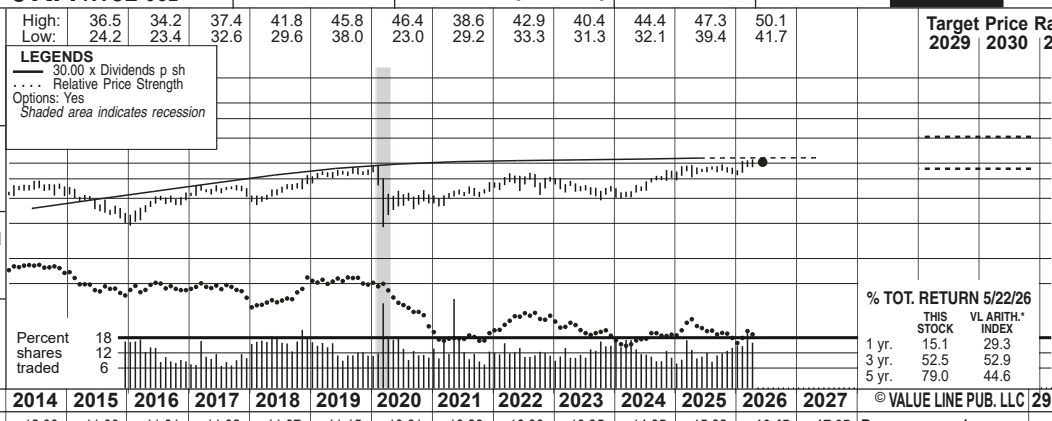
2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(+35%)	*10%*
Low	45	(-5%)	*2%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	250	191	325
to Sell	236	186	214
Hld's(000)	152263	160583	185547

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
High:	36.5	34.2	37.4	41.8	45.8	46.4	38.6	42.9	40.4	44.4	47.3	50.1						
Low:	24.2	23.4	32.6	29.6	38.0	23.0	29.2	33.3	31.3	32.1	39.4	41.7						



Target Price Range 2029 | 2030 | 2031: 128, 96, 80, 64, 48, 40, 32, 24, 16, 12

% TOT. RETURN 5/22/26

	THIS STOCK	VL ARITH.* INDEX
1 yr.	15.1	29.3
3 yr.	52.5	52.9
5 yr.	79.0	44.6

© VALUE LINE PUB. LLC 29-31

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Revenues per sh	19.04	19.96	18.58	14.45	12.30	11.00	11.31	11.32	11.37	11.15	10.61	18.26	16.86	13.35	14.85	15.82	*16.45*	*17.05*
"Cash Flow" per sh	3.01	3.31	3.69	3.46	3.40	3.23	3.31	3.34	3.74	4.02	4.03	4.44	5.63	4.61	4.88	5.00	*5.25*	*5.50*
Earnings per sh A	1.50	1.73	1.79	1.94	1.98	1.69	1.69	1.92	2.12	2.24	2.08	2.36	3.32	2.07	2.19	2.32	*2.45*	*2.60*
Div'd Decl'd per sh B ■	.73	.76	.80	.85	.95	1.05	1.16	1.27	1.40	1.51	1.58	1.63	1.65	1.66	1.68	1.69	*1.70*	*1.70*
Cap'l Spending per sh	4.36	6.48	5.85	4.99	2.86	2.74	3.31	4.13	2.87	3.18	3.25	3.89	5.25	5.88	5.43	5.12	*6.70*	*7.35*
Book Value per sh C	11.73	13.06	14.00	15.30	16.27	16.66	17.24	19.28	20.06	20.69	18.15	20.27	22.05	22.52	23.09	24.15	*24.50*	*25.85*
Common Shs Outst'g D	195.20	196.20	197.60	198.50	199.40	199.70	199.70	199.70	199.70	200.10	200.10	200.10	200.20	200.30	201.00	206.10	*207.00*	*207.00*
Avg Ann'l P/E Ratio	13.3	14.4	15.2	17.7	18.3	17.7	17.7	18.3	16.5	19.0	16.2	14.3	11.7	17.4	17.0	19.1	*Bold figures are Value Line estimates*	
Relative P/E Ratio	.85	.90	.97	.99	.96	.89	.93	.92	.89	1.01	.83	.77	.68	.97	.89	1.00		
Avg Ann'l Div'd Yield	3.7%	3.1%	2.9%	2.5%	2.6%	3.5%	3.9%	3.6%	4.0%	3.5%	4.7%	4.8%	4.2%	4.6%	4.5%	3.7%		
Revenues ($mill)							2259.2	2261.1	2270.3	2231.6	2122.3	3653.7	3375.7	2674.3	2985.3	3260.1	*3400*	*3525*
Net Profit ($mill)							338.2	384.3	425.5	449.6	415.9	472.5	665.7	416.8	441.5	470.7	*510*	*545*
Income Tax Rate							30.5%	32.5%	14.5%	7.4%	13.2%	11.5%	15.7%	11.9%	15.2%	16.0%	*15.0%*	*15.0%*
AFUDC % to Net Profit							6.4%	15.0%	8.3%	1.6%	1.6%	2.2%	1.6%	6.4%	9.1%	8.9%	*8.5%*	*8.0%*
Long-Term Debt Ratio							41.1%	41.7%	42.0%	43.6%	49.0%	52.6%	44.6%	49.0%	52.0%	51.9%	*52.5%*	*52.0%*
Common Equity Ratio							58.9%	58.3%	58.0%	56.4%	51.0%	47.4%	55.4%	51.0%	48.0%	48.1%	*47.5%*	*48.0%*
Total Capital ($mill)							5849.6	6600.7	6902.0	7334.7	7126.2	8552.7	7962.1	8852.1	9661.8	10347	*10650*	*11125*
Net Plant ($mill)							7696.2	8339.9	8643.8	9044.6	9374.6	9832.9	10547	11301	12211	12860	*13450*	*13900*
Return on Total Cap'l							7.0%	7.0%	7.3%	7.1%	6.9%	6.4%	9.4%	5.9%	6.0%	5.9%	*6.0%*	*6.5%*
Return on Shr. Equity							9.8%	10.0%	10.6%	10.9%	11.5%	11.6%	15.1%	9.2%	9.5%	9.5%	*10.0%*	*10.0%*
Return on Com Equity							9.8%	10.0%	10.6%	10.9%	11.5%	11.6%	15.1%	9.2%	9.6%	9.8%	*10.0%*	*10.5%*
Retained to Com Eq							3.3%	3.5%	3.8%	3.6%	2.8%	3.6%	7.6%	1.9%	2.2%	2.7%	*3.0%*	*3.5%*
All Div'ds to Net Prof							67%	64%	64%	67%	76%	69%	49%	80%	77%	71%	*69%*	*65%*

CAPITAL STRUCTURE as of 3/31/26
Total Debt $5862.0 mill.
LT Debt $5369.6 mill. **LT Interest** $261 mill.
(LT interest earned: 2.9x)

Leases, Uncapitalized Annual rentals $4.3 mill.
Pension Assets-12/25 $488.4 mill.
Oblig $569.9 mill.

Pfd Stock None

Common Stock 206,374,321 shs.
as of 3/31/26

MARKET CAP: $10.0 billion (Mid-Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (KWH)	-1.0	+7.7	+5.0
Avg. Indust. Use (MWH)	1767	1848	1908
Avg. Indust. Revs. per KWH (¢)	5.73	6.05	6.47
Capacity at Peak (Mw)	7116	6921	6921
Peak Load, Summer (Mw)	7384	7435	7412
Annual Load Factor (%)	45.9	49.0	51.7
% Change Customers (yr-end)	+.8	+1.2	+.7
Fixed Charge Cov. (%)	285	277	279

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	1.0%	5.0%	*4.5%*
"Cash Flow"	3.5%	4.0%	*4.5%*
Earnings	1.5%	- -	*6.0%*
Dividends	6.0%	2.0%	*1.5%*
Book Value	3.5%	3.0%	*4.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	557.2	605.0	945.4	566.7	2674.3
2024	596.8	662.6	965.4	760.5	2985.3
2025	747.7	741.6	1045.0	725.8	3260.1
2026	752.6	*775*	*1100*	*772.4*	*3400*
2027	*775*	*800*	*1150*	*800*	*3525*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	.19	.44	1.20	.24	2.07
2024	.09	.51	1.09	.50	2.19
2025	.31	.53	1.14	.34	2.32
2026	.24	*.55*	*1.25*	*.41*	*2.45*
2027	*.30*	*.55*	*1.35*	*.40*	*2.60*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.41	.41	.41	.4141	1.64
2023	.4141	.4141	.4141	.4182	1.66
2024	.4182	.4182	.4182	.4213	1.68
2025	.4213	.4213	.4213	.425	1.69
2026	.425	.425			

BUSINESS: OGE Energy Corp. supplies electricity to about 915,000 customers in Oklahoma and western Arkansas. Generation mix at 12/25: natural gas (57%); coal (34%); renewable (9%). Owns 3% of Energy Transfer's limited partnership units. Electric revenue breakdown: Residential, 36.7%; Commercial, 30.0%; Public Authorities, 8.4%; Industrial, 8.2%; Oilfield, 7.6%; Purchased Power/Other, 9.1% (12/25). Fuel, purchased power and transmission expenses were 38.6% of '25 rev. Employs 2,248. Off./dir. own less than 1% of comm. stock; BlackRock, Inc., 12.1%; Vanguard Group, 10.3% (4/26 Proxy). Chrmn, Pres., and CEO: Sean Trauschke. Inc.: OK. Addr.: 321 North Harvey, Box 321, Oklahoma City, OK 73101-0321. Tel.: 405-553-3000. Internet: www.oge.com.

OGE Energy Corp. generated mixed results in the 2026 first quarter. Despite lower system sales volumes, commercial demand held up well and supported modest revenue growth from the prior-year period, at $752.6 million. However, mild winter weather reduced heating-related demand and higher operational and maintenance costs weighed on bottom-line results. Share earnings fell below our $0.30 target, at $0.24. Elsewhere, capital spending of $266.8 million was focused on infrastructure and reliability for its growing base of customers across Oklahoma and western Arkansas.

The company reached a deal with Google Cloud to serve three new data centers in Muskogee and Stillwater, Oklahoma. Google will pay 100% of the grid connection costs for these sites. Google will also pay all contracted costs regardless of actual energy usage, and cover its proportional share of any new power generation needed to serve the added load. Contract demand ought to ramp up over time, approaching 1 gigawatt (GW) by 2031 and reaching a maximum 1.2 GW by 2036. However, we note that this is expected to have a minimal near-term impact for OGE's operations.

Over the next few years, the company will likely focus on executing its integrated resource plan and securing favorable regulatory outcomes to support rate base growth. OGE is actively investing in system upgrades, suggesting successful capital deployment will be the core driver of earnings expansion in the near term. Strategies center on infrastructure upgrades for reliability, grid modernization, and accommodating load growth from data centers. Long-term value creation will depend on OGE's ability to integrate renewable energy sources, build out necessary high-voltage transmission lines, and deploy battery storage solutions to handle peak power loads. The primary hurdle is balancing these capital upgrades without causing significant rate shocks that could alienate customers.

The equity is worth considering for income investors. We look for respectable long-term capital gains compared to the broader utility industry. Too, the dividend yield is above the sector median.

Collin Cicconi *June 5, 2026*

(A) Diluted eqs. Excludes nonrecurring gain (loss): '15, (33¢); '17, $1.18; '19, (8¢); '20, ($2.95); '21, $1.32; '22, $1.06; Next earnings report due late July.

(B) Div'ds historically paid in late Jan., Apr., July, & Oct. ■ Div'd reinvestment plan avail.
(C) Includes deferred charges. In '25: $557.2 million, or $2.70/sh.

(D) In mill., adjusted for split.

Company's Financial Strength	B++
Stock's Price Stability	100
Price Growth Persistence	30
Earnings Predictability	70

PINNACLE WEST NYSE-PNW

RECENT PRICE 106.91 | P/E RATIO 21.4 (Trailing: 19.9 Median: 18.0) | RELATIVE P/E RATIO 1.16 | DIV'D YLD 3.5% | VALUE LINE

TIMELINESS 4 Lowered 6/6/25
SAFETY 2 Raised 10/18/24
TECHNICAL 3 Lowered 6/26/26
BETA .75 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$79-$121	$100 (-5%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	145	(+35%)	*11%*
Low	105	(Nil)	*3%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	285	243	358
to Sell	270	178	236
Hld's(000)	117332	115069	139441

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
High:	73.3	82.8	92.5	92.6	99.8	105.5	88.5	80.6	86.0	95.4	96.5	109.5						
Low:	56.0	62.5	75.8	73.4	81.6	60.1	62.8	59.0	68.6	65.2	81.5	86.3						

LEGENDS
28.6 x Dividends p sh
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2029 2030 2031

% TOT. RETURN 7/6/26

	THIS STOCK	VL ARITH.* INDEX
1 yr.	22.9	23.1
3 yr.	47.7	52.8
5 yr.	59.4	47.8

© VALUE LINE PUB. LLC 29-31

30.01	29.67	30.09	31.35	31.58	31.50	31.42	31.90	32.93	30.87	31.81	33.66	38.21	41.40	43.03	44.17	*44.15*	*45.20*	Revenues per sh	*50.70*
6.85	7.52	7.92	8.15	8.09	9.09	9.39	9.92	10.37	10.69	10.97	11.84	11.50	11.95	13.14	13.12	*12.80*	*13.30*	"Cash Flow" per sh	*16.10*
3.08	2.99	3.50	3.66	3.58	3.92	3.95	4.43	4.54	4.77	4.87	5.47	4.26	4.41	5.24	5.05	*5.00*	*5.65*	Earnings per sh A	*7.00*
2.10	2.10	2.67	2.23	2.33	2.44	2.56	2.70	2.87	3.04	3.23	3.36	3.43	3.49	3.55	3.61	*3.67*	*3.73*	Div'd Decl'd per sh B ■	*4.40*
7.03	8.26	8.24	9.36	8.38	9.84	11.64	12.80	10.73	10.76	11.93	13.04	15.09	16.28	18.89	21.71	*20.75*	*19.75*	Cap'l Spending per sh	*20.00*
33.86	34.98	36.20	38.07	39.50	41.30	43.15	44.80	46.59	48.30	49.96	52.26	53.45	54.47	56.71	58.28	*59.00*	*60.60*	Book Value per sh C	*75.00*
108.77	109.25	109.74	110.18	110.57	110.98	111.34	111.75	112.10	112.44	112.76	113.01	113.17	113.42	119.10	120.90	*128.00*	*135.00*	Common Shs Outst'g D	*140.00*
12.6	14.6	14.3	15.3	15.9	16.0	18.7	19.3	17.8	19.4	16.7	14.1	17.1	17.4	15.3	17.8	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.0*
.80	.92	.91	.86	.84	.81	.98	.97	.96	1.03	.86	.76	.99	.97	.80	.92			Relative P/E Ratio	*1.00*
5.4%	4.8%	5.3%	4.0%	4.1%	3.9%	3.5%	3.2%	3.5%	3.3%	4.0%	4.3%	4.7%	4.5%	4.4%	4.0%			Avg Ann'l Div'd Yield	*3.5%*
3498.7	3565.3	3691.2	3471.2	3587.0	3803.8	4324.4	4696.0	5124.9	5339.9	*5650*	*6100*	Revenues ($mill)	*7100*
442.0	497.8	511.0	538.3	550.6	618.7	483.6	501.6	608.8	616.5	*620*	*745*	Net Profit ($mill)	*980*
33.9%	32.5%	20.2%	--	12.1%	14.8%	13.0%	12.9%	15.0%	14.5%	*15.0%*	*15.0%*	Income Tax Rate	*15.0%*
14.1%	13.9%	15.2%	9.3%	9.5%	10.1%	15.2%	19.3%	14.3%	17.7%	*18.0%*	*18.0%*	AFUDC % to Net Profit	*17.0%*
45.6%	48.9%	47.0%	47.1%	52.8%	53.9%	56.1%	55.0%	54.4%	56.6%	*57.5%*	*57.5%*	Long-Term Debt Ratio	*55.5%*
54.4%	51.1%	53.0%	52.9%	47.2%	46.1%	43.9%	45.0%	45.6%	43.4%	*42.5%*	*42.5%*	Common Equity Ratio	*44.5%*
8825.4	9796.4	9861.1	10263	11948	12820	13790	13718	14813	16252	*17750*	*19200*	Total Capital ($mill)	*23600*
12714	13445	14030	14523	15159	15987	16854	17980	19198	20720	*22350*	*23950*	Net Plant ($mill)	*28400*
6.0%	6.1%	6.2%	6.3%	5.5%	5.8%	4.5%	4.9%	5.5%	5.1%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
9.2%	9.9%	9.8%	9.9%	9.8%	10.5%	8.0%	8.1%	9.0%	8.7%	*8.0%*	*9.0%*	Return on Shr. Equity	*9.5%*
9.2%	9.9%	9.8%	9.9%	9.8%	10.5%	8.0%	8.1%	9.0%	8.7%	*8.0%*	*9.0%*	Return on Com Equity E	*9.5%*
3.5%	4.2%	3.9%	3.8%	3.5%	4.2%	1.7%	1.9%	3.2%	2.7%	*2.0%*	*3.0%*	Retained to Com Eq	*3.5%*
62%	58%	60%	61%	64%	60%	78%	77%	65%	69%	*73%*	*66%*	All Div'ds to Net Prof	*63%*

CAPITAL STRUCTURE as of 3/31/26
Total Debt $10996 mill.
LT Debt $9802 mill. **LT Interest** $450.0 mill.
(Total Interest Coverage: 2.5x)

Leases, Uncapitalized Annual rentals $22.1 mill.

Pension Assets-12/25 $2670.5 mill.
Oblig. $2850.8 mill.

Pfd Stock None

Common Stock 121,187,166 shs.
as of 4/28/26
MARKET CAP: $13.0 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (KWH)	+2.8	+7.4	+2.5
Total Ret'l Revs. per KWH (¢)	13.83	14.53	NA
Avg. Indust. Revs. per KWH (¢)	10.38	10.18	NA
Capacity at Peak (Mw)	9629	9466	NA
Peak Load, Summer (Mw)	8162	8210	8648
Annual Load Factor (%)	45.7	47.5	NA
% Change Customers (yr-end)	+1.8	+2.1	+2.4
Fixed Charge Cov. (%)	220	238	227

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	3.0%	6.0%	*3.0%*
"Cash Flow"	4.0%	3.5%	*4.0%*
Earnings	3.0%	.5%	*6.0%*
Dividends	4.5%	3.0%	*3.5%*
Book Value	3.5%	3.0%	*5.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	945.0	1121.7	1637.8	991.5	4696.0
2024	951.7	1309.0	1768.8	1095.4	5124.9
2025	1032.3	1358.8	1820.7	1128.1	5339.9
2026	1149.6	*1414.4*	*1926*	*1160*	*5650*
2027	*1200*	*1550*	*2100*	*1250*	*6100*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	d.03	.94	3.50	Nil	4.41
2024	.15	1.76	3.37	d.06	5.24
2025	d.04	1.58	3.39	.13	5.05
2026	.27	*1.50*	*3.35*	*d.12*	*5.00*
2027	*d.05*	*1.75*	*3.70*	*.25*	*5.65*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.85	.85	.85	.865	3.42
2023	.865	.865	.865	.88	3.48
2024	.88	.88	.88	.895	3.54
2025	.895	.895	.895	.91	3.60
2026	.91	.91			

BUSINESS: Pinnacle West Capital Corp. is a holding company for Arizona Public Service Company (APS), which supplies electricity to 1.43 mill. customers in most of Arizona, except about half of the Phoenix metro area, the Tucson metro area, and Mohave County in northwestern Arizona. Discontinued SunCor real estate subsidiary in '10. Electric revenue breakdown: residential, 48%; commercial/industrial, 48%; other, 4%. Generating sources: gas, 25%; nuclear, 23%; coal, 15%; renewables, 2%; purchased, 35% (47% of which is from renewables). Fuel costs: 36.2% of rev. '25 reported deprec. rate: 3.06%. Employs 6,610. Chr., Pres. & CEO: Ted Geisler. Inc.: AZ. Addr.: 400 North Fifth St., P.O. Box 53999, Phoenix, AZ 85072. Tel.: 602-250-1000. Web: www.pinnaclewest.com.

Pinnacle West Capital stock remains one of the top year-to-date performers within its industry. The share price is up more than 20% thus far in 2026, versus a 9% gain for the *Value Line Utility Index*. The stock shook off the company reporting a down year for earnings per share in 2025, with big swings in weather-impacted demand a key factor. Cooling and heating degree-days each fell by more than 20% versus a difficult comparison in 2024 as that year was an extreme weather outlier. On a weather-normalized basis, load growth (sustained electricity demand) was up 5.0% in 2025, while total customer count expanded 2.4%. It's these underlying growth levels, driven by favorable migration trends in Pinnacle West's service area and a healthy regional economy, that are keeping the share price well supported. Arizona is experiencing high population growth due to a business friendly stance and low taxes that have translated to a strong and growing job market and an influx of retirees.

The utility is off to a good start in 2026. Entering the year, leadership forecasted weather-normalized earnings of $4.55-$4.75 per share. The company is already well ahead of plan, with the cooling season starting much earlier than typical. The Wall Street consensus was for a break-even first quarter, but Pinnacle West ended up earning $0.27 per share. We lifted our full-year estimate by just a nickel per share, despite the large "beat" because we were already the high estimate on the Street, figuring management's outlook would prove too conservative. The company's service area has consistently been seeing above-trend cooling demand from heat waves throughout the 2020s.

Pinnacle West is suffering from regulatory lag. In mid-2025, it filed a rate-case application, seeking a rate increase of $580 million. A decision is due this October, with hearings and then deliberations from late spring through early autumn. The effective date for new pricing would likely be January 1, 2027. Higher delivery rates should provide a healthy lift to next year's net profits.

This issue does not stand out at the recent valuation. Annual total return prospects are only average for a utility.

Anthony J. Glennon *July 17, 2026*

(A) Diluted EPS. Excl. nonrec. gain: '17, 8¢; gains/(loss) from discont. ops.: '10, 18¢; '11, 10¢; '12, (5¢). Qtly. EPS may not sum to full year due to rounding. Next egs. report due mid-August. **(B)** Div'ds historically paid in early Mar., June, Sept., & Dec. There were five declarations in '12. ■ Div'd reinvestment plan available. **(C)** Incl. deferred charges/other intangibles. In '25: $46.39/sh. **(D)** In mill. **(E)** Rate base: Fair value. Rate allowed on common equity in '24: 9.55%-9.85%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	25
Earnings Predictability	80

SOUTHERN COMPANY NYSE-SO

RECENT PRICE **96.48** | P/E RATIO **21.0** (Trailing: 22.0 Median: 18.0) | RELATIVE P/E RATIO **1.17** | DIV'D YLD **3.2%** | **VALUE LINE**

TIMELINESS 4 Lowered 5/23/25
SAFETY 1 Raised 8/8/25
TECHNICAL 3 Lowered 7/10/26
BETA .65 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$85-$119	$102 (5%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	110	(+15%)	*7%*
Low	90	(-5%)	*2%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	1071	861	1191
to Sell	805	802	875
Hld's(000)	794663	797746	899698

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	© VALUE LINE PUB. LLC	29-31
High:	53.2	54.6	53.5	49.4	64.3	71.1	68.9	80.6	75.8	94.4	100.8	99.6								
Low:	41.4	46.0	46.7	42.4	43.3	42.0	56.7	60.7	58.8	65.8	80.5	85.2								
	20.70	20.41	19.06	19.26	20.34	19.18	20.09	22.86	22.73	20.34	19.29	21.80	26.89	23.15	24.38	26.40	*27.55*	*28.75*	Revenues per sh	*30.65*
	4.51	4.91	5.18	5.27	5.28	5.47	5.69	6.64	6.41	6.33	6.98	7.20	7.34	7.79	8.35	9.26	*8.90*	*9.15*	"Cash Flow" per sh	*9.75*
	2.36	2.55	2.67	2.70	2.77	2.84	2.83	3.21	3.00	3.17	3.25	3.42	3.61	3.64	4.06	4.30	*4.60*	*4.90*	Earnings per sh A	*5.20*
	1.80	1.87	1.94	2.01	2.08	2.15	2.22	2.30	2.38	2.46	2.54	2.62	2.70	2.78	2.86	2.94	*3.04*	*3.14*	Div'd Decl'd per sh B ■	*3.48*
	4.85	5.23	5.54	6.16	6.58	6.22	7.38	7.37	7.74	7.17	7.04	6.83	7.87	8.88	8.84	11.38	*8.70*	*8.65*	Cap'l Spending per sh	*8.50*
	19.21	20.32	21.09	21.43	21.98	22.59	25.00	23.98	23.92	26.11	26.48	26.30	27.93	28.82	29.85	32.17	*35.40*	*36.85*	Book Value per sh C	*41.35*
	843.34	865.13	867.77	887.09	907.78	911.72	990.39	1007.6	1033.8	1053.3	1056.5	1060.0	1089.0	1091.0	1096.0	1119.4	*1130.0*	*1140.0*	Common Shs Outst'g D	*1200.0*
	14.9	15.8	17.0	16.2	16.0	15.8	17.8	15.5	15.1	17.6	17.9	18.4	19.6	19.1	19.6	21.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*19.0*
	.95	.99	1.08	.91	.84	.80	.93	.78	.82	.94	.92	1.00	1.14	1.06	1.09	1.17			Relative P/E Ratio	*1.05*
	5.1%	4.6%	4.3%	4.6%	4.7%	4.8%	4.4%	4.6%	5.3%	4.4%	4.4%	4.2%	4.1%	4.1%	3.4%	3.4%			Avg Ann'l Div'd Yield	*3.5%*
							19896	23031	23495	21419	20375	23113	29279	25253	26724	29553	*31125*	*32750*	Revenues ($mill)	*36750*
							2757.0	3269.0	3096.0	3354.0	3481.0	3670.0	3931.3	3976.0	4401.0	4341.0	*5200*	*5585*	Net Profit ($mill)	*6250*
							28.5%	25.2%	21.3%	15.9%	14.3%	16.3%	18.9%	11.4%	14.5%	16.6%	*15.0%*	*15.0%*	Income Tax Rate	*15.0%*
							11.9%	7.6%	6.8%	6.0%	6.6%	7.7%	8.0%	7.9%	8.0%	11.1%	*8.0%*	*8.0%*	AFUDC % to Net Profit	*6.0%*
							61.5%	64.5%	62.0%	60.1%	61.5%	64.0%	63.0%	65.6%	64.4%	64.0%	*64.0%*	*63.5%*	Long-Term Debt Ratio	*63.0%*
							35.7%	35.0%	37.6%	39.5%	38.1%	35.6%	36.5%	37.6%	35.6%	36.0%	*36.0%*	*36.5%*	Common Equity Ratio	*37.0%*
							69359	68953	65750	69594	73336	78285	80558	83654	84373	*87500*	*90000*	*91000*	Total Capital ($mill)	*93500*
							78446	79872	80797	83080	87634	91108	94570	99844	100028	102631	*100800*	*101000*	Net Plant ($mill)	*110000*
							4.9%	5.9%	5.9%	6.0%	5.9%	5.8%	5.5%	4.6%	4.8%	5.5%	*5.5%*	*6.0%*	Return on Total Cap'l	*5.5%*
							10.3%	13.3%	12.4%	12.1%	12.3%	13.0%	12.5%	12.6%	12.9%	12.1%	*13.0%*	*13.5%*	Return on Shr. Equity	*12.5%*
							11.0%	13.4%	12.5%	12.1%	12.4%	13.1%	12.5%	12.6%	12.9%	12.1%	*13.0%*	*13.5%*	Return on Com Equity E	*12.5%*
							2.5%	3.9%	2.6%	2.8%	2.8%	3.1%	3.0%	3.2%	3.3%	4.2%	*4.5%*	*5.0%*	Retained to Com Eq	*4.0%*
							78%	72%	79%	77%	78%	76%	78%	77%	77%	68%	*66%*	*64%*	All Div'ds to Net Prof	*67%*

Target Price Range 2029 2030 2031

% TOT. RETURN 7/27/26

	THIS STOCK	VL ARITH.* INDEX
1 yr.	4.5	23.1
3 yr.	47.1	52.8
5 yr.	79.6	47.8

CAPITAL STRUCTURE as of 3/31/26
Total Debt $74522 mill.
LT Debt $67148 mill. **LT Interest** $1754 mill.
Incl. $215 mill. finance leases.
(LT interest earned: 3.3x)
Leases, Uncapitalized Annual rentals $233 mill.
Pension Assets-12/25 $15750 mill.
Oblig $13189 mill.
Pfd Stock $242 mill. **Pfd Div'd** $15 mill.
Incl. 10 mill. shs. 5.83% cum. pfd. ($25 stated value); 475,115 shs. 4.2%-5.44% cum. pfd. ($100 par).
Common Stock 1,127,301,098 shs.
MARKET CAP: $109 billion (Mega Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (KWH)	NA	NA	NA
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Yearend (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	NA	NA	NA

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	- -	.5%	*3.0%*
"Cash Flow"	4.0%	4.5%	*2.5%*
Earnings	3.0%	3.0%	*5.0%*
Dividends	3.5%	3.5%	*3.5%*
Book Value	3.0%	2.5%	*5.0%*

QUARTERLY REVENUES (mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	6480	5748	6980	6045	25253
2024	6646	6463	7274	6341	26724
2025	7776	6973	7823	6981	29553
2026	8397	*7273*	*8350*	*7105*	*31125*
2027	*8700*	*7750*	*8800*	*7500*	*32750*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	.79	.79	1.42	.64	3.64
2024	1.03	1.10	1.43	.50	4.06
2025	1.23	.92	1.60	.55	4.30
2026	1.32	*1.00*	*1.64*	*.64*	*4.60*
2027	*1.38*	*1.07*	*1.75*	*.70*	*4.90*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.66	.68	.68	.68	2.70
2023	.68	.70	.70	.70	2.78
2024	.70	.72	.72	.72	2.86
2025	.72	.74	.74	.74	2.94
2026	.76	.76			

BUSINESS: The Southern Company, through its subsidiaries, supplies electricity to 4.4 mill. customers in GA, AL, and MS. Also has a competitive generation business. Acq'd AGL Resources (renamed Southern Company Gas, 4.4 mill. customers in GA, NJ, IL, VA, & TN) 7/16. Sold Gulf Power 1/19. Electric revenue breakdown: Residential, 43%; commercial, 35%; industrial, 21%; other, 1%. Generating sources: Gas, 51%; coal, 19%; nuclear, 10%; other, 11%; purchased, 9%. Fuel costs: 26% of revenues. '25 reported deprec. rates (utility): 2.7%-3.4%. Has 27,300 employees. President and CEO: Chris Womack. Incorporated.: Delaware. Address: 30 Ivan Allen Jr. Blvd., N.W., Atlanta, Georgia 30308. Telephone: 404-506-0747. Internet: www.southerncompany.com.

The Southern Company ought to report good results in 2026. Revenues probably increased 4%–5% in the recent June interim, from the like-2025 period, to $7.27 billion, and may advance 5%–6% for the year as a whole, to $31.13 billion. We think adjusted (non-GAAP) earnings climbed 8%–9% over that span, to $1.00 per share, and should improve 6%–7% for full-year 2026, to $4.60.

The electric utility has a number of projects in the works. As of March 31st, its Georgia Power subsidiary had recorded $3.7 billion of combined capital costs, with another $15.8 billion of work under development. The company is projecting significant growth in electricity demand in its service regions, driven by data centers and other large-load customers.

The wholesale channel is picking up the slack for the retail business. In the first quarter of 2026, wholesale electric revenues (11% of the total) jumped 30% from the prior-year period. Leadership cited an increase in energy revenues related to the average cost per kilowatt-hour, resulting from higher fuel and purchased power prices. For comparison, retail electric revenues (55% of companywide revenues) edged up less than 1% in the March term. Sales growth and cost recoveries here were offset by rate changes and weather-related charges.

Looking ahead, 2027 ought to be another strong year for The Southern Company. The bottom-line growth we envision should be driven by cost savings and infrastructure improvements. Our respective revenue and adjusted earnings forecasts for 2027, at $37.25 billion (previously $31.65 billion) and $4.90 per share (previously $4.80), would mark annual gains of 5%–6% and 6%–7%.

The main attraction here is the competitive dividend yield. The Southern Company should appeal to conservative, income-focused investors, owing to the stock's stellar Safety rank (1, Highest) and the company's robust Financial Strength rating (A). The equity also has excellent scores for Price Stability (a perfect 100) and Earnings Predictability (95). However, the shares are untimely, lack upside in the 18-month time frame, and subpar total return potential 3 to 5 years out.

Sharif Abdou *August 7, 2026*

Company's Financial Strength	A
Stock's Price Stability	100
Price Growth Persistence	70
Earnings Predictability	95

(A) Diluted EPS. Excl. nonrec. gain (losses): '13, (83¢); '14, (59¢); '15, (25¢); '16, (28¢); '17, ($2.37); '18, (78¢); '19, $1.30; '20, (17¢); '21, (54¢); '26 Q1, ($11¢). Next earnings report due late Oct. **(B)** Div'ds paid in early Mar., June, Sept., and Dec. ■ Div'd reinvestment plan avail. **(C)** Incl. def'd charges. In '25: $17.86/sh. **(D)** In mill. **(E)** Rate base: AL, MS, fair value; FL, GA, orig. cost. Allowed return on common eq. (blended): 12.5%; earned on avg. com. eq., '21: 12.8%. Regulatory Climate: GA, AL Above Average.

XCEL ENERGY NDQ-XEL

RECENT PRICE 80.37 | P/E RATIO 19.6 (Trailing: 20.8 Median: 20.0) | RELATIVE P/E RATIO 1.07 | DIV'D YLD 3.0% | VALUE LINE

TIMELINESS 4 Lowered 6/5/26
SAFETY 2 Lowered 1/19/24
TECHNICAL 3 Lowered 7/17/26
BETA .70 (1.00 = Market)

18-Month Target Price Range

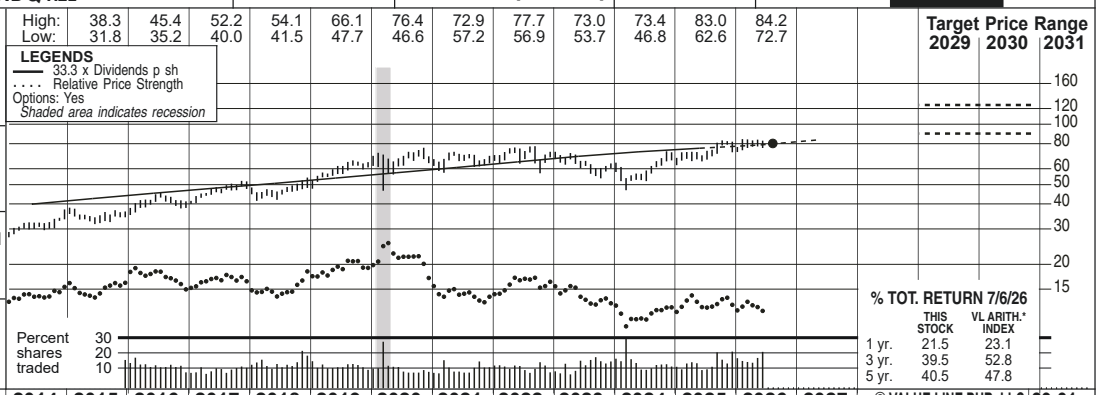
Low-High	Midpoint (% to Mid)
$68-$107	$88 (10%)

2029-31 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	125	(+55%)	*14%*
Low	90	(+10%)	*6%*

Institutional Decisions

	3Q2025	4Q2025	1Q2026
to Buy	615	497	602
to Sell	393	374	531
Hld's(000)	542501	550427	636006



2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	© VALUE LINE PUB. LLC	29-31
21.38	21.90	20.76	21.92	23.11	21.72	21.90	22.46	22.44	21.98	21.45	24.69	27.86	25.60	23.40	23.52	*24.50*	*25.50*	Revenues per sh	*30.30*
3.51	3.79	4.00	4.10	4.28	4.56	5.04	5.47	5.92	6.25	6.61	7.08	7.81	7.96	8.43	8.53	*9.30*	*9.90*	"Cash Flow" per sh	*12.40*
1.56	1.72	1.85	1.91	2.03	2.10	2.21	2.30	2.47	2.64	2.79	2.96	3.17	3.35	3.50	3.80	*4.10*	*4.45*	Earnings per sh A	*5.70*
1.00	1.03	1.07	1.11	1.20	1.28	1.36	1.44	1.52	1.62	1.72	1.83	1.95	2.08	2.19	2.28	*2.37*	*2.52*	Div'd Decl'd per sh B ■ †	*3.20*
4.60	4.53	5.27	6.82	6.33	7.26	6.42	6.54	7.70	8.05	9.99	7.80	8.44	10.55	12.82	17.49	*21.20*	*22.40*	Cap'l Spending per sh	*13.25*
16.76	17.44	18.19	19.21	20.20	20.89	21.73	22.56	23.78	25.24	27.12	28.70	30.34	31.74	33.99	37.86	*41.05*	*44.40*	Book Value per sh C	*53.40*
482.33	486.49	487.96	497.97	505.73	507.54	507.22	507.76	514.04	524.54	537.44	544.03	549.58	554.94	574.37	623.60	*650.00*	*675.00*	Common Shs Outst'g D	*710.00*
14.1	14.2	14.8	15.0	15.4	16.5	18.5	20.2	18.9	22.3	23.9	22.5	22.2	19.0	17.0	19.0	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*19.0*
.90	.89	.94	.84	.81	.83	.97	1.02	1.02	1.19	1.23	1.22	1.28	1.06	.89	.99			Relative P/E Ratio	*1.05*
4.5%	4.2%	3.9%	3.9%	3.8%	3.7%	3.3%	3.1%	3.3%	2.7%	2.6%	2.8%	2.8%	3.3%	3.7%	3.2%			Avg Ann'l Div'd Yield	*3.0%*
						11107	11404	11537	11529	11526	13431	15310	14206	13441	14669	*15925*	*17200*	Revenues ($mill)	*21500*
						1123.4	1171.0	1261.0	1372.0	1473.0	1597.0	1736.0	1851.0	1969.0	2239.0	*2615*	*2955*	Net Profit ($mill)	*4055*
						34.1%	30.7%	12.6%	8.5%	--	--	--	--	--	--	*NMF*	*NMF*	Income Tax Rate	*NMF*
						7.8%	9.4%	12.4%	8.3%	10.7%	6.2%	5.9%	7.7%	12.2%	18.1%	*21.0%*	*22.0%*	AFUDC % to Net Profit	*20.0%*
						56.3%	55.9%	56.4%	56.8%	57.4%	58.2%	57.8%	58.6%	58.4%	58.4%	*59.5%*	*59.5%*	Long-Term Debt Ratio	*58.5%*
						43.7%	44.1%	43.6%	43.2%	42.6%	41.8%	42.2%	41.4%	41.6%	41.6%	*40.5%*	*40.5%*	Common Equity Ratio	*41.5%*
						25216	25975	28025	30646	34220	37391	39488	42591	46898	56703	*65800*	*74100*	Total Capital ($mill)	*91700*
						32842	34329	36944	39483	42950	45457	48253	51642	57198	65639	*76000*	*87400*	Net Plant ($mill)	*105300*
						5.7%	5.8%	5.7%	5.6%	5.4%	5.3%	5.5%	5.4%	5.5%	5.2%	*5.0%*	*5.5%*	Return on Total Cap'l	*6.0%*
						10.2%	10.2%	10.3%	10.4%	10.1%	10.2%	10.4%	10.5%	10.1%	9.5%	*10.0%*	*10.0%*	Return on Shr. Equity	*10.5%*
						10.2%	10.2%	10.3%	10.4%	10.1%	10.2%	10.4%	10.5%	10.1%	9.5%	*10.0%*	*10.0%*	Return on Com Equity E	*10.5%*
						4.0%	3.9%	4.3%	4.4%	4.2%	4.2%	4.3%	4.3%	4.1%	4.1%	*4.0%*	*4.5%*	Retained to Com Eq	*4.5%*
						61%	62%	58%	58%	58%	59%	58%	59%	60%	57%	*58%*	*57%*	All Div'ds to Net Prof	*56%*

CAPITAL STRUCTURE as of 3/31/26
Total Debt $38331 mill.
LT Debt $35850 mill. **LT Interest** $1550 mill.
Incl. $1298 mill. finance leases.
(Total Interest Coverage: 2.5x)

Leases, Uncapitalized Annual rentals $112 mill.
Pension Assets-12/25 $2690 mill.
Oblig. $2820 mill.
Pfd Stock None

Common Stock 624,269,560 shs.
as of 4/28/26
MARKET CAP: $51.2 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2023	2024	2025
% Change Retail Sales (KWH)	-1.6	-2.4	-2.6
Resid'l Revs. per KWH (¢)	13.80	13.83	14.91
C & I Revs. per KWH (¢)	8.82	8.24	8.87
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	20512	20343	19974
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.1	+1.2	+1.0
Fixed Charge Cov. (%)	245	194	196

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '23-'25 to '29-'31
Revenues	1.0%	2.0%	*3.5%*
"Cash Flow"	7.0%	6.0%	*7.0%*
Earnings	6.0%	6.0%	*8.0%*
Dividends	6.0%	6.0%	*6.0%*
Book Value	5.5%	6.5%	*7.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	4080	3022	3662	3442	14206
2024	3649	3028	3644	3120	13441
2025	3906	3287	3915	3561	14669
2026	4021	*3519*	*4475*	*3910*	*15925*
2027	*4325*	*3625*	*5050*	*4200*	*17200*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2023	.76	.52	1.23	.83	3.35
2024	.89	.55	1.25	.81	3.50
2025	.84	.75	1.24	.96	3.80
2026	.91	*.79*	*1.40*	*1.00*	*4.10*
2027	*.99*	*.85*	*1.53*	*1.08*	*4.45*

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2022	.4575	.4875	.4875	.4875	1.92
2023	.4875	.52	.52	.52	2.05
2024	.52	.5475	.5475	.5475	2.16
2025	.5475	.57	.57	.57	2.26
2026	.57	.5925	.5925		

BUSINESS: Xcel Energy Inc. is the parent of: Northern States Power Company (NSP), which supplies electricity to MN, WI, ND, SD & MI & gas to MN, WI, ND & MI; Public Service Company of Colorado (PSCo), which supplies electricity & gas to CO; & Southwestern Public Service Company (SPS), which supplies electricity to TX and NM. Customers: 3.9 mill. electric, 2.2 mill. gas. Electric revenues: resid'l, 32%; comm'l & ind'l, 49%; other, 19%. Purchases 30% of power, owns 70%. Total electric mix: wind, 33%; gas, 33%; coal, 14%, nuclear, 12%, solar/other, 8%. Fuel cost: 34% of revenues. '25 deprec. rate: 3.9%. Employs 11,530. Chrmn., President, and CEO: Robert Frenzel. Inc.: MN. Addr.: 414 Nicollet Mall, Minneapolis, MN 55401. Tel.: 612-330-5500. Web: www.xcelenergy.com.

Xcel Energy is off to a decent start in 2026. First-quarter core earnings of $0.91 per share were in line with Wall Street and company expectations despite the impact of unseasonably warm weather throughout much of the utility holding company's service area during the period. The step up on the bottom line reflected increased recovery of electric infrastructure investments and load growth from steadily rising electricity demand, partially offset by higher financing costs and depreciation expense. Leadership reaffirmed its full-year 2026 core earnings-per-share target of $4.04-$4.16, representing nearly 8% year-over-year growth.

The board lifted the dividend. Xcel remains a model of consistency within the electric utility industry. It has grown the bottom line year in and year out for the past two decades and almost always achieves its early in the year earnings goals. The diversification across a wide swath of the U.S., with a huge territory that spans eight Western and Midwestern states, helps. It provides economies of scale and budget flexibility that management can lean on. The dividend has been increased for 23 consecutive years. Xcel is targeting 4%-6% annual dividend growth with a payout ratio that's well below the industry median in the mid-60% range.

The utility's capital investment plan ought to support 6%-8% earnings growth through late decade. The company will be spending at least $60 billion over the next five years to modernize, add generation, expand transmission and distribution, and harden its grid from storm damage. That's an average of $12 billion per year, up from $6.6 billion spent per annum over the 2021 to 2025 stretch. It translates to a more than 12% compound annual growth rate. The company recoups most of those funds, plus an economic return via the revenue collected from ratepayers bills. We think the return on invested capital should translate to the company increasing its per-share earnings toward the high end of its stated goal.

Annual total return prospects to 2029-2031 are about two percentage points above the industry median. This quality issue trades at a decent entry point for long-term utility investors.

Anthony J. Glennon *July 17, 2026*

(A) Diluted EPS. Excl. nonrec. gain/(losses): '10, 5¢; '15, (16¢); '17, (5¢); '23, (14¢); '24, (6¢); '25, (38¢); gain on discontin'd ops.: '10, 1¢. Qtly. EPS may not sum to full year due to rounding. Next egs. report due late July. **(B)** Div'ds paid mid-Jan., Apr., July, and Oct. ■ Div'd reinvestment plan available. † Shareholder investment plan available. **(C)** Incl. intangibles. In '25: $3891 mill., $6.24/sh. **(D)** In mill. **(E)** Rate base: Varies. Rate allowed on common equity (blended): 9.6%. Regulatory Climate: Average.

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

Bear Valley Electric Service, Inc.
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Thirteen Electric Companies
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	5.48%
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A2 Rated Public Utility Bonds (2)	0.27%
3.	Adjusted Prospective Yield on A2 Rated Public Utility Bonds	5.75%
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group (3)	0.11%
5.	Adjusted Bond Yield	5.86%
6.	Equity Risk Premium (4)	4.69% - 5.08%
7.	Risk Premium Derived Common Equity Cost Rate	10.55% - 10.94%

Notes: (1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 27 and 28 of this Exhibit).

(2) The average yield spread of A2 rated public utility bonds over Aaa rated corporate bonds of 0.27% from page 22 of this Exhibit.

(3) Adjustment to reflect the Baa1 Moody's LT issuer rating of the Utility Proxy Group as shown on page 23 of this Exhibit. The 0.11% upward adjustment is derived by taking 2/3 of the spread between A2 and Baa2 Public Utility Bonds (2/3 * 0.17% = 0.11%) as derived from page 22 of this Exhibit.

(4) From page 25 of this Exhibit.

Bear Valley Electric Service, Inc.
Interest Rates and Bond Spreads for
Moody's Corporate and Public Utility Bonds

Selected Bond Yields

	[1] Aaa Rated Corporate Bond	[2] A2 Rated Public Utility Bond	[3] Baa2 Rated Public Utility Bond
Jul-2026	5.76 %	5.97 %	6.13 %
Jun-2026	5.52	5.79	5.96
May-2026	5.56	5.88	6.06
Average	5.61 %	5.88 %	6.05 %

Selected Bond Spreads

A2 Rated Public Utility Bonds Over Aaa Rated Corporate Bonds: 0.27 % (1)

Baa2 Rated Public Utility Bonds Over A2 Rated Public Utility Bonds: 0.17 % (2)

Notes:
(1) Column [2] - Column [1].
(2) Column [3] - Column [2].

Source of Information:
Bloomberg Professional Services

Bear Valley Electric Service, Inc.
Comparison of Long-Term Issuer Ratings for the
Proxy Group of Thirteen Electric Companies

Proxy Group of Thirteen Electric Companies	Moody's Long-Term Issuer Rating August 2026		Standard & Poor's Long-Term Issuer Rating August 2026	
	Long-Term Issuer Rating (1)	Numerical Weighting (2)	Long-Term Issuer Rating (1)	Numerical Weighting (2)
Alliant Energy Corporation	Baa1	8.0	A-	7.0
Ameren Corporation	A3	7.0	BBB+	8.0
American Electric Power Company, Inc.	Baa2	9.0	BBB+	8.0
Duke Energy Corporation	A3	7.0	BBB+	8.0
Edison International	Baa1	8.0	BBB-	10.0
Entergy Corporation	Baa1	8.0	BBB+	8.0
Evergy, Inc.	Baa1/Baa2	8.5	BBB+	8.0
FirstEnergy Corp.	Baa1	8.0	BBB+	8.0
IDACORP, Inc.	Baa2	9.0	BBB	9.0
OGE Energy Corp.	A3	7.0	A-	7.0
Pinnacle West Capital Corporation	Baa1	8.0	BBB+	8.0
The Southern Company	A2	6.0	A-	7.0
Xcel Energy Inc.	A3	7.0	BBB+	8.0
Average	Baa1	7.7	BBB+	8.0

Notes:
(1) Ratings are that of the average of each company's utility operating subsidiaries.
(2) From page 24 of this Exhibit.

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

Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings

Moody's Bond Rating	Numerical Bond Weighting	Standard & Poor's Bond Rating
Aaa	1	AAA
Aa1	2	AA+
Aa2	3	AA
Aa3	4	AA-
A1	5	A+
A2	6	A
A3	7	A-
Baa1	8	BBB+
Baa2	9	BBB
Baa3	10	BBB-
Ba1	11	BB+
Ba2	12	BB
Ba3	13	BB-
B1	14	B+
B2	15	B
B3	16	B-

Bear Valley Electric Service, Inc.
Judgment of Equity Risk Premium for the
Proxy Group of Thirteen Electric Companies

Line No.		Proxy Group of Thirteen Electric Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1)	4.01% - 5.19%
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A2 rated bonds (2)	5.31%
3.	Predicted Equity Risk Premium Based on Regression Analysis of 1,281 Fully-Litigated Electric Cases (3)	4.74%
4.	Average equity risk premium	4.69% - 5.08%

Notes: (1) From page 26 of this Exhibit.
(2) From page 29 of this Exhibit.
(3) From page 30 of this Exhibit.

Bear Valley Electric Service, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Thirteen Electric Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Thirteen Electric Companies
1.	Kroll Equity Risk Premium (1)	6.17%
2.	Regression on Kroll Risk Premium Data (2)	6.70%
3.	Kroll Equity Risk Premium based on PRPM (3)	8.90%
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	5.89%
5.	Equity Risk Premium Based on Bloomberg, Value Line, and S&P Global Market Intelligence S&P 500 Companies (5)	18.16%
6.	Conclusion of Equity Risk Premium (6)	6.92%
7.	Adjusted Beta (7)	0.58 - 0.75
8.	Forecasted Equity Risk Premium	4.01% - 5.19%

Notes:

(1) Based on the arithmetic mean historical monthly returns on large company common stocks from Kroll 2023 SBBI® Yearbook and Bloomberg Professional Services minus the arithmetic mean monthly yield of Moody's average Aaa and Aa2 corporate bonds from 1928-2025.

(2) This equity risk premium is based on a regression of the monthly equity risk premiums of large company common stocks relative to Moody's average Aaa and Aa2 rated corporate bond yields from 1928-2025 referenced in Note 1 above. Using the equation generated from the regression, an expected equity risk premium is calculated using the average consensus forecast of Aaa corporate bonds of 5.48% (from page 21 of this Exhibit).

(3) The Predictive Risk Premium Model (PRPM) is discussed in Mr. D'Ascendis' direct testimony. The Ibbotson equity risk premium based on the PRPM is derived by applying the PRPM to the monthly risk premiums between Ibbotson large company common stock monthly returns and average Aaa and Aa corporate monthly bond yields, from January 1928 through July 2026.

(4) The equity risk premium based on the Value Line Summary and Index is derived by subtracting the average consensus forecast of Aaa corporate bonds of 5.48% (from page 21 of this Exhibit) from the projected 3-5 year total annual market return of 11.37% (described fully in note 1 on page 33 of this Exhibit).

(5) Using data from Bloomberg Professional Services, Value Line, and S&P Global Market Intelligence for the S&P 500, an expected total return of 23.64% was derived based upon expected dividend yields as a proxy for income returns and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 5.48% results in an expected equity risk premium of 18.16%.

(6) Average of Line Nos. 1 through 4.

(7) Average of mean and median betas from pages 31 and 32 of this Exhibit.

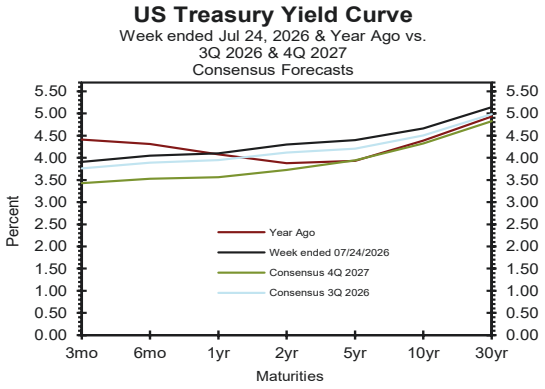
Sources of Information:
Kroll 2023 SBBI® Yearbook
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2026, July 31, 2026
S&P Capital IQ
Bloomberg Professional Services

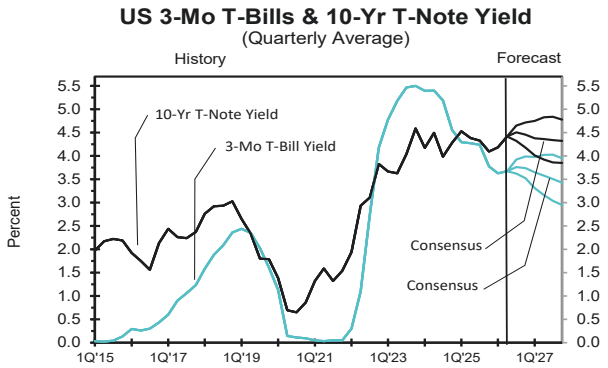
Blue Chip Financial Forecasts® – July 31, 2026

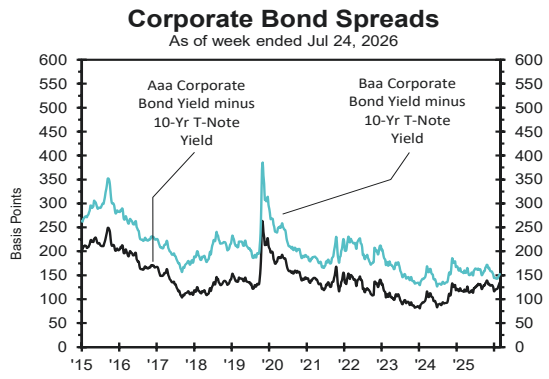
US Interest Rates and Key Assumptions

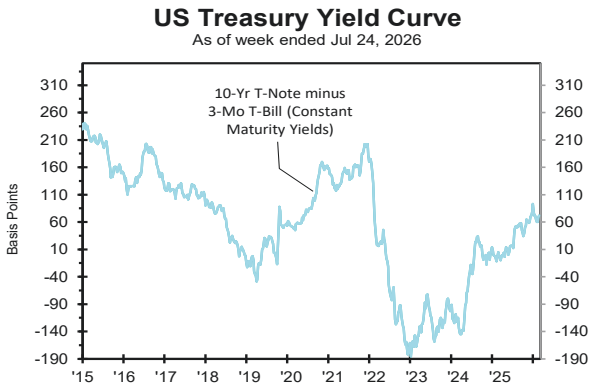
	History								Consensus Forecasts					
	Average for Week Ending				Average for the Month			Latest Qtr	3Q	4Q	1Q	2Q	3Q	4Q
Interest Rates	Jul 24	Jul 17	Jul 10	Jul 3	June	May	April	2Q 2026	2026	2026	2027	2027	2027	2027
Federal Funds Rate	3.63	3.62	3.63	3.63	3.63	3.63	3.64	3.63	*3.6*	*3.7*	*3.7*	*3.6*	*3.5*	*3.5*
Prime Rate	6.75	6.75	6.75	6.75	6.75	6.75	6.75	6.75	*6.8*	*6.8*	*6.7*	*6.7*	*6.6*	*6.5*
SOFR	3.62	3.62	3.58	3.65	3.63	3.58	3.64	3.62	*3.6*	*3.7*	*3.7*	*3.6*	*3.5*	*3.5*
Commercial Paper, 1-mo	3.68	3.68	3.64	3.68	3.68	3.67	3.70	3.68	*3.7*	*3.7*	*3.7*	*3.7*	*3.6*	*3.5*
Treasury Bill, 3-mo	3.91	3.85	3.86	3.85	3.81	3.69	3.70	3.73	*3.8*	*3.7*	*3.7*	*3.6*	*3.5*	*3.4*
Treasury Bill, 6-mo	4.05	3.96	3.98	4.00	3.87	3.77	3.72	3.79	*3.9*	*3.8*	*3.7*	*3.7*	*3.6*	*3.5*
Treasury Bill, 1 yr	4.10	4.02	4.03	3.98	3.91	3.79	3.69	3.80	*3.9*	*3.9*	*3.8*	*3.7*	*3.6*	*3.6*
Treasury Note, 2 yr	4.30	4.18	4.18	4.14	4.11	4.00	3.80	3.97	*4.1*	*4.0*	*3.9*	*3.9*	*3.8*	*3.7*
Treasury Note, 5 yr	4.40	4.30	4.27	4.20	4.21	4.15	3.94	4.10	*4.2*	*4.1*	*4.1*	*4.0*	*4.0*	*3.9*
Treasury Note, 10 yr	4.66	4.57	4.54	4.45	4.47	4.48	4.32	4.42	*4.5*	*4.5*	*4.4*	*4.4*	*4.3*	*4.3*
Treasury Bond, 30 yr	5.14	5.08	5.04	4.93	4.95	5.03	4.91	4.96	*5.0*	*4.9*	*4.9*	*4.9*	*4.9*	*4.8*
Corporate Aaa Bond	6.01	5.92	5.85	5.72	5.69	5.71	5.61	5.67	*5.6*	*5.6*	*5.5*	*5.5*	*5.5*	*5.5*
Corporate Baa Bond	6.18	6.09	6.03	5.92	5.90	5.98	5.91	5.93	*6.2*	*6.2*	*6.2*	*6.0*	*6.2*	*6.2*
State & Local Bonds	4.27	4.17	4.12	4.09	4.11	4.19	4.14	4.15	*4.4*	*4.4*	*4.4*	*4.4*	*4.4*	*4.4*
Home Mortgage Rate	6.58	6.55	6.49	6.43	6.49	6.44	6.33	6.42	*6.5*	*6.4*	*6.4*	*6.3*	*6.3*	*6.3*
	3Q	4Q	1Q	2Q	3Q	4Q[a]	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Key Assumptions	2024	2024	2025	2025	2025	2025	2026	2026	2026	2026	2027	2027	2027	2027
Fed AFE Index	114.7	117.7	119.6	112.7	110.9	112.2	111.0	111.9	*114.8*	*114.3*	*114.1*	*114.2*	*114.4*	*113.9*
Real GDP	3.3	1.9	-0.6	3.8	4.4	0.5	2.1	1.5	*2.0*	*1.9*	*2.1*	*2.1*	*2.2*	*2.1*
GDP Price Index	1.8	2.4	3.6	2.1	3.8	3.7	3.6	6.2	*2.4*	*2.7*	*2.5*	*2.3*	*2.3*	*2.4*
Consumer Price Index	1.3	3.2	3.7	1.7	3.1	2.4	3.7	6.1	*1.9*	*2.6*	*2.4*	*2.2*	*2.3*	*2.4*
PCE Price Index	1.7	2.5	3.4	2.1	2.8	2.9	4.6	5.1	*2.4*	*2.6*	*2.5*	*2.2*	*2.3*	*2.3*

(a) 4Q 2025 CPI uses an interpolated value for October 2025 calculated by Haver Analytics.









Long-Range Survey:

The table below contains results of our semi-annual long-range CONSENSUS survey. There are also Top 5 and Bottom 5 averages for each variable. Shown are estimates for the years 2027 through 2032 and averages for the five-year periods 2028-2032 and 2033-2037. Apply these projections cautiously. Few economic, demographic and political forces can be evaluated accurately over such long time spans.

		Average For The Year						Five-Year Averages	
		2027	2028	2029	2030	2031	2032	2028-2032	2033-2037
1. Federal Funds Rate	**CONSENSUS**	**3.2**	**3.1**	**3.2**	**3.2**	**3.2**	**3.2**	**3.2**	**3.1**
	Top 5 Average	3.6	3.6	3.7	3.7	3.6	3.6	3.6	3.6
	Bottom 5 Average	2.9	2.7	2.8	2.8	2.9	2.9	2.8	2.7
2. Prime Rate	**CONSENSUS**	**6.3**	**6.3**	**6.3**	**6.3**	**6.3**	**6.3**	**6.3**	**6.3**
	Top 5 Average	6.8	6.7	6.7	6.7	6.7	6.7	6.7	6.7
	Bottom 5 Average	6.0	5.9	5.9	5.9	6.0	6.0	5.9	5.9
3. SOFR	**CONSENSUS**	**3.2**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**	**3.1**
	Top 5 Average	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4
	Bottom 5 Average	3.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8
4. Commercial Paper, 1-Mo	**CONSENSUS**	**3.3**	**3.2**	**3.1**	**3.1**	**3.2**	**3.2**	**3.2**	**3.1**
	Top 5 Average	3.5	3.4	3.4	3.3	3.4	3.4	3.4	3.3
	Bottom 5 Average	3.1	3.0	2.9	2.9	2.9	2.9	2.9	2.9
5. Treasury Bill Yield, 3-Mo	**CONSENSUS**	**3.2**	**3.1**	**3.1**	**3.2**	**3.2**	**3.2**	**3.2**	**3.2**
	Top 5 Average	3.6	3.5	3.4	3.5	3.5	3.5	3.5	3.4
	Bottom 5 Average	2.9	2.8	2.9	2.9	2.9	2.9	2.9	2.9
6. Treasury Bill Yield, 6-Mo	**CONSENSUS**	**3.3**	**3.2**	**3.2**	**3.2**	**3.3**	**3.3**	**3.2**	**3.2**
	Top 5 Average	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Bottom 5 Average	3.0	2.9	3.0	3.0	3.0	3.0	3.0	3.0
7. Treasury Bill Yield, 1-Yr	**CONSENSUS**	**3.3**	**3.3**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**3.3**
	Top 5 Average	3.7	3.6	3.6	3.6	3.6	3.7	3.6	3.6
	Bottom 5 Average	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.1
8. Treasury Note Yield, 2-Yr	**CONSENSUS**	**3.6**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**	**3.5**
	Top 5 Average	3.9	3.9	3.9	3.8	3.8	3.8	3.9	3.8
	Bottom 5 Average	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
9. Treasury Note Yield, 5-Yr	**CONSENSUS**	**3.8**	**3.8**	**3.8**	**3.8**	**3.8**	**3.8**	**3.8**	**3.8**
	Top 5 Average	4.1	4.2	4.2	4.1	4.1	4.1	4.1	4.1
	Bottom 5 Average	3.5	3.4	3.4	3.4	3.4	3.5	3.4	3.4
10. Treasury Note Yield, 10-Yr	**CONSENSUS**	**4.2**	**4.2**	**4.1**	**4.1**	**4.1**	**4.1**	**4.1**	**4.2**
	Top 5 Average	4.5	4.5	4.5	4.4	4.4	4.4	4.5	4.4
	Bottom 5 Average	3.9	3.7	3.7	3.7	3.7	3.8	3.7	3.8
11. Treasury Bond Yield, 30-Yr	**CONSENSUS**	**4.8**	**4.7**	**4.7**	**4.6**	**4.6**	**4.6**	**4.7**	**4.6**
	Top 5 Average	5.2	5.1	5.0	4.9	4.9	4.9	5.0	4.9
	Bottom 5 Average	4.4	4.3	4.4	4.3	4.3	4.3	4.3	4.3
12. Corporate Aaa Bond Yield	**CONSENSUS**	**5.3**	**5.3**	**5.4**	**5.3**	**5.3**	**5.3**	**5.3**	**5.3**
	Top 5 Average	5.8	5.9	6.0	5.8	5.8	5.8	5.9	5.8
	Bottom 5 Average	4.9	4.7	4.7	4.7	4.7	4.7	4.7	4.7
13. Corporate Baa Bond Yield	**CONSENSUS**	**6.0**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**	**6.1**
	Top 5 Average	6.5	6.6	6.7	6.6	6.7	6.7	6.6	6.7
	Bottom 5 Average	5.5	5.6	5.6	5.5	5.5	5.6	5.5	5.4
14. State & Local Bonds Yield	**CONSENSUS**	**4.2**	**4.3**	**4.3**	**4.3**	**4.3**	**4.3**	**4.3**	**4.2**
	Top 5 Average	4.5	4.7	4.7	4.7	4.7	4.7	4.7	4.7
	Bottom 5 Average	3.8	3.9	3.8	3.9	3.9	3.9	3.9	3.8
15. Home Mortgage Rate	**CONSENSUS**	**6.2**	**6.1**	**6.1**	**6.0**	**6.0**	**6.0**	**6.0**	**6.0**
	Top 5 Average	6.5	6.4	6.4	6.3	6.3	6.3	6.3	6.3
	Bottom 5 Average	5.8	5.7	5.7	5.7	5.7	5.7	5.7	5.7
A. Fed's AFE Nominal $ Index	**CONSENSUS**	**110.8**	**110.6**	**110.2**	**109.5**	**109.2**	**108.8**	**109.7**	**108.6**
	Top 5 Average	111.7	112.1	112.2	111.8	111.8	111.3	111.8	111.4
	Bottom 5 Average	110.0	109.1	108.1	107.1	106.7	106.3	107.5	105.7
		Year-Over-Year, % Change						Five-Year Averages	
		2027	2028	2029	2030	2031	2032	2028-2032	2033-2037
B. Real GDP	**CONSENSUS**	**2.0**	**2.0**	**2.1**	**2.0**	**2.0**	**2.0**	**2.0**	**1.9**
	Top 5 Average	2.5	2.3	2.4	2.4	2.4	2.3	2.4	2.2
	Bottom 5 Average	1.6	1.8	1.8	1.7	1.7	1.7	1.7	1.6
C. GDP Chained Price Index	**CONSENSUS**	**2.4**	**2.2**	**2.1**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**
	Top 5 Average	2.7	2.4	2.3	2.2	2.2	2.2	2.2	2.2
	Bottom 5 Average	2.0	2.0	1.8	1.8	1.7	1.7	1.8	1.8
D. Consumer Price Index	**CONSENSUS**	**2.5**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**
	Top 5 Average	3.0	2.5	2.5	2.5	2.4	2.5	2.5	2.5
	Bottom 5 Average	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
E. PCE Price Index	**CONSENSUS**	**2.4**	**2.2**	**2.1**	**2.1**	**2.0**	**2.0**	**2.1**	**2.0**
	Top 5 Average	3.0	2.5	2.3	2.3	2.3	2.3	2.3	2.3
	Bottom 5 Average	2.0	1.9	1.9	1.9	1.8	1.7	1.8	1.8

Projected Market Appreciation of the S&P Utility Index
Derivation of Mean Equity Risk Premium Based Studies
Using Holding Period Returns and
Projected Market Appreciation of the S&P Utility Index

Line No.		Implied Equity Risk Premium
1.	Historical Equity Risk Premium (1)	4.23%
2.	Regression of Historical Equity Risk Premium (2)	4.88%
3.	Forecasted Equity Risk Premium Based on PRPM (3)	4.60%
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg, Value Line, and S&P Capital IQ Data) (4)	7.54%
5.	Average Equity Risk Premium (5)	5.31%

Notes:
(1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2025. Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.

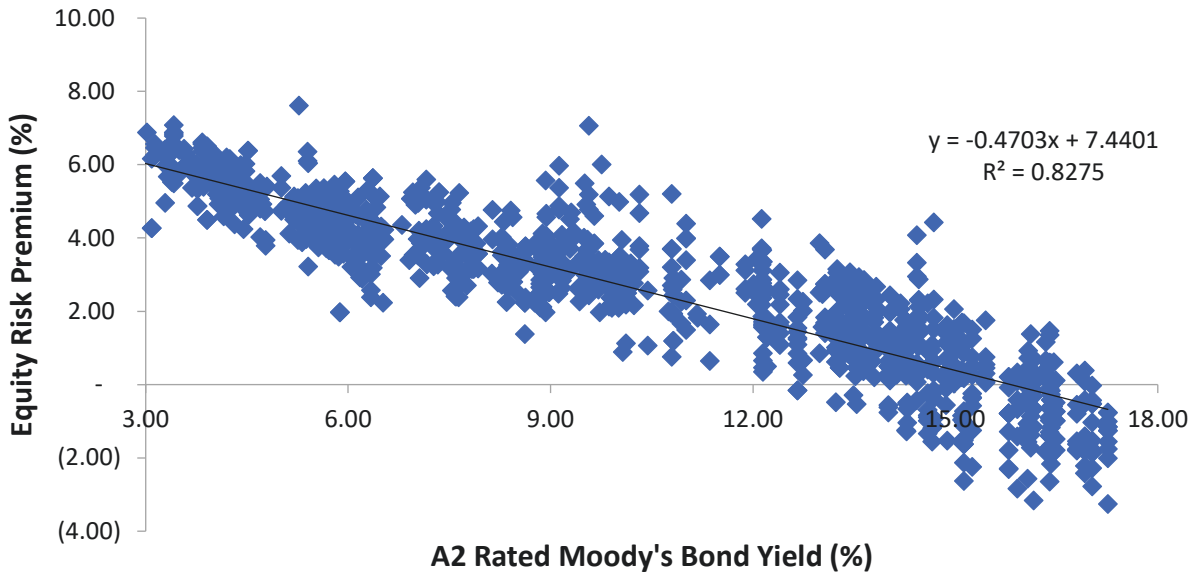
(2) This equity risk premium is based on a regression of the monthly equity risk premiums of the S&P Utility Index relative to Moody's A2 rated public utility bond yields from 1928 - 2025 referenced in note 1 above. Using the equation generated from the regression, an expected equity risk premium is calculated using the prospective A2 rated public utility bond yield of 5.75% (from line 3, page 21 of this Exhibit).

(3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A2 rated public utility bonds from January 1928 - July 2026.

(4) Using data from Bloomberg, Value Line, and S&P Capital IQ for the S&P Utilities Index, an expected return of 13.29% was derived based on expected dividend yields as a proxy for income returns and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A2 rated public utility bond yield of 5.75%, calculated on line 3 of page 21 of this Exhibit results in an equity risk premium of 7.54%. (13.29% - 5.75% = 7.54%).

(5) Average of lines 1 through 4.

Bear Valley Electric Service, Inc.
Prediction of Equity Risk Premiums Relative to
Moody's A2 Rated Utility Bond Yields - Electric Utilities



Constant	Slope	Prospective A2 Rated Utility Bond (1)	Prospective Equity Risk Premium
7.4401 %	-0.4703	5.75 %	4.74 %

Notes:

(1) From line 3 of page 21 of this Exhibit.

Source of Information: Regulatory Research Associates.

Bear Valley Electric Service, Inc.
Indicated Common Equity Cost Rate Through Use
of the Traditional Capital Asset Pricing Model (CAPM) and Empirical Capital Asset Pricing Model (ECAPM)

Proxy Group of Thirteen Electric Companies

Proxy Group of Thirteen Electric Companies	[1] Value Line Adjusted Beta	[2] Bloomberg Adjusted Beta	[3] Average Beta	[4] Market Risk Premium (1)	[5] Risk-Free Rate (2)	[6] Traditional CAPM Cost Rate	[7] ECAPM Cost Rate	[8] Indicated Common Equity Cost Rate (3)
Alliant Energy Corporation	0.80	0.41	0.60	7.87 %	4.84 %	9.56 %	10.35 %	9.96 %
Ameren Corporation	0.75	0.45	0.60	7.87	4.84	9.56	10.35	9.96
American Electric Power Company, Inc.	0.70	0.29	0.50	7.87	4.84	8.78	9.76	9.27
Duke Energy Corporation	0.65	0.24	0.45	7.87	4.84	8.38	9.46	8.92
Edison International	0.90	0.50	0.70	7.87	4.84	10.35	10.94	10.65
Entergy Corporation	0.75	0.49	0.62	7.87	4.84	9.72	10.47	10.09
Evergy, Inc.	0.75	0.42	0.59	7.87	4.84	9.48	10.29	9.89
FirstEnergy Corp.	0.70	0.32	0.51	7.87	4.84	8.85	9.82	9.34
IDACORP, Inc.	0.70	0.39	0.54	7.87	4.84	9.09	10.00	9.54
OGE Energy Corp.	0.85	0.49	0.67	7.87	4.84	10.11	10.76	10.44
Pinnacle West Capital Corporation	0.75	0.44	0.59	7.87	4.84	9.48	10.29	9.89
The Southern Company	0.65	0.30	0.48	7.87	4.84	8.62	9.64	9.13
Xcel Energy Inc.	0.70	0.47	0.58	7.87	4.84	9.41	10.23	9.82
Mean			0.57			9.34 %	10.18 %	9.76 %
Median			0.59			9.48 %	10.29 %	9.89 %
Average of Mean and Median			0.58			9.41 %	10.24 %	9.83 %

Notes on page 33 of this Exhibit.

Bear Valley Electric Service, Inc.
Indicated Common Equity Cost Rate Through Use
of the Traditional Capital Asset Pricing Model (CAPM) and Empirical Capital Asset Pricing Model (ECAPM) Excluding Bloomberg Betas

Proxy Group of Thirteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]
Proxy Group of Thirteen Electric Companies	Value Line Adjusted Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Alliant Energy Corporation	0.80	7.87 %	4.84 %	11.14 %	11.53 %	11.33 %
Ameren Corporation	0.75	7.87	4.84	10.74	11.24	10.99
American Electric Power Company, Inc.	0.70	7.87	4.84	10.35	10.94	10.65
Duke Energy Corporation	0.65	7.87	4.84	9.96	10.65	10.30
Edison International	0.90	7.87	4.84	11.93	12.12	12.02 (4)
Entergy Corporation	0.75	7.87	4.84	10.74	11.24	10.99
Evergy, Inc.	0.75	7.87	4.84	10.74	11.24	10.99
FirstEnergy Corp.	0.70	7.87	4.84	10.35	10.94	10.65
IDACORP, Inc.	0.70	7.87	4.84	10.35	10.94	10.65
OGE Energy Corp.	0.85	7.87	4.84	11.53	11.83	11.68
Pinnacle West Capital Corporation	0.75	7.87	4.84	10.74	11.24	10.99
The Southern Company	0.65	7.87	4.84	9.96	10.65	10.30
Xcel Energy Inc.	0.70	7.87	4.84	10.35	10.94	10.65
Mean	0.74			10.68 %	11.19 %	10.85 %
Median	0.75			10.74 %	11.24 %	10.82 %
Average of Mean and Median	0.75			10.71 %	11.22 %	10.84 %

Notes on page 33 of this Exhibit.

Bear Valley Electric Service, Inc.
Notes to Accompany the Application of the CAPM and ECAPM

Notes:

(1) The market risk premium (MRP) is derived by using five different measures from four sources: Kroll, Value Line, Bloomberg, and S&P Capital IQ as illustrated below:

Measure 1: Kroll Arithmetic Mean MRP (1926-2025)

Arithmetic Mean Monthly Returns for Large Stocks 1926-2025:	12.35	%
Arithmetic Mean Income Returns on Long-Term Government Bonds:	4.99	
MRP based on Kroll Historical Data:	7.37	%

Measure 2: Application of a Regression Analysis to Kroll Historical Data

(1926-2025)	7.67	%

Measure 3: Application of the PRPM to Kroll Historical Data

(January 1926 - July 2026)	9.92	%

Measure 4: Value Line Projected MRP (Thirteen weeks ending August 7, 2026)

Total projected return on the market 3-5 years hence*:	11.37	%
Risk-Free Rate (see note 2):	4.84	
MRP based on Value Line Summary & Index:	6.53	%

*Forcasted 3-5 year capital appreciation plus expected dividend yield

Measure 5: Bloomberg, Value Line, and S&P Capital IQ Projected Return on the Market based on the S&P 500

Total return on the Market based on the S&P 500:	23.64	%
Risk-Free Rate (see note 2):	4.84	
MRP based on Bloomberg, Value Line, and S&P Capital IQ data:	18.80	%

Average of Measures 1 through 4:	7.87	%

(2) For reasons explained in the Direct Testimony, the appropriate risk-free rate for cost of capital purposes is the average forecast of 30 year Treasury Bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts. (See pages 27 and 28 of this Exhibit) The projection of the risk-free rate is illustrated below:

Third Quarter 2026	5.00	%
Fourth Quarter 2026	4.90	
First Quarter 2027	4.90	
Second Quarter 2027	4.90	
Third Quarter 2027	4.90	
Fourth Quarter 2027	4.80	
2028-2032	4.70	
2033-2037	4.60	
	4.84	%

(3) Average of CAPM and ECAPM cost rates.

(4) Results were excluded from the final average and median as they were more than two standard deviations from the proxy group's mean.

Sources of Information:
Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2026, July 31, 2026
Kroll 2023 SBBI® Yearbook
S&P Capital IQ
Bloomberg Professional Services

Bear Valley Electric Service, Inc.
Basis of Selection of the Group of Non-Price Regulated Companies
Comparable in Total Risk to the Proxy Group of Thirteen Electric Companies

The criteria for selection of the Proxy Group of Non-Price Regulated Companies comparable in total risk to the Proxy Group of Thirteen Electric Companies was that the Non-Price Regulated Companies be domestic and reported in Value Line Investment Survey (Standard Edition).

The Proxy Group of Non-Price Regulated Companies was selected based on the unadjusted beta range of 0.41 - 0.71 and residual standard error of the regression range of 2.3603 - 2.8151 of the Proxy Group of Thirteen Electic Companies.

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

The standard deviation of the Utility Proxy Group's residual standard error of the regression is 0.1137. The standard deviation of the standard error of the regression is calculated as follows:

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

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

$$\text{Thus,} \quad 0.1137 = \frac{2.5877}{\sqrt{518}} = \frac{2.5877}{22.7596}$$

Source of Information: Value Line Proprietary Database, June 2026.
Value Line Investment Survey (Standard Edition).

Bear Valley Electric Service, Inc.
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

Proxy Group of Thirteen Electric Companies	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
Alliant Energy Corporation	0.80	0.63	2.4552	0.0725
Ameren Corporation	0.75	0.61	2.4725	0.0730
American Electric Power Company, Inc.	0.70	0.49	2.6152	0.0773
Duke Energy Corporation	0.65	0.42	2.3112	0.0683
Edison International	0.90	0.79	3.5806	0.1058
Entergy Corporation	0.75	0.61	2.6995	0.0798
Evergy, Inc.	0.75	0.60	2.4426	0.0722
FirstEnergy Corp.	0.70	0.53	2.5711	0.0760
IDACORP, Inc.	0.65	0.45	2.4397	0.0721
OGE Energy Corp.	0.85	0.70	2.3247	0.0687
Pinnacle West Capital Corporation	0.70	0.54	2.6250	0.0775
The Southern Company	0.65	0.41	2.4134	0.0713
Xcel Energy Inc.	0.70	0.52	2.6899	0.0795
Average	0.73	0.56	2.5877	0.0765
Beta Range (+/- 2 std. Devs. of Beta)	0.41	0.71		
2 std. Devs. of Beta	0.15			
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.3603	2.8151		
Std. dev. of the Res. Std. Err.	0.1137			
2 std. devs. of the Res. Std. Err.	0.2274			

Source of Information: Value Line Proprietary Database, June 2026.

Bear Valley Electric Service, Inc.
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Thirteen Electric Companies

Proxy Group of Five Non-Price Regulated Companies	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
Abbott Laboratories	0.75	0.58	2.7216	0.0804
General Dynamics Corporation	0.85	0.71	2.4416	0.0721
Ingredion Incorporated	0.80	0.69	2.3841	0.0704
Quest Diagnostics Incorporated	0.65	0.47	2.8052	0.0829
Reynolds Consumer Products Inc.	0.65	0.42	2.5456	0.0752
Proxy Group of Five Non-Price Regulated Companies Average	0.74	0.57	2.5796	0.0762
Proxy Group of Thirteen Electric Companies	0.73	0.56	2.5877	0.0765

Source of Information: Value Line Proprietary Database, June 2026.

Bear Valley Electric Service, Inc.
Summary of Cost of Equity Models Applied to
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Thirteen Electric Companies

Principal Methods	Proxy Group of Five Non-Price Regulated Companies
Discounted Cash Flow Model (DCF) (1)	11.75%
Risk Premium Model (RPM) (2)	10.06% - 11.10%
Capital Asset Pricing Model (CAPM) (3)	9.97% - 10.96%
Mean	10.59% - 11.27%
Median	10.06% - 11.10%
Average of Mean and Median	10.33% - 11.18%

Notes:
(1) From page 38 of this Exhibit.
(2) From page 39 of this Exhibit.
(3) From pages 42 and 43 of this Exhibit.

Bear Valley Electric Service, Inc.
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Thirteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Proxy Group of Five Non-Price Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Zack's Five Year Projected Growth Rate in EPS	S&P Capital IQ Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS (1)	Adjusted Dividend Yield	Indicated Common Equity Cost Rate (2)
Abbott Laboratories	2.73 %	8.00 %	9.40 %	8.62 %	8.67 %	2.85 %	11.52 %
General Dynamics Corporation	1.78	10.00	10.20	9.43	9.88	1.87	11.75
Ingredion Incorporated	3.26	5.00	11.00	NA	8.00	3.39	11.39
Quest Diagnostics Incorporated	1.68	9.00	9.70	9.49	9.40	1.76	11.16
Reynolds Consumer Products Inc.	3.82	10.00	NA	NA	10.00	4.01	14.01
	NA = Not Available					Mean	11.97 %
						Median	11.52 %
					Average of Mean and Median		11.75 %

Notes:

(1) Average of columns 2 through 4 excluding negative growth rates.

(2) The application of the DCF model to the domestic, non-price regulated comparable risk companies is identical to the application of the DCF to the Utility Proxy Groups. The dividend yield is derived by using the 60 day average price and the spot indicated dividend as of 8/3/2026. The dividend yield is then adjusted by 1/2 the average projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.zacks.com, and S&P Capital IQ (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.

Source of Information:
Value Line Investment Survey.
www.zacks.com, Downloaded on 8/3/2026
S&P Capital IQ

Bear Valley Electric Service, Inc.
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Five Non-Price Regulated Companies
1.	Prospective Yield on Baa2 Rated Corporate Bonds (1)	6.15%
2.	Adjustment to Reflect Bond Rating Difference of Non-Price Regulated Companies (2)	-0.24%
3.	Adjusted Bond Yield	5.91%
4.	Equity Risk Premium (3)	4.15% - 5.19%
5.	Risk Premium Derived Common Equity Cost Rate	10.06% - 11.10%

Notes: (1) Average forecast of Baa corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated June 1, 2026, July 31, 2026 (see pages 27 and 28 of this Exhibit). The estimates are detailed

Third Quarter 2026	6.20 %
Fourth Quarter 2026	6.20
First Quarter 2027	6.20
Second Quarter 2027	6.00
Third Quarter 2027	6.20
Fourth Quarter 2027	6.20
2028-2032	6.10
2033-2037	6.10
Average	6.15 %

(2) The average yield spread of Baa2 rated corporate bonds over A2 corporate bonds for the three months ending July 2026. To reflect the A2 average rating of the Non-Price Regulated Proxy Group, the yield on the Baa corporate bond must be adjusted by the full spread between A2 and Baa2 corporate bond yields as shown below:

	A2 Corp. Bond Yield	Baa2 Corp. Bond Yield	Spread
Jul-26	5.95 %	6.19 %	0.24 %
Jun-26	5.76	6.00	0.24
May-26	5.85	6.10	0.25
		Average yield spread	0.24

(3) From page 41 of this Exhibit.

Bear Valley Electric Service, Inc.
Comparison of Long-Term Issuer Ratings for the
and Proxy Group of Five Non-Price Regulated Companies

Proxy Group of Five Non-Price Regulated Companies	Moody's Long-Term Issuer Rating August 2026		Standard & Poor's Long-Term Issuer Rating August 2026	
	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
Abbott Laboratories	Aa3	4.0	A+	5.0
General Dynamics Corporation	A1	5.0	A	6.0
Ingredion Incorporated	Baa1	8.0	BBB	9.0
Quest Diagnostics Incorporated	Baa1	8.0	BBB+	8.0
Reynolds Consumer Products Inc.	NA	--	BB+	11.0
Proxy Group of Five Non-Price Regulated Companies Average	A2	6.3	BBB+	7.8

Notes:
(1) From page 24 of this Exhibit.

Source of Information:
Bloomberg Professional Services.

Bear Valley Electric Service, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for Non-Price Regulated Companies of Comparable risk to the
Proxy Group of Thirteen Electric Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Five Non-Price Regulated Companies
1.	Kroll Equity Risk Premium (1)	6.17%
2.	Regression on Kroll Risk Premium Data (2)	6.70%
3.	Kroll Equity Risk Premium based on PRPM (3)	8.90%
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	5.89%
5.	Equity Risk Premium Based on Bloomberg, Value Line, and S&P Global Market Intelligence S&P 500 Companies (5)	18.16%
6.	Conclusion of Equity Risk Premium (6)	6.92%
7.	Adjusted Beta (7)	0.60 - 0.75
8.	Forecasted Equity Risk Premium	4.15% - 5.19%

Notes:

(1) From note 1 of page 26 of this Exhibit.
(2) From note 2 of page 26 of this Exhibit.
(3) From note 3 of page 26 of this Exhibit.
(4) From note 4 of page 26 of this Exhibit.
(5) From note 5 of page 26 of this Exhibit.
(6) From note 6 of page 26 of this Exhibit.
(7) Average of the mean and median betas from pages 42 and 43 of this Exhibit.

Sources of Information:

Stocks, Bonds, Bills, and Inflation - 2023 SBBI Yearbook, Kroll.
Value Line Summary and Index.
Blue Chip Financial Forecasts, June 1, 2026, July 31, 2026
Bloomberg Professional Services.

Bear Valley Electric Service, Inc.
Traditional CAPM and ECAPM Results for the Proxy Groups of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Thirteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Five Non-Price Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Abbott Laboratories	0.75	0.42	0.58	7.87 %	4.84 %	9.41 %	10.23 %	9.82 %
General Dynamics Corporation	0.85	0.71	0.78	7.87	4.84	10.98	11.41	11.20
Ingredion Incorporated	0.80	0.58	0.69	7.87	4.84	10.27	10.88	10.58
Quest Diagnostics Incorporated	0.65	0.37	0.51	7.87	4.84	8.85	9.82	9.34
Reynolds Consumer Products Inc.	0.65	0.48	0.56	7.87	4.84	9.25	10.11	9.68
		Mean	0.62			9.75 %	10.49 %	10.12 %
		Median	0.58			9.41 %	10.23 %	9.82 %
		Average of Mean and Median	0.60			9.58 %	10.36 %	9.97 %

Notes:
(1) From note 1 of page 33 of this Exhibit.
(2) From note 2 of page 33 of this Exhibit.
(3) Average of CAPM and ECAPM cost rates.

Bear Valley Electric Service, Inc.
Traditional CAPM and ECAPM Results Excluding Bloomberg Betas for the Proxy Groups of Non-Price-Regulated Companies
Comparable in Total Risk to the Proxy Group of Thirteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]
Proxy Group of Five Non-Price Regulated Companies	Value Line Adjusted Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Abbott Laboratories	0.75	7.87 %	4.84 %	10.74 %	11.24 %	10.99 %
General Dynamics Corporation	0.85	7.87	4.84	11.53	11.83	11.68
Ingredion Incorporated	0.80	7.87	4.84	11.14	11.53	11.33
Quest Diagnostics Incorporated	0.65	7.87	4.84	9.96	10.65	10.30
Reynolds Consumer Products Inc.	0.65	7.87	4.84	9.96	10.65	10.30
Mean	0.74			10.67 %	11.18 %	10.92 %
Median	0.75			10.74 %	11.24 %	10.99 %
Average of Mean and Median	0.75			10.71 %	11.21 %	10.96 %

Notes:
(1) From note 1 of page 33 of this Exhibit.
(2) From note 2 of page 33 of this Exhibit.
(3) Average of CAPM and ECAPM cost rates.

Bear Valley Electric Service, Inc.
Derivation of Investment Risk Adjustment Based upon
Kroll Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.		[1] Market Capitalization on August 03, 2026 (1) (millions)		[2] Applicable Decile of the NYSE/AMEX/ NASDAQ (3)	[3] Applicable Size Premium (4)	[4] Spread from Applicable Size Premium (5)
1.	Bear Valley Electric Service, Inc.	$ 289.209		10	4.37%	
2.	Proxy Group of Thirteen Electric Companies	$ 40,028.638 (2)	138.41 x	2	0.27%	4.10%

	[A] Decile	[B] Market Capitalization of Smallest Company (millions)	[C] Market Capitalization of Largest Company (millions)	[D] Size Premium (Return in Excess of CAPM)*
Largest	1	$ 53,677.496	$ 4,542,663.305	0.01%
	2	20,547.627	53,647.975	0.27%
	3	10,784.341	20,493.885	0.40%
	4	6,449.090	10,707.825	0.37%
	5	4,237.161	6,442.608	0.65%
	6	2,522.120	4,232.272	0.88%
	7	1,472.350	2,518.431	1.05%
	8	782.513	1,472.329	0.77%
	9	351.125	782.173	1.68%
Smallest	10	3.747	351.051	4.37%

*From 2026 Kroll Cost of Capital Navigator

Notes:

(1) Source: Bloomberg Professional Services.
(2) Average of the Market Capitalization of the Proxy Group of Thirteen Electric Companies on 8/3/2026.
(3) Gleaned from Columns [B] and [C] on the bottom of this page. The appropriate decile (Column [A]) corresponds to the market capitalization of the proxy group, which is found in Column [1].
(4) Corresponding risk premium to the decile is provided in Column [D] on the bottom of this page.
(5) Line No. 1 Column [3] – Line No. 2 Column [3]. For example, the 4.10% in Column [4], Line No. 2 is derived as follows 4.10% = 4.37% - 0.27%.

Bear Valley Electric Service, Inc.
Market Capitalization of Bear Valley Electric Service, Inc. and the
Proxy Group of Thirteen Electric Companies

Company	Exchange	[1] Common Stock Shares Outstanding at Fiscal Year End 2025 (millions)	[2] Book Value per Share at Fiscal Year End 2025 (1)	[3] Total Common Equity at Fiscal Year End 2025 (millions)	[4] Closing Stock Market Price on 8/3/2026	[5] Market-to-Book Ratio on 8/3/2026 (2)	[6] Market Capitalization on 8/3/2026 (3) (millions)
Bear Valley Electric Service, Inc.		NA	NA	132.843 (4)	NA		
Proxy Group of Thirteen Electric Companies						217.71 (5)	$ 289.209 (6)
Proxy Group of Thirteen Electric Companies							
Alliant Energy Corporation	NASDAQ	$ 257.14	$ 28.521	$ 7,334.00	$ 71.27	249.90 %	$ 18,326.43
Ameren Corporation	NYSE	276.42	48.48	13,401.00	109.50	225.90	30,268.48
American Electric Power Company, Inc.	NASDAQ	540.86	57.57	31,138.00	128.32	222.90	69,403.34
Duke Energy Corporation	NYSE	778.00	65.38	50,869.00	124.28	190.10	96,689.84
Edison International	NYSE	384.79	44.39	17,082.00	71.46	161.00	27,497.16
Entergy Corporation	NYSE	452.34	37.41	16,923.08	108.06	288.80	48,879.79
Evergy, Inc.	NASDAQ	230.28	44.39	10,221.30	83.23	187.50	19,166.34
FirstEnergy Corp.	NYSE	577.93	21.65	12,510.00	48.43	223.70	27,989.29
IDACORP, Inc.	NYSE	54.90	65.06	3,571.87	143.79	221.00	7,893.93
OGE Energy Corp.	NYSE	201.90	24.65	4,977.30	47.37	192.20	9,564.00
Pinnacle West Capital Corporation	NYSE	120.91	58.28	7,046.46	100.81	173.00	12,188.47
The Southern Company	NYSE	1,119.39	32.18	36,016.00	92.94	288.90	104,036.23
Xcel Energy Inc.	NASDAQ	623.88	37.84	23,609.00	77.69	205.30	48,468.99
Average		$ 432.21	$ 43.52	$ 18,053.77	$ 92.86	217.71 %	$ 40,028.64

NA= Not Available

Notes: (1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 1 * Column 4.
(4) Requested rate base multiplied by the requested common equity ratio.
(5) The market-to-book ratio of Bear Valley Electric Service on August 3, 2026 is assumed to be equal to the market-to-book ratio of the Proxy Group of Thirteen Electric Companies on August 3, 2026 as appropriate.
(6) Column [3] multiplied by Column [5].

Source of Information: 2025 Annual Forms 10K
Bloomberg Professional

Bear Valley Electric Service, Inc.
Return on Common Equity Implied Based on
Capital Structure of Proxy Group of Thirteen Electric Companies
and Weighted Average Cost of Capital

[1]	[2]		[3]		[4]	[5]	
Description	Weight (%)		Cost		Weighted Cost	Pre-Tax Weighted Cost	
High End of Proxy Group of Thirteen Electric Companies							
Debt	49.11%	(1)	5.92%	(2)	2.91%	2.91%	
Common Equity	50.89%		10.61%	(3)	5.40%	7.50%	(4)
Weighted Average Cost of Capital					8.31%	10.41%	
Capital Structure of BVES							
Debt	40.00%	(2)	5.92%	(2)	2.37%	2.37%	
Common Equity	60.00%		9.65%		5.79%	8.04%	(5)
Weighted Average Cost of Capital					8.16%	10.41%	(6)
Indicated ROE Adjustment			**-0.96%**				

Notes:
(1) High End of capital structures from Proxy Group of Thirteen Electric Companies, as shown on pages 4 and 5 of this Exhibit.
(2) Company provided.
(3) Average model result from page 2 of this Exhibit.
(4) Assuming an effective composite Federal and State income tax rate of 27.98%, the pre-tax weighted cost of common equity based on the Proxy Group of Electric Companies, 10.61% common equity cost rate before adjustment and actual capital structure is 7.50%. 7.50% = 5.40%/(1 - 27.98%).
(5) Pre-tax weighted cost rate of common equity equals the pre-tax overall weighted cost rate (10.41%) minus the weighted cost rate of debt based on BVES's proposed actual capital structure, 2.37%. 10.41% - 2.37% = 8.04%.
(6) Pre-tax weighted overall cost of capital based on Mr. D'Ascendis' proposed overall rate of return.

Bear Valley Electric Service, Inc.
Calculation of Indicated Financial Risk Adjustment Based upon Proxy Group of Thirteen Electric
Using the Hamada Equation

Line No.	Type of Capital	Capital Structure of BVES (1)	High End of Proxy Group of Thirteen Electric Companies (2)
1.	Long-Term Debt	40.00%	49.11%
2.	Common Equity	60.00%	50.89%
3.	Total	100.00%	100.00%
4.	Beta (3)		0.57 - 0.75
5.	Un-levered beta		0.34 (4) 0.44 (5)
6.	Re-Levered beta		0.50 (6) 0.65 (7)
7.	Market Risk Premium (8)		7.87%
8.	Risk-Free Rate (9)		4.84%
9.	Indicated CAPM based on High End of Equity Range (10)		9.33% - 10.74%
10.	Indicated CAPM based on BVES's Capital Structure (11)		8.78% - 9.96%
11.	Indicated Financial Risk Adjustment (12)		**-0.55%** **-0.78%**

Notes:

(1) From page 1 of this Exhibit.

(2) High End of capital structures from Proxy Group of Thirteen Electric Companies, as shown on pages 4 and 5 of this Exhibit.

(3) Utility Proxy Group Beta from pages 31 and 32 of this Exhibit.

(4) The un-levered beta is calculated as follows:

$$b_u = \frac{b_l}{[1 + \frac{D}{E}(1 - T)]}$$

$$.34 = \frac{.57}{[1 + \frac{49.11\%}{50.89\%}(1 - 27.98\%)]}$$

Where:
b_l= levered beta
D = Debt Ratio
E = Equity Ratio
T = Corporate Tax Rate

(5) The un-levered beta is calculated as follows:

$$b_u = \frac{b_l}{[1 + \frac{D}{E}(1 - T)]}$$

$$.44 = \frac{.75}{[1 + \frac{49.11\%}{50.89\%}(1 - 27.98\%)]}$$

Where:
b_l= levered beta
D = Debt Ratio
E = Equity Ratio
T = Corporate Tax Rate

(6) The beta is then re-levered using BVES' requested Capital Structure:

$$b_l = b_u[1 + \frac{D}{E}(1 - T)]$$

$$.50 = .34[1 + \frac{40.00\%}{60.00\%}(1 - 27.98\%)]$$

(7) The beta is then re-levered using BVES' requested Capital Structure:

$$b_l = b_u[1 + \frac{D}{E}(1 - T)]$$

$$.65 = .44[1 + \frac{40.00\%}{60.00\%}(1 - 27.98\%)]$$

(8) Market Risk Premium from page 33 of this Exhibit.

(9) Risk-Free Rate from page 33 of this Exhibit.

(10) Line 4 * Line 7 + Line 8.

(11) Line 6 * Line 7 + Line 8.

(12) Line 10 - Line 9.

Bear Valley Electric Service, Inc.
Derivation of the Flotation Cost Adjustment to the Cost of Common Equity

Equity Issuances and Flotation Costs of Parent

Date	Transaction	[Column 1] Shares Issued	[Column 2] Gross Equity Issue before Costs	[Column 3] Total Flotation Costs	[Column 4] Total Net Proceeds (1)	[Column 5] Flotation Cost Percentage (2)
2025	At-the-Market Offering	903,769	$ 68,700,000	$ 1,400,000	$ 67,300,000	2.04%
2024	At-the-Market Offering	1,145,219	$ 91,700,000	$ 2,200,000	$ 89,500,000	2.40%
			$ 160,400,000	$ 3,600,000	$ 156,800,000	2.24%

Flotation Cost Adjustment

	[Column 6] Average Dividend Yield (3)	[Column 7] Average Projected EPS Growth Rate (3)	[Column 8] Adjusted Dividend Yield (4)	[Column 9] Average DCF Cost Rate Unadjusted for Flotation (5)	[Column 10] DCF Cost Rate Adjusted for Flotation (6)	[Column 11] Flotation Cost Adjustment (7)
Proxy Group of Thirteen Electric Companies	3.23 %	7.65 %	3.35 %	11.00 %	11.08 %	0.08 %

Notes:
(1) Column 2 - Column 3.
(2) (Column 2 - Column 4) / Column 2.
(3) From page 7 of this Exhibit.
(4) This reflects a growth rate component equal to one-half the conclusion of growth rate (from column 7) x column 6 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment.
(5) Column 7 + Column 8.
(6) Adjustment for flotation costs based on adjusting the average constant growth DCF cost rate in accordance with the following:

$$K = \frac{D(1+0.5g)}{P(1-F)} + g$$

Where g is the growth factor and F is the percentage of flotation costs.

(7) Column 10 - Column 9.

Source of Information: Company Form 10-K.

Bear Valley Electric Service, Inc.
Regression of Measures of Price to Earnings Ratio on Growth Measures

Company	Ticker	Trailing P/E Ratio	Proj. Earnings Growth Rate	Proj. Dividend Growth Rate
Ameren Corporation	AEE	21.2	7.50%	5.00%
American Electric Power Company, Inc.	AEP	21.7	5.50%	3.50%
Artesian Resources Corporation	ARTNA	14.2	NA	NA
Atmos Energy Corporation	ATO	22.4	8.50%	8.00%
Avista Corporation	AVA	15.2	4.50%	4.00%
American Water Works Company	AWK	22.1	7.00%	8.50%
American States Water Company	AWR	22.6	7.00%	8.00%
Black Hills Corporation	BKH	18.2	3.50%	3.50%
CMS Energy Corporation	CMS	20.4	8.50%	7.00%
CenterPoint Energy, Inc.	CNP	25.0	8.50%	7.50%
Chesapeake Utilities	CPK	20.0	10.00%	7.00%
California Water Service Group	CWT	22.6	9.50%	5.50%
Dominion Energy Inc.	D	20.4	9.00%	1.00%
DTE Energy Company	DTE	20.2	6.00%	5.50%
Duke Energy Corporation	DUK	19.9	6.50%	4.00%
Consolidated Edison, Inc.	ED	19.9	6.50%	5.50%
Edison International	EIX	11.4	6.00%	6.00%
Eversource Energy	ES	15.3	4.50%	4.50%
Entergy Corporation	ETR	28.7	11.50%	7.00%
Evergy, Inc.	EVRG	21.2	6.50%	3.00%
Exelon Corporation	EXC	17.1	11.00%	5.00%
FirstEnergy Corp.	FE	19.0	5.50%	5.00%
Global Water Resources	GWRS	86.3	NA	NA
Hawaiian Electric Industries, Inc.	HE	16.6	NMF	NMF
H2O America	HTO	19.0	5.00%	3.50%
IDACORP, Inc.	IDA	25.1	5.50%	4.50%
Alliant Energy Corporation	LNT	23.2	6.00%	6.00%
MGE Energy, Inc.	MGEE	19.5	5.50%	6.00%
Middlesex Water Company	MSEX	21.6	8.00%	4.00%
NextEra Energy, Inc.	NEE	20.9	8.50%	8.00%
NiSource Inc.	NI	23.5	9.00%	6.00%
New Jersey Resources	NJR	16.6	6.00%	6.00%
NorthWestern Corporation	NWE	21.2	5.50%	2.00%
Northwest Natural Gas Holding	NWN	17.3	6.50%	0.50%
OGE Energy Corp.	OGE	21.6	6.00%	1.50%
One Gas, Inc.	OGS	18.5	7.00%	2.00%
Otter Tail Corporation	OTTR	13.1	-1.00%	8.50%
PG&E Corporation	PCG	10.2	9.00%	NMF
Public Service Enterprise Group Incorporated	PEG	19.0	7.50%	6.00%
Pinnacle West Capital Corporation	PNW	19.9	6.00%	3.50%
Portland General Electric Company	POR	19.2	6.00%	5.50%
PPL Corporation	PPL	19.6	8.00%	6.00%
RGC Resources	RGCO	17.2	NA	NA
Southern Company	SO	22.0	5.00%	3.50%
Spire Inc.	SR	16.9	8.50%	5.00%
Sempra Energy	SRE	19.4	7.00%	6.00%
Southwest Gas Holdings	SWX	23.1	NMF	NMF
TXNM Energy	TXNM	24.2	4.50%	5.00%
UGI Corporation	UGI	7.8	6.00%	4.00%
Unitil Corp.	UTL	15.5	NA	NA
WEC Energy Group, Inc.	WEC	20.8	7.00%	7.00%
Essential Utilities	WTRG	18.2	5.50%	5.50%
Xcel Energy Inc.	XEL	20.8	8.00%	6.00%
York Water Company	YORW	20.1	NA	NA

Source: Value Line as of August 3, 2026

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.316198277
R Square	0.09998135
Adjusted R Square	0.079980936
Standard Error	3.647495664
Observations	47

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	66.50733905	66.50733905	4.998963936	0.030367286
Residual	45	598.6901078	13.30422462		
Total	46	665.1974468			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	15.7569195	1.821145024	8.65220468	3.95181E-11	12.08894514	19.42489387
Proj. Earnings Growth Rate	57.46461018	25.70161792	2.235836295	0.030367286	5.698894422	109.2303259

Regression Statistics	
Multiple R	0.142920724
R Square	0.020426333
Adjusted R Square	-0.0018367
Standard Error	3.574561944
Observations	46

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	11.7233476	11.7233476	0.917499819	0.343366146
Residual	44	562.2096959	12.77749309		
Total	45	573.9330435			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	18.5104887	1.500830187	12.33349973	7.09471E-16	15.48576421	21.5352132
Proj. Dividend Growth Rate	26.29194039	27.44856505	0.957862109	0.343366146	-29.02700757	81.61088836

Bear Valley Electric Service, Inc.
Retention Ratio Regression Analysis

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.348
R Square	0.121
Adjusted R Square	0.120
Standard Error	0.265
Observations	1099

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	10.670	10.670	151.422	0.000
Residual	1097	77.299	0.070		
Total	1098	87.969			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.143	0.010	14.064	0.000	0.123	0.163
Retention Ratio	-0.242	0.020	-12.305	0.000	-0.281	-0.204

Bear Valley Electric Service, Inc.
Dr. Woolridge Corrected DCF Results

Woolridge Panel A Electric Proxy Group

Company	Ticker	30-Day Dividend Yield [1]	90-Day Dividend Yield [1]	180-Day Dividend Yield [1]	Value Line Growth Rate [2]	Zacks Growth Rate [3]	S&P Growth Rate [3]	Average Growth Rate [4]	Dividend Yield Adjustment Factor [5]	Expected 30-Day Dividend Yield [6]	Expected 90-Day Dividend Yield [6]	Expected 180-Day Dividend Yield [6]	30-Day DCF Result [7]	90-Day DCF Result [7]	180-Day DCF Result [7]
Alliant Energy Corporation (NYSE-LNT)	LNT	2.90%	2.95%	3.06%	6.00%	7.15%	8.17%	7.11%	1.0355	3.01%	3.05%	3.17%	10.12%	10.16%	10.28%
Ameren Corporation (NYSE-AEE)	AEE	2.72%	2.71%	2.81%	7.50%	9.27%	7.90%	8.22%	1.0411	2.83%	2.82%	2.92%	11.05%	11.05%	11.14%
American Electric Power Co. (NYSE-AEP)	AEP	2.90%	2.88%	3.03%	5.50%	8.60%	8.59%	7.56%	1.0378	3.01%	2.99%	3.14%	10.58%	10.56%	10.70%
Avista Corporation (NYSE-AVA)	AVA	4.78%	4.84%	4.89%	5.00%	4.14%	5.78%	4.97%	1.0249	4.90%	4.96%	5.01%	9.88%	9.93%	9.98%
CMS Energy Corporation (NYSE-CMS)	CMS	3.08%	3.02%	3.08%	8.50%	7.14%	7.55%	7.73%	1.0386	3.20%	3.13%	3.20%	10.93%	10.86%	10.93%
Consolidated Edison, Inc. (NYSE-ED)	ED	3.29%	3.23%	3.36%	6.50%	6.47%	6.29%	6.42%	1.0321	3.40%	3.34%	3.46%	9.82%	9.76%	9.89%
Dominion Resources, Inc. (NYSE-D)	D	3.95%	4.15%	4.27%	9.00%	NA	6.78%	7.89%	1.0394	4.10%	4.31%	4.44%	11.99%	12.20%	12.33%
DTE Energy Company (NYSE-DTE)	DTE	3.18%	3.19%	3.32%	6.00%	5.94%	7.59%	6.51%	1.0325	3.28%	3.30%	3.43%	9.79%	9.81%	9.94%
Duke Energy Corporation (NYSE-DUK)	DUK	3.42%	3.34%	3.42%	6.50%	NA	6.58%	6.54%	1.0327	3.53%	3.45%	3.54%	10.07%	9.99%	10.08%
Edison International (NYSE-EIX)	EIX	4.85%	4.90%	5.31%	6.00%	9.43%	6.31%	7.25%	1.0362	5.03%	5.07%	5.51%	12.27%	12.32%	12.75%
Entergy Corporation (NYSE-ETR)	ETR	2.29%	2.31%	2.48%	11.50%	13.32%	13.39%	12.74%	1.0637	2.44%	2.46%	2.64%	15.18%	15.20%	15.37%
Evergy, Inc. (NYSE-EVRG)	EVRG	3.31%	3.36%	3.50%	6.50%	9.07%	9.04%	8.20%	1.0410	3.45%	3.50%	3.64%	11.65%	11.70%	11.85%
Eversource Energy (NYSE-ES)	ES	4.49%	4.49%	4.50%	4.50%	3.25%	4.77%	4.17%	1.0209	4.58%	4.59%	4.60%	8.75%	8.76%	8.77%
Exelon Corporation (NYSE-EXC)	EXC	3.65%	3.58%	3.64%	7.00%	6.03%	6.39%	6.47%	1.0324	3.77%	3.69%	3.76%	10.24%	10.16%	10.23%
FirstEnergy Corp. (NYSE-FE)	FE	3.98%	3.85%	3.93%	5.50%	7.00%	7.81%	6.77%	1.0339	4.11%	3.98%	4.06%	10.88%	10.75%	10.83%
IDACORP, Inc. (NYSE-IDA)	IDA	2.45%	2.45%	2.56%	5.00%	7.64%	8.38%	7.01%	1.0350	2.54%	2.54%	2.65%	9.54%	9.55%	9.66%
NextEra Energy, Inc. (NYSE-NEE)	NEE	2.88%	2.75%	2.84%	8.50%	8.51%	7.57%	8.19%	1.0410	3.00%	2.86%	2.96%	11.19%	11.05%	11.15%
OGE Energy Corp. (NYSE-OGE)	OGE	3.55%	3.55%	3.69%	6.00%	5.57%	6.79%	6.12%	1.0306	3.66%	3.66%	3.80%	9.78%	9.78%	9.92%
Pinnacle West Capital Corp. (NYSE-PNW)	PNW	3.52%	3.57%	3.77%	6.00%	5.81%	7.94%	6.58%	1.0329	3.64%	3.69%	3.90%	10.22%	10.27%	10.48%
Portland General Electric Company (NYSE-POR)	POR	4.36%	4.30%	4.40%	6.50%	7.03%	6.49%	6.67%	1.0334	4.50%	4.44%	4.55%	11.17%	11.11%	11.22%
PPL Corporation (NYSE-PPL)	PPL	3.18%	3.06%	3.12%	8.00%	7.52%	7.89%	7.80%	1.0390	3.30%	3.18%	3.24%	11.11%	10.99%	11.04%
Public Service Enterprise Gp. Inc. (NYSE-PEG)	PEG	3.36%	3.32%	3.30%	7.50%	6.09%	6.73%	6.77%	1.0339	3.47%	3.43%	3.42%	10.24%	10.21%	10.19%
Southern Company (NYSE-SO)	SO	3.24%	3.20%	3.29%	7.00%	7.23%	8.08%	7.44%	1.0372	3.36%	3.32%	3.41%	10.80%	10.76%	10.85%
WEC Energy Group (NYSE-WEC)	WEC	3.35%	3.33%	3.39%	7.00%	7.44%	8.14%	7.53%	1.0376	3.48%	3.45%	3.52%	11.00%	10.98%	11.04%
Xcel Energy Inc. (NYSE-XEL)	XEL	2.98%	2.96%	3.00%	8.00%	9.36%	8.96%	8.77%	1.0439	3.11%	3.09%	3.13%	11.89%	11.86%	11.91%
												Average	10.81%	10.79%	10.90%

Notes:
[1] Source: Exhibit JRW-5, Page 2
[2] Source: Exhibit JRW-5, Page 4
[3] Source: Exhibit JRW-5, Page 5
[4] Average growth rate excluding negative growth rates
[5] 1 + 0.5 x average growth rate
[6] Dividend yield x dividend yield adjustment factor
[7] Expected dividend yield + average growth rate

Bear Valley Electric Service, Inc.
Dr. Woolridge Corrected DCF Results

Woolridge Panel B D'Ascendis Proxy Group

Company	Ticker	30-Day Dividend Yield [1]	90-Day Dividend Yield [1]	180-Day Dividend Yield [1]	Value Line Growth Rate [2]	Zacks Growth Rate [3]	S&P Growth Rate [3]	Average Growth Rate [4]	Dividend Yield Adjustment Factor [5]	Expected 30-Day Dividend Yield [6]	Expected 90-Day Dividend Yield [6]	Expected 180-Day Dividend Yield [6]	30-Day DCF Result [7]	90-Day DCF Result [7]	180-Day DCF Result [7]
Alliant Energy Corporation (NYSE-LNT)	LNT	3.00%	3.14%	3.18%	6.00%	7.15%	8.17%	7.11%	1.0355	3.10%	3.25%	3.30%	10.21%	10.36%	10.40%
Ameren Corporation (NYSE-AEE)	AEE	2.57%	2.70%	2.74%	7.50%	9.27%	7.90%	8.22%	1.0411	2.67%	2.81%	2.85%	10.90%	11.03%	11.07%
American Electric Power Co. (NYSE-AEP)	AEP	2.89%	3.09%	3.21%	5.50%	8.60%	8.59%	7.56%	1.0378	3.00%	3.21%	3.33%	10.56%	10.77%	10.89%
Edison International (NYSE-EIX)	EIX	4.85%	4.90%	5.31%	6.00%	9.43%	6.31%	7.25%	1.0362	5.03%	5.07%	5.51%	12.27%	12.32%	12.75%
Entergy Corporation (NYSE-ETR)	ETR	2.41%	2.59%	2.68%	11.50%	13.32%	13.39%	12.74%	1.0637	2.56%	2.75%	2.85%	15.30%	15.49%	15.59%
Evergy, Inc. (NYSE-EVRG)	EVRG	3.39%	3.58%	3.66%	6.50%	9.07%	9.04%	8.20%	1.0410	3.53%	3.73%	3.81%	11.73%	11.93%	12.02%
FirstEnergy Corp. (NYSE-FE)	FE	3.98%	3.85%	3.93%	5.50%	7.00%	7.81%	6.77%	1.0339	4.11%	3.98%	4.06%	10.88%	10.75%	10.83%
IDACORP, Inc. (NYSE-IDA)	IDA	2.48%	2.62%	2.68%	5.00%	7.64%	8.38%	7.01%	1.0350	2.57%	2.71%	2.77%	9.58%	9.72%	9.78%
OGE Energy Corp. (NYSE-OGE)	OGE	3.54%	3.76%	3.77%	6.00%	5.57%	6.79%	6.12%	1.0306	3.65%	3.88%	3.88%	9.77%	10.00%	10.00%
Pinnacle West Capital Corp. (NYSE-PNW)	PNW	3.62%	3.86%	3.95%	6.00%	5.81%	7.94%	6.58%	1.0329	3.74%	3.99%	4.08%	10.32%	10.57%	10.66%
Portland General Electric Company (NYSE-POR)	POR	3.97%	4.14%	4.44%	6.50%	7.03%	6.49%	6.67%	1.0334	4.11%	4.28%	4.59%	10.78%	10.96%	11.26%
Southern Company (NYSE-SO)	SO	3.07%	3.25%	3.20%	7.00%	7.23%	8.08%	7.44%	1.0372	3.18%	3.37%	3.32%	10.62%	10.81%	10.76%
Xcel Energy Inc. (NYSE-XEL)	XEL	2.82%	2.93%	2.96%	8.00%	9.36%	8.96%	8.77%	1.0439	2.94%	3.06%	3.09%	11.72%	11.83%	11.86%
												Average	11.13%	11.27%	11.38%

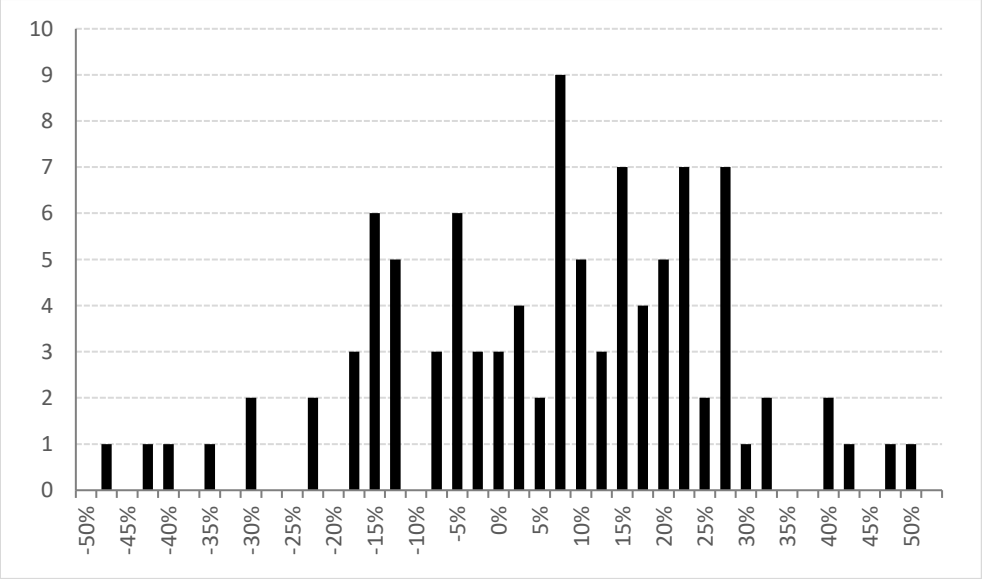
Notes:
[1] Source: Exhibit JRW-5, Page 2
[2] Source: Exhibit JRW-5, Page 4
[3] Source: Exhibit JRW-5, Page 5
[4] Average growth rate excluding negative growth rates
[5] 1 + 0.5 x average growth rate
[6] Dividend yield x dividend yield adjustment factor
[7] Expected dividend yield + average growth rate

Bear Valley Electric Service, Inc.
Comparison of Market Return Measures

	[1]	[2]	[3]	[4]	[5]	[6]
	Actual Market Return (1)	LT average Market Return (2)	Kroll (3)	Damodaran (4)	Fernandez Survey (5)	Duke CFO Study Forecasted Market Return (6)
2009	26.46%	11.67%	10.50%	8.64%	10.75%	NA
2010	15.06%	11.85%	10.08%	8.20%	10.25%	NA
2011	2.11%	11.88%	9.63%	8.49%	9.32%	NA
2012	16.00%	11.77%	10.00%	7.89%	7.96%	6.30%
2013	32.39%	11.82%	9.50%	7.54%	8.10%	5.70%
2014	13.69%	12.05%	9.00%	8.00%	8.81%	6.30%
2015	1.38%	12.07%	9.00%	7.95%	7.90%	7.20%
2016	11.96%	11.95%	9.50%	8.39%	7.60%	6.10%
2017	21.83%	11.95%	9.00%	8.14%	8.20%	5.70%
2018	-4.38%	12.06%	8.50%	7.49%	8.20%	7.16%
2019	31.49%	11.88%	9.00%	8.64%	8.30%	6.21%
2020	18.40%	12.09%	8.50%	7.12%	7.50%	6.81%
2021	28.71%	12.16%	8.00%	5.65%	7.30%	8.38%
2022	-18.11%	12.33%	8.00%	5.75%	8.30%	8.69%
2023	26.61%	12.02%	10.14%	9.82%	9.50%	8.40%
2024	25.62%	12.16%	10.03%	8.48%	9.60%	8.99%
2025	18.06%	12.30%	10.06%	8.91%	9.60%	9.59%
Sum	267.28%	204.01%	158.44%	135.10%	147.19%	101.53%
Forecast Bias (7)		**76.33%**	**59.28%**	**50.55%**	**55.07%**	**45.40%**

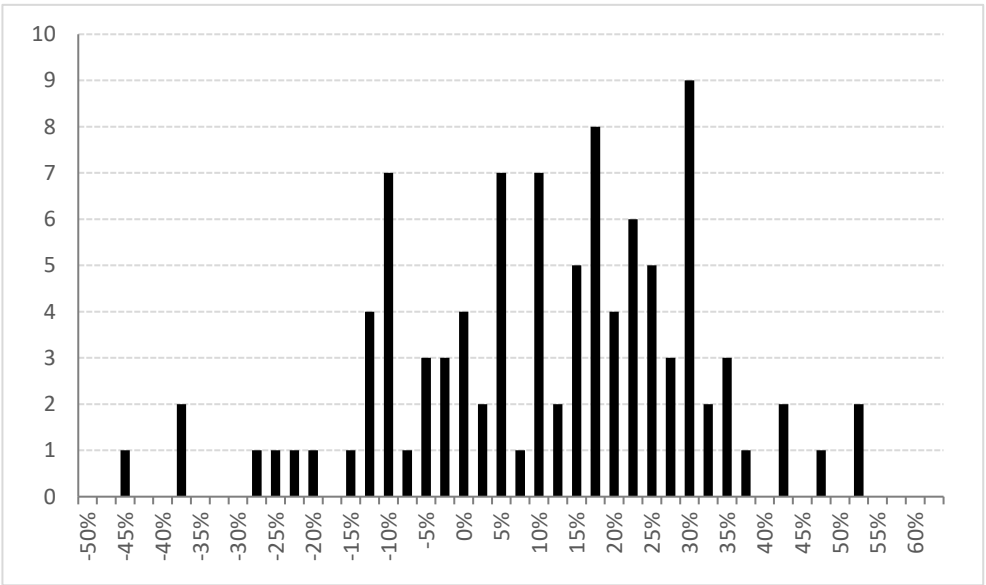
Notes:
(1) Source: Kroll, 2023 SBBI, Appendix A-1, A-7; Cost of Capital Navigator; Bloomberg Professional Services.
(2) Rolling historic long-term average of data in Column 1 since 1926
(3) Source: Kroll Recommended ERP + Corresponding Risk-Free Rate
(4) Source: Damodaran: Implied Equity Risk Premiums - United States plus corresponding risk-free rate.
(5) Source: Pablo Fernandez, IESE Business School MRP and RFR Survey
(6) Source: Duke/Richmond Fed CFO Survey Market Return Estimate
(7) Sum of forecasts divided by sum of actual observations. Duke CFO Study Forecast bias calculated for the period 2012 through 2025.

Bear Valley Electric Service, Inc.
Frequency Distribution of Market Returns and Market Risk Premiums



Average MRP from Direct	Percentile Rank
8.54%	48.70%

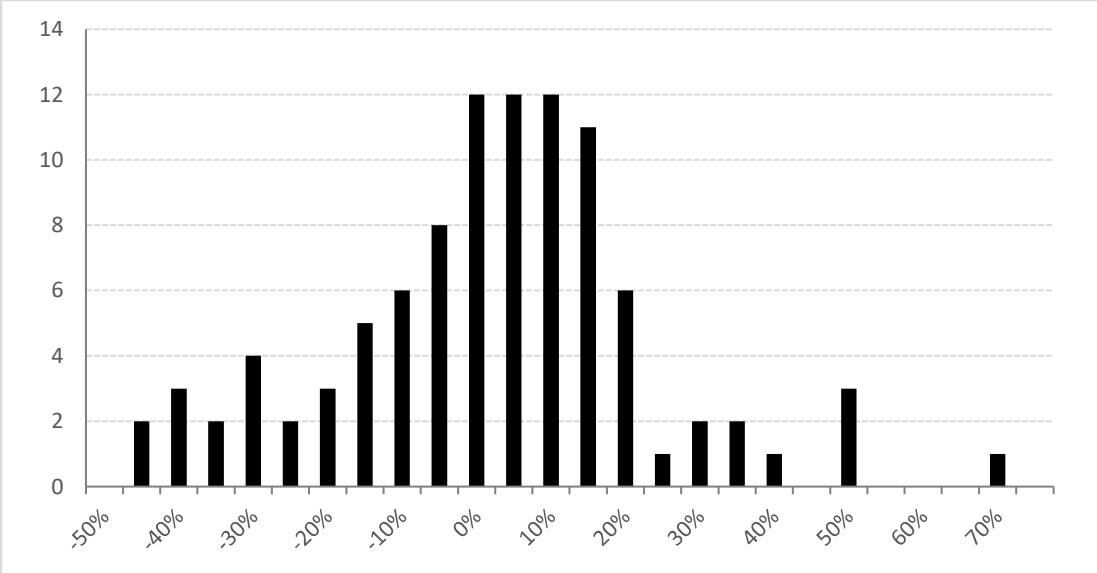
Average MRP from Rebuttal	Percentile Rank
7.87%	44.40%



Average Return from Direct	Percentile Rank
13.15%	47.00%

Average Return from Rebuttal	Percentile Rank
12.71%	46.70%

Bear Valley Electric Service, Inc.
Frequency Distribution of Equity Risk Premiums, 1928 - 2025



Average ERP from Direct	Percentile Rank
5.01%	48.20%

Average ERP from Rebuttal	Percentile Rank
4.88%	48.00%

Source of Information: Bloomberg Professional Services; Mergent Bond Record

FINANCIAL QUARTERLY
R · E · V · I · E · W

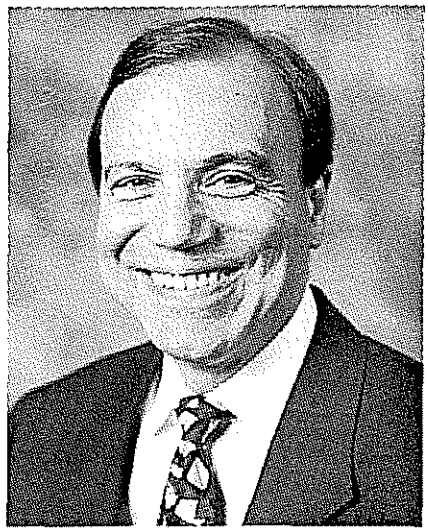
Comparable Earnings: New Life for an Old Precept

by
Frank J. Hanley
Pauline M. Ahern

Reprinted from the American Gas Association's *Financial Quarterly Review*
Summer 1994 edition, Arlington, Va.

Comparable Earnings: New Life for an Old Precept

Accelerating deregulation has greatly increased the investment risk of natural gas utilities. As a result, the authors believe it more appropriate than ever to employ the comparable earnings model. We believe our application of the model overcomes the greatest traditional objection to it — lack of comparability of the selected non-utility proxy firms. Our illustration focuses on a target gas pipeline company with a beta of 0.96 — almost equal to the market's beta of 1.00.



Frank J. Hanley is president of AUS Consultants — Utility Services Group. He has testified in several hundred rate proceedings on the subject of cost of capital before the Federal Energy Regulatory Commission and 27 state regulatory commissions. Before joining AUS in 1971, he was an assistant treasurer of a number of operating companies in the American Water Works System, as well as a financial planning officer with the Philadelphia National Bank. He is a Certified Rate of Return Analyst.

Pauline M. Ahern is a senior financial analyst with AUS Consultants — Utility Services Group. She has participated in many cost-of-capital studies. A former employee of the U.S. Department of the Treasury and the Federal Reserve Bank of Boston, she holds an MBA degree from Rutgers University and is a Certified Rate of Return Analyst.

Introduction

The comparable earnings model used to determine a common equity cost rate is deeply rooted in the standard of "corresponding risk" enunciated in the landmark *Bluefield* and *Hope* decisions of the U.S. Supreme Court.[1] With such solid grounding in the foundations of rate of return regulation, comparable earnings should be accepted as a principal model, along with the currently popular market-based models, provided that its most common criticism, non-comparability of the proxy companies, is overcome.

Our comparable earnings model overcomes the non-comparability issue of the non-utility firms selected as a proxy for the target utility, in this example, a gas pipeline company. We should note that in the absence of common stock prices for the target utility (as with a wholly-owned subsidiary), it is appropriate to use the average of a proxy group of similar risk gas pipeline companies whose common stocks are actively traded. As we will demonstrate, our selection process results in a group of domestic, non-utility firms that is comparable in total risk, the sum of business and financial risk, which reflects both non-diversifiable systematic, or market, risk as well as diversifiable unsystematic, or firm-specific, risk.

Embedded in the Landmark Decisions

As stated in *Bluefield* in 1922: "A public utility is entitled to such rates as will permit it to earn a return ... on investments in other business undertakings which are attended by corresponding risks and uncertainties ..."

In addition, the court stated in *Hope* in 1944: "By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks."

Thus, the "corresponding risk" precept of *Bluefield* and *Hope* predates the use of such market-based cost-of-equity models as the Discounted Cash Flow (DCF) and Capital Asset Pricing (CAPM), which were developed later and are currently popular in rate-base/rate-of-return regulation. Consequently, the comparable earnings model has a longer regulatory and judicial history. However, it has far greater relevance now than ever before in its history because significant deregulation has substantially increased natural gas utilities' investment risk to a level similar to that of non-utility firms. As a result, it is

Comparable Earnings *from page 4*

more important than ever to look to similar-risk non-utility firms for insight into common equity cost rate, especially in view of the deficiencies inherent in the currently popular market-based cost of common equity models, particularly the DCF model.

Despite the fact that the landmark decisions are still regarded as having set the standards for determining a fair rate of return, the comparable earnings model has experienced decreased usage by expert witnesses, as well as less regulatory acceptance over the years. We believe the decline in the popularity of the comparable earnings model, in large measure, is attributable to the difficulty of selecting non-utility proxy firms that regulators will accept as comparable to the target utility. Regulatory acceptance is difficult to gain when the selection process is arbitrary. Our application of the model is objective and consistent with fundamental financial tenets.

Principles of Comparable Earnings

Regulation is a substitute for the competition of the marketplace. Moreover, regulated public utilities compete in the capital markets with all firms, including unregulated non-utilities. The comparable earnings model is based upon the opportunity cost principle; i.e., that the true cost of an investment is the return that could have been earned on the next best available alternative investment of similar risk. Consequently, the comparable earnings model is consistent with regulatory and financial principles, as it is a surrogate for the competition of the marketplace, and investors seek the greatest available rate of return for bearing similar risk.

The selection of comparable firms is the most difficult step in applying the comparable earnings model, as noted by Phillips[2] as well as by Bonbright, Danielsen and Kamerschen.[3] The selection of non-utility proxy firms should result in a sufficiently broad-based group in order to minimize the effect of company-specific aberrations. However, if the selection process is arbitrary, it likely would result in a proxy group that is too broad-based, such as the Standard & Poor's 500 Composite Index or the Value Line Industrial Composite. The use of such groups would require subjective adjustments to the comparable earnings results to reflect risk differences between the group(s) and the target utility, a gas pipeline company in this example.

Authors' Selection Criteria

We base the selection of comparable non-utility firms on market-based, objective, quantitative measures of risk resulting from market prices that subsume investors' assessments of all elements of risk. Thus, our approach is based upon the principle of risk and return; namely, that firms of comparable risk should be expected to earn comparable returns. It is also consistent with the "corresponding risk" standard established in *Bluefield* and *Hope*. We measure total investment risk as the sum of non-diversifiable systematic and diversifiable unsystematic risk. We use the unadjusted beta as a measure of systematic risk and the standard error of the estimate (residual standard error) as a measure of unsystematic risk. Both the unadjusted beta and the residual standard error are derived from a regression of the target utility's security returns relative to the market's returns, which takes the general form:

$$r_{it} = a_i + b_i r_{mt} + e_{it}$$

where:

- r_{it} = tth observation of the ith utility's rate of return
- r_{mt} = tth observation of the market's rate of return
- e_{it} = tth random error term
- a_i = constant least-squares regression coefficient
- b_i = least-squares regression slope coefficient, the unadjusted beta.

As shown by Francis,[4] the total variation or risk of a firm's return, Var (r_i), comes from two sources:

Var (r_i) = total risk of ith asset
= var$(a_i + b_i r_m + e)$
substituting $(a_i + b_i r_m + e)$ for r_i
= var$(b_i r_m)$ + var (e) since var$(a_i) = 0$
= b_i^2 var(r_m) + var (e) since var$(b_i r_m) = b_i^2$ var(r_m)
= systematic + unsystematic risk

Francis[5] also notes: "The term $\sigma^2(r_i|r_m)$ is called the *residual variance around the regression line* in statistical terms or *unsystematic risk* in capital market theory language. $\sigma^2 (r_i|r_m)$ = ... = var (e). The residual variance is the squared standard error in regression language, a measure of unsystematic risk." Application of these criteria results in a group of non-utility firms whose average total investment risk is indeed comparable to that of the target gas pipeline.

As a measure of systematic risk, we use the Value Line unadjusted beta. Beta measures the extent to which market-wide or macro-economic events affect a firm's stock price. We use the unadjusted beta of the target utility as a starting point because it results from the regression of the target utility's security returns relative to the market's returns. Thus, the resulting standard deviation of beta relates to the unadjusted beta. We use the standard deviation of the unadjusted beta to determine the range around it as the selection criterion based on systematic risk.

We use the residual standard error of the regression as a measure of unsystematic risk. The residual standard error reflects the extent to which events specific to the firm's operations affect a firm's stock price. Thus, it is a measure of diversifiable, unsystematic, firm-specific risk.

An Illustration of Authors' Approach

Step One: We begin our approach by establishing the selection criteria as a range of both unadjusted beta and residual standard error of the target gas

continued on page 6

Comparable Earnings *from page 5*

pipeline company.

As shown in table 1, our target gas pipeline company has a Value Line unadjusted beta of 0.90, whose standard deviation is 0.1250. The selection criterion range of unadjusted beta is the unadjusted beta plus (+) and minus (-) three of its standard deviations. By using three standard deviations, 99.73 percent of the comparable unadjusted betas is captured.

Three standard deviations of the target utility's unadjusted beta equals 0.38 (0.1250 x 3 = 0.3750, rounded to 0.38). Consequently, the range of unadjusted betas to be used as a selection criteria is 0.52 - 1.28 (0.52 = 0.90 - 0.38) and (1.28 = 0.90 + 0.38).

Likewise, the selection criterion range of residual standard error equals the residual standard error plus (+) and minus (-) three of its standard deviations. The standard deviation of the residual standard error is defined as: $\sigma/\sqrt{2N}$.

As also shown in table 1, the target gas pipeline company has a residual standard error of 3.7867. According to the above formula, the standard deviation of the residual standard error would be 0.1664 (0.1664 = 3.7867/ $\sqrt{2(259)}$ = 3.7867/22.7596, where 259 = N, the number of weekly price change observations over a period of five years). Three standard deviations of the target utility's residual standard error would be 0.4992 (0.1664 x 3 = .4992). Consequently, the range of residual standard errors to be used as a selection criterion is 3.2875 - 4.2859 (3.2875 = 3.7867 - 0.4992) and (4.2859 = 3.7867 + 0.4992).

Step Two: The step one criteria are applied to Value Line's data base of nearly 4,000 firms for which Value Line derives unadjusted betas and residual standard errors on a weekly basis. All firms with unadjusted betas and residual standard errors within the criteria ranges are then selected.

Step Three: In the regulatory ratemaking environment, authorized common equity return rates are applied to a book-value rate base. Thus, the earnings rates on book common equity, or net worth, of competitive, non-utility firms are highly relevant provided those firms are indeed comparable in total risk to the target gas pipeline. The use of the return rates of other utilities has no relevance because their allowed, and hence subsequently achieved, earnings rates are dependent upon the regulatory

table 1

Summary of the Comparable Earnings Analysis for the Proxy Group of 248 Non-Utility Companies Comparable in Total Risk to the Target Gas Pipeline Company[1]

	1	2	3	4	5	6	7	8
			residual	rate of return on net worth				
	adj. beta	unadj. beta	standard error	3-year average[2]	4-year average[2]	5-year average[2]	5-year projected[3]	
average for the proxy group of 248 non-utility companies comparable in total risk to the target gas pipeline company	0.97	0.92	3.7705					
target gas pipeline company	0.96	0.90[4]	3.7867					
median				11.7%	12.0%	12.6%	15.5%	
average of the median historical returns					12.1%			
conclusion[5]								13.8%

[1]The criteria for selection of the non-utility group was that the non-utility companies be domestic and included in *Value Line Investment Survey*. The non-utility group was selected based on an unadjusted beta range of 0.52 to 1.28 and a residual standard error range of 3.2875 to 4.2859.
[2]Ending 1992.
[3]1996-1998/1997-1999.
[4]The average standard deviation of the target gas pipeline company's unadjusted beta is 0.1250.
[5]Equal weight given to both the average of the 3-, 4- and 5-year historical medians (12.1%) and 5-year projected median rate of return on net worth (15.5%). Thus, 13.8% = (12.1% + 15.5% / 2).
Source: Value Line Inc., March 15, 1994
Value Line Investment Survey

Comparable Earnings *from page 6*

process. Consequently, we believe all utilities must be eliminated to avoid circularity. Moreover, we believe non-domestic firms must be eliminated because their reporting methods differ significantly from U.S. firms.

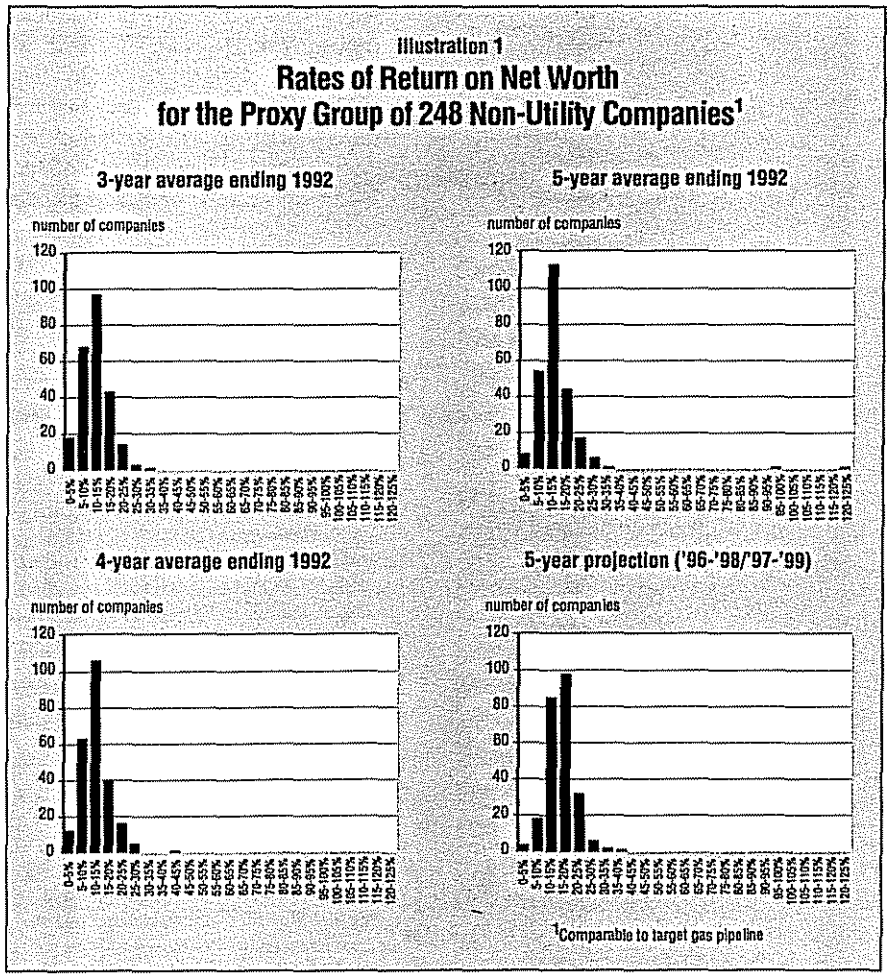
Step Four: We then eliminated those firms for which Value Line does not publish a "Ratings & Report" in *Value Line Investment Survey* so that the historical and projected returns on net worth[6] are from a consistent source. We use historical returns on net worth for the most recent five years, as well as those projected three to five years into the future. We believe it is logical to evaluate both historical and projected return rates because it is reasonable to assume that investors avail themselves of both when they are available from widely disseminated information services, such as Value Line Inc. The use of Value Line's return rates on net worth understates the common equity return rates for two reasons. First, preferred stock is included in net worth. Second, the net worth return rates are as of the end of each period. Thus, the use of average common equity return rates would yield higher results.

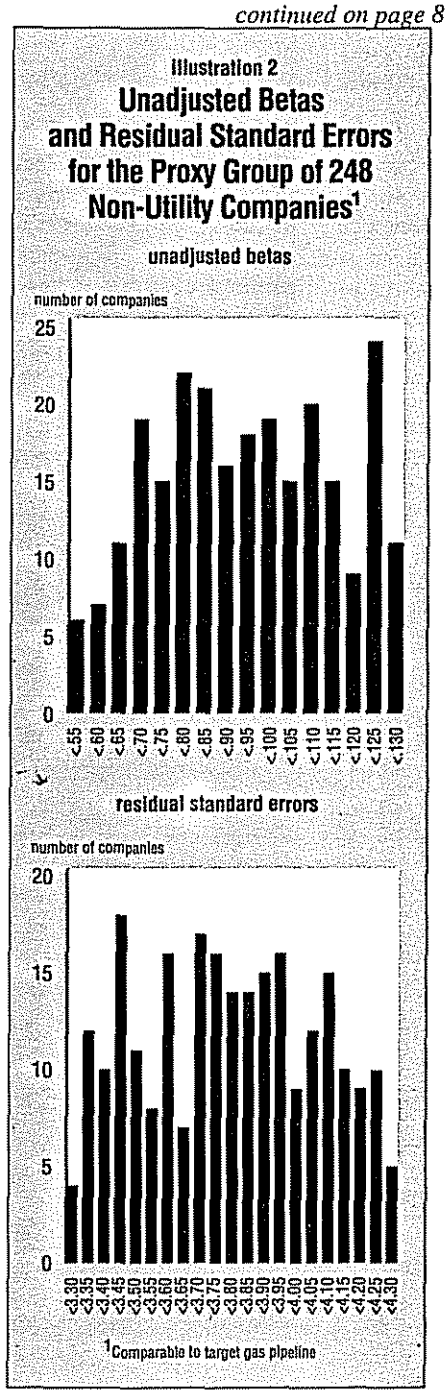
Step Five: Median returns based on the historical average three, four and five years ending 1992 and projected 1996-1998 or 1997-1999 rates of return on net worth are then determined as shown in columns 4 through 7 of table 1. The median is used due to the wide variations and skewness in rates of return on net worth for the non-utility firms as evidenced by the frequency distributions of those returns as shown in illustration 1.

However, we show the average unadjusted beta, 0.92, and residual standard error, 3.7705, for the proxy group in columns 2 and 3 of table 1 because their frequency distributions are not significantly skewed, as shown in illustration 2.

Step Six: Our conclusion of a com-

continued on page 8





Comparable Earnings *from page 7*

parable earnings cost rate is based upon the mid-point of the average of the median three-, four- and five-year historical rates of return on net worth of 12.1 percent as shown in column 5 and the median projected 1996-1998/1997-1999 rate of return on net worth of 15.5 percent as shown in column 7 of table 1. As shown in column 8, it is 13.8 percent.

Summary

Our comparable earnings approach demonstrates that it is possible to select a proxy group of non-utility firms that is comparable in total risk to a target utility. In our example, the 13.8 percent comparable earnings cost rate is very conservative as it is an expected achieved rate on book common equity (a regulatory allowed rate should be greater) and because it is based on end-of-period net worth. A similar rate on average net worth would be about 20 to 40 basis points higher (i.e., 14.0 to 14.2 percent) and still understate the appropriate regulatory allowed rate of return on book common equity.

Our selection criteria are based upon measures of systematic and unsystematic risk, specifically unadjusted beta and residual standard error. They provide the basis for the objective selection of comparable non-utility firms. Our selection criteria rely on changes in market prices over approximately five years. We compare the aggregate total risk, or the sum of systematic and unsystematic risk, which reflects investors' aggregate assessment of both business and financial risk. Thus, no adjustments are necessary to the proxy group results to compensate for the differences in business risk and financial risk, such as accounting practices and debt/equity ratios. Moreover, it is inappropriate to attempt a comparison of the target utility with any individual firm, or subset of firms, in the proxy group because only the average firm of the group is relevant.

Because the comparable earnings model is firmly anchored in the "corresponding risk" precept established in the landmark court decisions, it is worthy of consideration as a principal model for use in estimating the cost rate of common equity capital of a regulated utility. Our approach to the comparable earnings model produces a proxy group that is indeed comparable in total risk because the selection process is objective and quantitative. It therefore overcomes criticism linked to arbitrary selection processes.

All cost-of-common-equity models, including the DCF and CAPM, are fraught with deficiencies, usually stemming from the many necessary but unrealistic assumptions that underlie them. The effects of the deficiencies of individual models can be mitigated by using more than one model when estimating a utility's common equity cost rate. Therefore, when the non-comparability issue is overcome, the comparable earnings model deserves to receive the same consideration as a primary model, as do the currently popular market-based models. ■

[1] *Bluefield Water Works Improvement Co. v. Public Service Commission*. 262 U.S. 679 (1922) and *Federal Power Commission v. Hope Natural Gas Co.* 320 U.S. 519 (1944).

[2] Charles F. Phillips Jr., The Regulation of Public Utilities: Theory and Practice. Public Utilities Reports Inc., 1988. p. 379.

[3] James C. Bonbright, Albert L. Danielsen and David R. Kamerschen. Principles of Public Utilities Rates. 2nd edition. Public Utilities Reports Inc. 1988, p. 329.

[4] Jack Clark Francis. Investments: Analysis and Management. 3rd edition. McGraw-Hill Book Co., 1980, p. 363.

[5] Id., p. 548.

[6] Returns on net worth must be used when relying on Value Line data because returns on book common equity for non-utility firms are not available from Value Line.

Report Lists Pipeline, Storage Projects

More than $9 billion worth of projects to expand the nation's natural gas pipeline network are in various stages of development, according to an A.G.A. report. These projects involve nearly 8,000 miles of new pipelines and capacity additions to existing lines and represent 15.3 billion cubic feet (Bcf) per day of new pipeline capacity.

During 1993 and early 1994, construction on 3,100 miles of pipeline was completed or under way, at a cost of nearly $4 billion, says A.G.A. These projects are adding 5.4 Bcf in daily delivery capacity nationwide.

Among the projects completed in 1993 were Pacific Gas Transmission Co.'s 805 miles of looping that allows increased deliveries of Canadian gas to the West Coast; Northwest Pipeline Corp.'s addition of 433 million cubic feet of daily capacity for customers in the Pacific Northwest and Rocky Mountain areas; and the 156-mile Empire State Pipeline in New York.

In addition, major construction projects were started on the systems of Texas Eastern Transmission Corp. and Algonquin Gas Transmission Co. — both subsidiaries of Panhandle Eastern Corp. — and along Florida Gas Transmission Co.'s pipeline.

The report goes on to discuss another $5 billion in proposed projects, which, if completed, will add nearly 5,000 miles of pipeline and 9.8 Bcf per day in capacity, much of it serving Florida and West Coast markets.

A.G.A. also identifies 47 storage projects and says that if all of them are built, existing storage capacity will increase by more than 500 Bcf, or 15 percent.

For a copy of *New Pipeline Construction: Status Report 1993-94* (#F00103), call A.G.A. at (703) 841-8490. Price per copy is $6 for employees of member companies and associates and $12 for other customers.

Investments: Analysis and Management

Fifth Edition

Jack Clark Francis

Bernard M. Baruch College
City University of New York

McGraw-Hill, Inc.

New York St. Louis San Francisco Auckland Bogotá
Caracas Hamburg Lisbon London Madrid Mexico
Milan Montreal New Delhi Paris San Juan
São Paulo Singapore Sydney Tokyo Toronto

Investments: Analysis and Management

1 2 3 4 5 6 7 8 9 0 DOC DOC 9 5 4 3 2 1 0

ISBN 0-07-021814-5

This book was set in Times Roman by General Graphic Services, Inc.
The editors were Ken MacLeod and Ira Roberts;
the designer was Robin Hessel;
the production supervisor was Friederich W. Schulte.
New drawings were done by J&R Services, Inc.
R. R. Donnelley & Sons Company was printer and binder.

Library of Congress Cataloging-in-Publication Data

Francis, Jack Clark.
Investments: Analysis and management / Jack Clark Francis.—
5th ed.
p. cm.—(McGraw-Hill series in finance)
Includes bibliographical references.
ISBN 0-07-021814-5
1. Investments. 2. Securities. 3. Financial futures.
4. Arbitrage. I. Title. II. Series.
HG4521.F685 1991
332.6—dc20 90-33289

Beta Measurements The beta coefficient is an *index of systematic risk.* Beta coefficients may be used for ranking the systematic risk of different assets. If the beta is larger than 1, $b > 1.0$, then the asset is more volatile than the market and is called an **aggressive asset.** If the beta is less than 1, $b < 1.0$, the asset is a **defensive asset;** its price fluctuations are less volatile than the market's. Figure 10-1 illustrates the characteristic lines for three different assets that have low, medium, and high levels of beta (or undiversifiable risk).

Figure 10-2 shows that IBM is a stock with an average amount of systematic risk. IBM's beta of 1.02 indicates that its return tends to increase 2 percent more than the return on the market average when the market is rising. When the market falls, IBM's return tends to fall 2 percent more than the market's. The characteristic line for IBM has an above average correlation coefficient of $\rho = .7495$, indicating that the returns on this security follow its particular characteristic line slightly more closely than those of the average stock.

Partitioning Risk Total risk can be measured by the variance of returns, denoted Var(r). This measure of *total risk is partitioned into its systematic and unsystematic components in Equation (10-8).*[7]

$$\begin{aligned}\text{Var}(r_i) &= \text{total risk of } i\text{th asset} \\ &= \text{Var}(a_i + b_i r_{m,t} + e_{i,t}) \\ &\quad \text{by substituting } (a_i + b_i r_{m,t} + e_{i,t}) \text{ for } r_{i,t} \\ &= 0 + \text{Var}(b_i r_{m,t}) + \text{Var}(e_{i,t}) \\ &\quad \text{since Var}(a_i) = 0 \end{aligned} \tag{10-8}$$

$$\begin{aligned}\text{Var}(r_i) &= b_i^2\,\text{Var}(r_m) + \text{Var}(e) \qquad \text{since Var}(b_i r_m) = b_i^2\,\text{Var}(r_m) \\ &= \text{systematic} + \text{unsystematic risk}\end{aligned} \tag{10-8a}$$

$$.01389 = .00780 + .00609 \qquad \text{for IBM}$$

The unsystematic risk measure Var(e) is called in regression language the *residual variance* or, synonymously, the *standard error squared.*

Undiversifiable Proportion The percentage of total risk that is systematic can be measured by the coefficient of determination ρ^2 (that is, the characteristic line's squared correlation coefficient).

[7]In this context, **partition** is a technical statistical term that means to divide the total variance into *mutually exclusive* and *exhaustive* pieces. This partition is only possible if the returns from the market are statistically independent from the residual error terms that occur simultaneously, $\text{Cov}(r_{m,t}, e_{i,t}) = 0$. The mathematics of regression analysis will orthogonalize the residuals and thus ensure that the needed statistical independence exists.

$$\frac{\text{Systematic risk}}{\text{Total risk}} = \frac{b_i^2 \text{ Var}(r_m)}{\text{Var}(r_m)} = \rho^2 \tag{10-9}$$

$$\frac{.007802}{.01389} = \frac{(1.021)^2\ (.00749)}{.00749} = .5617 \times 100 = 56.17\% \quad \text{for IBM}$$

Diversifiable Proportion The percentage of unsystematic risk equals $(1.0 - \rho^2)$.

$$\frac{\text{Unsystematic risk}}{\text{Total risk}} = \frac{\text{Var}(e)}{\text{Var}(r_i)} = (1.0 - \rho^2)$$

$$\frac{.00609}{.01389} = (1.0 - .5617) = .438 \times 100 \tag{10-10}$$

$$= 43.8\% \text{ unsystematic} \quad \text{for IBM}$$

Studies of the characteristic lines of hundreds of stocks listed on the NYSE indicate that the average correlation coefficient is approximately $\rho = .5$.[8] This means that about $\rho^2 = 25$ percent of the total variability of return in most NYSE securities is explained by movements in the market.

	NYSE average	IBM
Systematic risk: ρ^2	.25	.5617
Unsystematic risk: $(1.0 - \rho^2)$	.75	.4383
Total risk: 100%	1.00	1.0000

As explained above, systematic changes are common to all stocks and are therefore undiversifiable.

A primary use of the characteristic line (or *market model,* or the *single-index model,* as it is also called) is to assess the risk characteristics of one asset.[9] The statistics in Table 10-2, for instance, indicate that IBM's common stock is slightly more risky than the average common stock in terms of total risk and

[8]The average ρ was found to be about .5, as reported in Marshall Blume, "On the Assessment of Risk," *Journal of Finance,* March 1971, p. 4. For similar estimates, see J. C. Francis, "Statistical Analysis of Risk Surrogates for NYSE Stocks," *Journal of Financial and Quantitative Analysis,* Dec. 1979.

[9]Professor Jensen reformulated the characteristic line in a risk-premium form. See M. C. Jensen, "The Performance of Mutual Funds in the Period 1945 through 1964," *Journal of Finance,* May 1968, pp. 389–416. See also M. C. Jensen, "Risk, the Pricing of Capital Assets, and the Evaluation of Investment Portfolios," *Journal of Business,* vol. XLII, 1969. Jensen interprets the alpha intercept term of the characteristic line, as he formulates it, as an investment performance measure. It has been suggested that Jensen's performance measure is biased. See Keith V. Smith and Dennis A. Tito, "Risk-Return Measures of Ex-Post Portfolio Performance," *Journal of Financial and Quantitative Analysis,* Dec. 1969, vol. IV, no. 4, p. 466.

systematic risk.[10] New risk measurements must be made periodically, however, because the risk and return of an asset may change with the passage of time.[11]

10-3 CAPITAL ASSET PRICING MODEL (CAPM)

An old axiom states "there is no such thing as a free lunch." This means that you cannot expect to get something for nothing—a rule that certainly applies to investment returns. Investors who want to earn high average rates of return must take high risks and endure the associated loss of sleep, the possibility of ulcers, and the chance of bankruptcy. The question to which we now turn is: Should investors worry about total risk, undiversifiable risk, diversifiable risk, or all three?

In Chapter 1 it was suggested that *investors should seek investments that have the maximum expected return in their risk class.* Their happiness from investing is presumed to be derived as indicated in the expected utility $E(U)$ function below.

$$E(U) = f[E(r), \sigma]$$

The investment preferences of wealth-seeking risk-averse investors represented by the function above cause them to maximize their expected utility (or, equivalently, happiness) by (1) maximizing their expected return in any given risk class, $\partial E(U)/\partial E(r) > 0$, or, conversely, (2) minimizing their total risk at any given rate of expected return, $\partial E(U)/\partial \sigma < 0$. However, in selecting individual assets, investors will not be particularly concerned with the asset's total risk σ. Figure 9-1 showed that the unsystematic portion of total risk can be easily diversified by holding a portfolio of different securities. But, systematic risk affects all stocks in the market because it is undiversifiable. Portfolio theory therefore suggests that only the undiversifiable (or systematic) risk is worth avoiding.[12]

[10]Statements about the relative degree of total risk are made in the context of a long-run horizon—that is, over at least one *complete business cycle*. Obviously, an accurate short-run forecast which says that some particular company will go bankrupt next quarter makes it more risky than IBM, although IBM may have had more historical variability of return.

[11]Empirical studies documenting the intertemporal instability of betas have been published. Marshall Blume, "Betas and Their Regression Tendencies," *Journal of Finance,* June 1975, pp. 785–795. See also J. C. Francis, "Statistical Analysis of Risk Coefficients for NYSE Stocks," *Journal of Financial and Quantitative Analysis,* Dec. 1979, vol. XIV, no. 5, pp. 981–997. An appendix at the end of this chapter reviews some evidence about shifting betas, standard deviations, and correlations.

[12]Both the systematic and unsystematic portions of total risk must be considered by **undiversified investors.** Entrepreneurs who have their entire net worth invested in one business, for example, can be bankrupted by a piece of bad luck that could be easily averaged away to zero in a diversified portfolio. Poorly diversified investors should not treat diversifiable risk lightly. Only well-diversified investors can afford to ignore diversifiable risk.

Bear Valley Electric Service, Inc.
Summary of Decoupling and Capital Investment Rate Mechanisms for the
Utility Proxy Group

Company	Utility Type	Parent	State	Decoupling [1]	Capital Investment [2]
American States Water Co.					
Bear Valley Electric Service, Inc.	Electric	AWR	California	F	✓
Alliant Energy Corporation					
Interstate Power and Light Company	Electric	LNT	Iowa		
Wisconsin Power and Light Company	Electric	LNT	Wisconsin		
Ameren Corporation					
Ameren Illinois Company	Electric	AEE	Illinois	F	✓
Union Electric Company	Electric	AEE	Missouri	P	✓
American Electric Power Company, Inc.					
AEP Texas Inc.	Electric	AEP	Texas		✓
Appalachian Power (Wheeling Power)	Electric	AEP	West Virginia		
Appalachian Power Company	Electric	AEP	Virginia		✓
Indiana Michigan Power Company	Electric	AEP	Indiana	P	
Indiana Michigan Power Company	Electric	AEP	Michigan	P	✓
Kentucky Power Company	Electric	AEP	Kentucky	P	
Kingsport Power Company	Electric	AEP	Tennessee		
Ohio Power Company	Electric	AEP	Ohio		✓
Public Service Company of Oklahoma	Electric	AEP	Oklahoma	P	✓
Southwestern Electric Power Company	Electric	AEP	Arkansas	P	
Southwestern Electric Power Company	Electric	AEP	Louisiana	P	✓
Southwestern Electric Power Company	Electric	AEP	Texas		✓
Duke Energy Corporation					
Duke Energy Carolinas, LLC	Electric	DUK	North Carolina	P	
Duke Energy Carolinas, LLC	Electric	DUK	South Carolina		
Duke Energy Florida, LLC	Electric	DUK	Florida		✓
Duke Energy Indiana, LLC	Electric	DUK	Indiana		✓
Duke Energy Kentucky, Inc.	Electric	DUK	Kentucky	P	✓
Duke Energy Ohio, Inc.	Electric	DUK	Ohio	P	✓
Duke Energy Progress, LLC	Electric	DUK	North Carolina	P	✓
Duke Energy Progress, LLC	Electric	DUK	South Carolina		
Edison International					
Southern California Edison Company	Electric	EIX	California	F	✓
Entergy Corporation					
Entergy Arkansas LLC	Electric	ETR	Arkansas		
Entergy Louisiana LLC	Electric	ETR	Louisiana	P	✓
Entergy Mississippi LLC	Electric	ETR	Mississippi		✓
Entergy New Orleans LLC	Electric	ETR	New Orleans	P	
Entergy Texas Inc.	Electric	ETR	Texas		✓
Evergy, Inc.					
Evergy Kansas Central	Electric	EVRG	Kansas		✓
Evergy Kansas Metro	Electric	EVRG	Kansas		
Evergy Missouri Metro	Electric	EVRG	Missouri	P	✓
Evergy Missouri West	Electric	EVRG	Missouri	P	✓
FirstEnergy Corp.					
Jersey Central Power & Light Co.	Electric	FE	New Jersey	P	✓
Metropolitan Edison Co.	Electric	FE	Pennsylvania		✓
Monongahela Power Co.	Electric	FE	West Virginia		✓
Ohio Edison Co.	Electric	FE	Ohio		✓
Pennsylvania Electric Co.	Electric	FE	Pennsylvania	P	✓
Pennsylvania Power Co.	Electric	FE	Pennsylvania		✓
The Cleveland Electric Illuminating Co.	Electric	FE	Ohio		✓
The Potomac Edison Co.	Electric	FE	Maryland/West Virginia		✓
The Toledo Edison Co.	Electric	FE	Ohio		✓
West Penn Power Co.	Electric	FE	Pennsylvania		✓

Bear Valley Electric Service, Inc.
Summary of Decoupling and Capital Investment Rate Mechanisms for the
Utility Proxy Group

Company	Utility Type	Parent	State	Decoupling [1]	Capital Investment [2]
IDACORP, Inc.					
Idaho Power Co.	Electric	IDA	Idaho	F	
Idaho Power Co.	Electric	IDA	Oregon		
OGE Energy Corp.					
Oklahoma Gas and Electric Company	Electric	OGE	Arkansas	P	✓
Oklahoma Gas and Electric Company	Electric	OGE	Oklahoma	P	✓
Pinnacle West Capital Corporation					
Arizona Public Service Co.	Electric	PNW	Arizona	P	
The Southern Company					
Alabama Power Company	Electric	SO	Alabama		
Georgia Power Company	Electric	SO	Georgia		
Mississippi Power Company	Electric	SO	Mississippi		✓
Xcel Energy Inc.					
Northern States Power Company - MN	Electric	XEL	Minnesota	F	
Northern States Power Company - MN (North Dakota)	Electric	XEL	North Dakota		
Northern States Power Company - MN (South Dakota)	Electric	XEL	South Dakota	P	✓
Northern States Power Company - WI	Electric	XEL	Wisconsin		
Northern States Power Company - WI (Michigan)	Electric	XEL	Michigan		
Public Service Company of Colorado	Electric	XEL	Colorado		✓
Southwestern Public Service Company	Electric	XEL	New Mexico		✓
Southwestern Public Service Company	Electric	XEL	Texas		✓

Notes:

Note: A mechanism may cover one or more cost categories; therefore, designations may not indicate separate mechanisms for each category.

[1] Full or partial decoupling (such as Fixed Variable rate design, weather normalization clauses, and recovery of lost revenues as a result of Energy Efficiency programs). All full or partial decoupling mechanisms include weather normalization adjustments.

[2] Includes recovery of costs related to infrastructure replacement, system integrity/hardening, and other capital expenditures.

Sources: Company SEC Form 10-Ks; Operating company tariffs; Company Investor Presentations; Regulatory Research