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APPLICATION OF ENTERGY TEXAS, INC. FOR AUTHORITY TO CHANGE RATES	**§**	**STATE OFFICE OF ADMINISTRATIVE HEARINGS**

DIRECT TESTIMONY AND EXHIBITS

OF

KEVIN W. O'DONNELL, CFA

ON BEHALF OF

CERTAIN CITIES SERVED BY ENTERGY TEXAS, INC.

OCTOBER 26, 2022

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DIRECT TESTIMONY OF
KEVIN W. O'DONNELL, CFA

INTRODUCTION

Q. Please state your name, position, and business address for the record.

A. My name is Kevin W. O'Donnell. I am President of Nova Energy Consultants, Inc. My business address is 1350 SE Maynard Rd., Suite 101, Cary, North Carolina 27511.

Q. On whose behalf are you presenting testimony in this proceeding?

A. I am testifying on behalf of ETI Cities, which take power supply service from Entergy Texas Inc. (ETI or Company).

Q. Please summarize your educational background and relevant employment experience.

A. I have a Bachelor of Science in Civil Engineering from North Carolina State University and a Master of Business Administration from Florida State University. I earned the designation of Chartered Financial Analyst ("CFA") in 1988. I have worked in utility regulation since September 1984, when I joined the Public Staff of the North Carolina Utilities Commission ("NCUC"). I left the NCUC Public Staff in 1991 and have worked continuously in utility consulting since that time, first with Booth & Associates, Inc. (until 1994), then as Director of Retail Rates for the North Carolina Electric Membership Corporation (1994-1995), and since then in my own consulting firm.

I have been accepted as an expert witness on rate of return, cost of capital, capital structure, cost of service, rate design, and other regulatory issues in general rate cases, fuel cost proceedings, and other proceedings before the North Carolina Utilities Commission, the South Carolina Public Service Commission, the Wisconsin Public Service Commission, the Virginia State Commerce Commission, the Minnesota Public Service Commission, the New Jersey Board of Public

Utilities, the Public Utility Commission of Montana, the New Mexico Public Regulatory Commission, the Colorado Public Utilities Commission, the District of Columbia Public Service Commission, the Maryland Public Service Commission, the California Public Utilities Commission, and the Florida Public Service Commission. In 1996, I testified before the U.S. House of Representatives' Committee on Commerce and Subcommittee on Energy and Power, concerning competition within the electric utility industry. Additional details regarding my education and work experience are set forth in Appendix A.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony in this proceeding is to present my findings and recommendations to the Commission as to the overall rate of return to allow ETI in the current proceeding.

Q. What ROE is ETI requesting as part of this proceeding?

A. According to the testimony of ETI witness Ann E. Bulkley, ETI is requesting a return on equity (ROE) of 10.5% in this proceeding[1] and a 30 basis point adder for management performance.

Q. Should the Commission adopt ETI's requested ROE to set just and reasonable rates?

A. No, Ms. Bulkley's recommended ROE of 10.5% is flawed in many aspects and grossly overstates ETI's actual market-based cost of equity. I will detail my recommendation, as well as the flaws identified within Ms. Bulkley's analysis, within the remainder of this testimony. I will also comment on the 30-basis point adder requested by the Company as a management bonus.

[1] Pre-Filed Direct Testimony of ETI witness Ann M. Bulkley, p. 6.

Q. Please summarize your primary recommendations in this case.

A. My recommendations in this case are as follows:

- I accept the Company's requested capital structure of 51.21% common equity, 0.81% preferred stock, and 47.98% long-term debt;
- I accept the embedded cost of long-term debt of 3.47%;
- I accept the Company's cost of preferred stock of 5.35%;
- The market-required ROE for ETI is 9.00%;
- The overall rate of return (ROR) I recommend is 6.32%;
- The ROE recommended by Ms. Bulkley for ETI of 10.5% is excessive, unreasonable, and not indicative of current market conditions;
- The Company request for a 30-basis point adder for a management performance bonus lacks sufficient justification for the request and should be denied; and
- My recommended capital structure, ROE, and overall return are shown below within **Table 1** as based upon the results and data shown within **Exhibit KWO-1**:

Table 1: Cities Witness O'Donnell's Recommended Cost of Capital for ETI

O'Donnell ROR Recommendation			
	Capital Structure Ratio (%)	Cost Rate (%)	Weighted Cost Rate (%)
Long-Term Debt	47.98%	3.47%	1.66%
Preferred Stock	0.81%	5.35%	0.04%
Common Equity	51.21%	9.00%	4.61%
Rx	100.00%		6.32%

Q. How is the remainder of your testimony organized?

A. My testimony begins by identifying how current financial markets and corresponding investor behavior impact the calculation of ETI's ROE. I then discuss important policy considerations that guide the determination of an appropriate rate of return. Following that discussion, I present my analysis of the

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appropriate ROE for ETI for ratemaking purposes in this case. The analysis begins with an evaluation of ETI's proxy group, capital structure, and cost of debt. I discuss my ROE analysis that employed several methods of calculating the ROE and recommend a ROE range and then a specific point estimate ROE. I then evaluate Ms. Bulkley's ROE analysis in detail and provide reasons why the Commission should reject her recommendations as well as the Company's requested 30 basis point adder for management performance. Finally, I provide a summary of my conclusions.

I. Current state of the financial markets and changes since last ETI rate case

Q. What is the general state of the United States economy and how is our economy impacting current interest rates?

A. At present, the United States economy is suffering through a period of high inflation, and fears of recession abound in the country. On September 13, 2022, the Consumer Price Index ("CPI"), as reported by the U.S. Bureau of Labor Statistics, reported an 8.2%[2] annualized increase for September 2022. On Wednesday, Oct. 12, the Producer Price Index, which measures wholesale price movements, reported a 8.5% annualized increase.[3] These reports indicated that the Federal Reserve will, most likely, continue to increase interest rates in an attempt to rein in inflation.[4]

Q. Have the debt markets changed over the past year?

A. The Federal Reserve has embarked on a series of rate hikes to help curtail inflation without taking too much out of economic growth. Chart 1 below shows how the yields on 30-year US Treasury bonds have changed in the past year.

[2] https://www.bls.gov/news.release/pdf/cpi.pdf
[3] https://www.cnbc.com/2022/10/12/producer-price-index-september-2022.html
[4] Jeff Cox, *Fed raises rates by another three-quarters of a percentage point, pledges more hikes to fight inflration"* CNBC, September 21, 2022, *https://www.cnbc.com/2022/09/21/fed-rate-hike-september-2022-.html*

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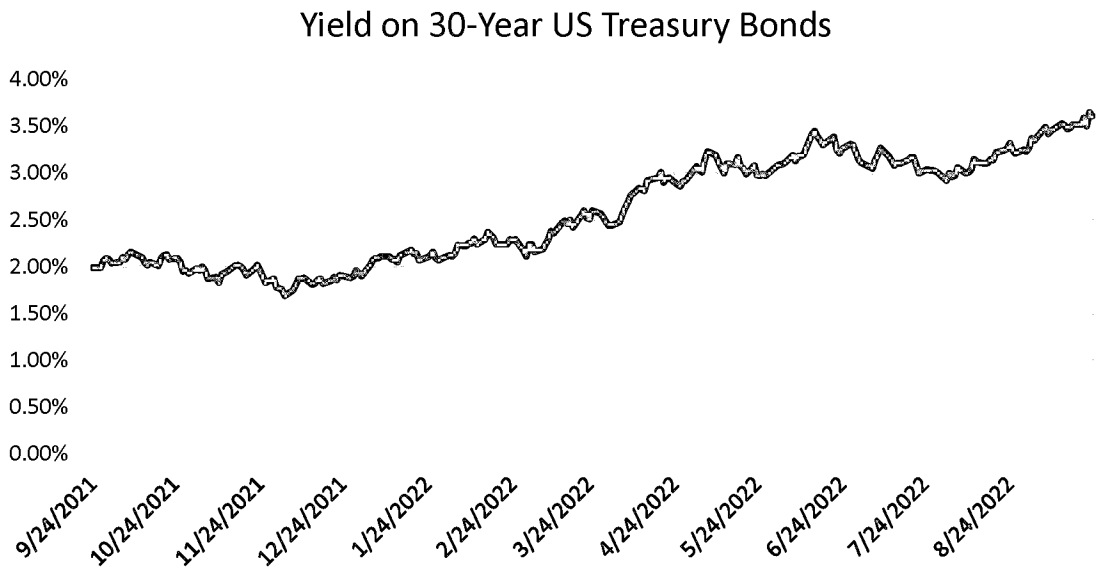
Chart 1: Yield on 30-Year U.S. Treasury Bonds[5]



Q. How have the equity markets reacted to the current environment of increasing interest rates and a possible recession?

A. From the beginning of 2022, the overall stock market has fallen approximately 20% through September 23, 2022.[6] **Chart 2** below shows how the overall market represented by the Dow Jones Industrial Average (DJIA) has responded to the change in the economy.

[5] U.S. Dept. of the Treasury, *Daily Treasury Par Yield Curve Rates*, https://home.treasury.gov/resource-center/data-chart-center/interest-rates/TextView?type=daily_treasury_yield_curve&field_tdr_date_value=2022 (last visited Sept. 23, 2022).

[6] Insider, Inc., *Dow Jones 30 Industrial Index*, https://markets.businessinsider.com/index/dow_jones (last visited August 11, 2022).

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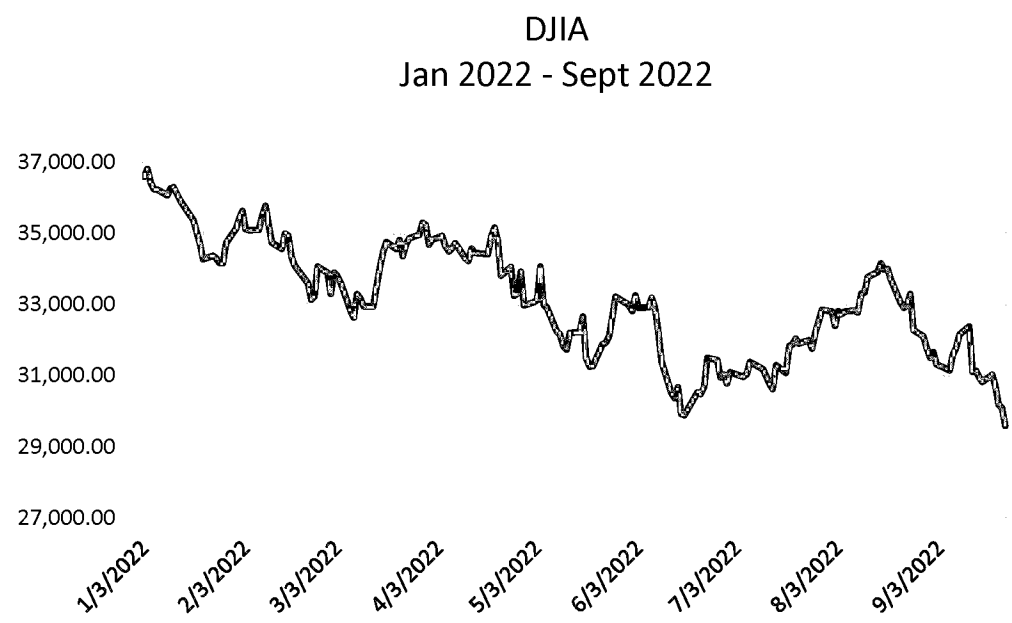
Chart 2: DJIA in 2022[7]



Q. Have utility stocks fallen at the same level as the stocks that comprise the DJIA since the beginning of the year?

A. No. Below is a chart that shows how the Dow Jones Utility Average ("DJUA") as performed since the beginning of the year.

[7] Yahoo Finance, *Dow Jones Industrial Average*, https://finance.yahoo.com/quote/%5EDJI/history (last visited August 11, 2022).

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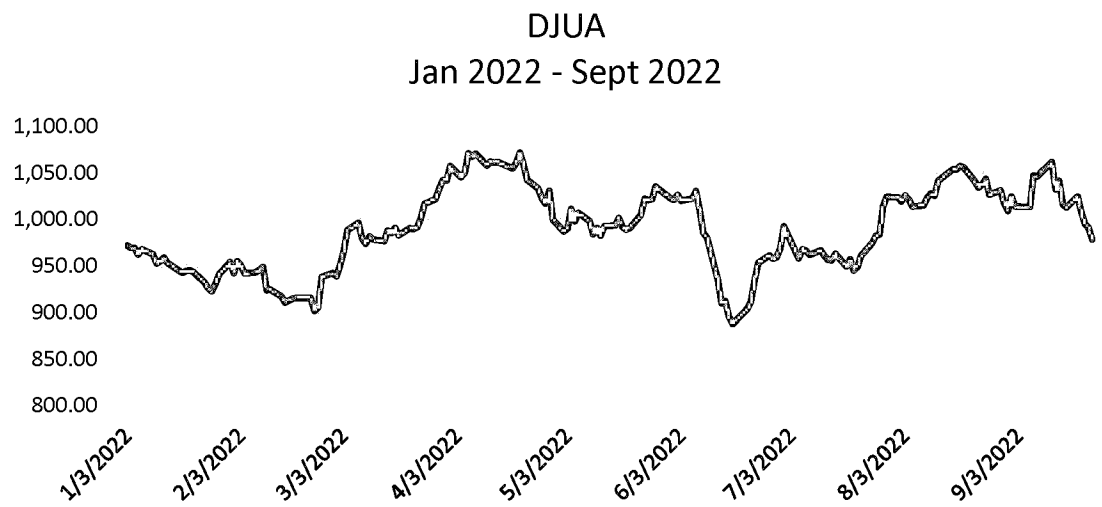
Chart 3: DJUA in 2022[8]



Q. What does the performance of the DJIA and the DJUA say about current markets?

A. Utility stocks have long been recognized by investors as safe harbors during tough economic times. Investor behavior in the current economic climate shows this continues to be the case. In 2022, stock investors have fled higher risk stocks in the overall market and, instead, purchased utility stocks as a means to ride out the current economic storm.

This trend was highlighted in a July 5, 2022 article entitled "Analysts see stable utility sector stocks poised to ride out potential recession".[9] The first paragraph of the article states:

> Performance by U.S. utility stocks during previous economic downturns, a decreasing sensitivity to interest rates and stable earnings and dividend growth suggest the sector could see

[8] Yahoo Finance, *Dow Jones Utility Average*, https://finance.yahoo.com/quote/%5EDJU/history?p=%5EDJU (last visited August 11, 2022).
[9] Allison Good, *Analysts see stable utility sector stocks poised to ride out potential recession,* S&P Global, July 5, 2022, https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/analysts-see-stable-utility-sector-stocks-poised-to-ride-out-potential-recession-70995301.

> substantial price upside despite signs of a looming recession, industry experts said.[10]

This same article goes on to state how the utility sector can now be seen as a higher growth sector in the economy. The article states:

> Utility share prices' recent deconsolidation from inflation has transformed the industry from a steady-growth, defensive play to a higher-growth sector that can increase earnings and return material capital to investors during economic dips. So far in 2022, the S&P 500 Utilities index has lost just 3% of its value as of the June 28 market close, compared to the broader S&P 500 index's nearly 20% drop.[11]

Q. Does this mean that the cost of capital has increased for investor-owned utilities?

A. No. As seen in **Chart 2** above, as well as in the quotes from the S&P Global article, investors are buying utility stocks in order to wait out the economic storm while also being in a good position for strong earnings growth in the future. The utility market to-date in 2022 is flat as compared to the overall market that is down approximately 20%. A flat utility market means that market models such as the Discounted Cash Flow ("DCF"), which I believe is the most accurate model used by investors, are producing level results throughout the year assuming earnings growth rates are the same throughout the year.

Q. Do higher interest rates imply a higher cost of capital using cost of capital models, such as the Capital Asset Pricing Model (CAPM)?

A. Yes. However, the issue with using the CAPM, ECAPM, or Risk Premium model, is rarely the level of interest rates to use in the model but is, instead, the unreasonably high premiums used by utility witnesses in rate cases. As I will demonstrate later in this testimony, Ms. Bulkley uses risk premiums in this case that are inflated in light of current markets.

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[10] *Id.*
[11] *Id.*

Furthermore, I used current interest rates in my analysis, thereby taking into account higher interest rates in calculating a higher return on equity (ROE) for these risk premium methods.

II. Economic and regulatory policy guidelines for a just and reasonable rate of return

Q. Please briefly describe the economic and regulatory policy considerations you have taken into account in developing your recommendation concerning the just and reasonable rate of return that ETI should have an opportunity to earn.

A. The theory of utility regulation assumes that public utilities perform functions that are natural monopolies. Historically, it was believed or assumed that it was more efficient for a single firm to provide a particular utility service than multiple firms. Within the electric industry, the transmission and distribution of electricity to utilities' end-use customers is still a monopolistic business and will, for the foreseeable future, be regulated. On this basis, state legislatures and state utility commissions/boards established exclusive franchised territories to public utilities in order for these utilities to provide services more efficiently and at the lowest reasonable cost. In exchange for the protection within its monopoly service area, the utility is obligated to provide service that is adequate and non-discriminatory at just and reasonable rates.

This trade-off logically leads to the question – what constitutes a just and reasonable rate? The generally accepted answer is that a prudently managed utility should be allowed to charge prices that allow the utility the opportunity to recover the reasonable and prudent costs of providing utility service and the opportunity to earn a just and reasonable rate of return on invested capital.[12] The just and reasonable rate of return on capital should allow the utility, under prudent management, to provide adequate service and attract capital to meet future expansion needs in its service area. Since public utilities are capital-intensive

[12] See the discussion of the Supreme Court's decisions that define this standard below.

businesses, the cost of capital is a crucial issue for utility companies, their customers, and regulators.

If the allowed rate of return is set too high, then consumers are burdened with excessive costs, current investors receive a windfall, and the utility has an incentive to overinvest. If the return is set too low, adequate service is jeopardized because the utility will not be able to raise capital on reasonable terms. As such, regulators are tasked with analyzing the markets to determine a "zone of reasonableness" and ultimately specific rates within which consumers are not burdened by excessive costs and utilities are not given the wrong incentives. Since every equity investor faces a risk-return tradeoff, the issue of risk is an important element in determining the just and reasonable rate of return for a utility.

Q. Please explain the significance of the Supreme Court's *Hope* and *Bluefield* decisions.

A. Regulatory law and policy recognize that utilities compete with other firms in the market for investor capital. The United States Supreme Court set the guidelines for a fair, just, and reasonable rate of return in two often-cited cases: *Bluefield Water Works and Improvement Co. v. Public Service Comm'n*. 262 U.S. 679 (1923) and *Federal Power Comm'n v. Hope Co.*, 320 U.S. 591 (1944).

In the *Bluefield* case, the U.S. Supreme Court stated:

> A public utility is entitled to such rates as will permit it to earn a return upon the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit, and enable it to raise the money necessary for the proper discharge of its public duties.[13]

[13] *See Bluefield*, 262 U.S. at 692.

The *Bluefield* Court found that utilities are entitled to earn a return on investments of comparable risks and that a corresponding return should be sufficient enough to support credit activities and to raise funds to carry out its mission.

In *Federal Power Commission v. Hope Company*, 320 U.S. 591 (1944), the U.S. Supreme Court recognized that utilities compete with other firms in the market for investor capital. *Hope* provides legal and policy guidance concerning the return which public utilities should be allowed to earn. In *Hope*, the U.S. Supreme Court stated that the return to equity owners (or shareholders) of a regulated public utility should be commensurate to returns on investments in other enterprises whose risks correspond to those of the utility being examined:

> [T]he return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise so as to maintain credit and attract capital.[14]

III. Development of proxy group

Q. Please describe how you selected a proxy group for estimating ETI's return on equity.

A. I reviewed Ms. Bulkley's screening process and have chosen to accept her comparable group. In my 37 years of experience in presenting cost of capital testimony around the country, I have learned that the inputs to the cost of capital models are the drivers in the analyses, and not necessarily one's development of their proxy group. The same is true in the current case.

[14] *See Hope*, 320 U.S. at 603.

Q. Have you performed a cost of equity analysis separately on Entergy?

A. Yes. ETI is owned by Entergy Corp.. As the owner of ETI, Entergy is the most direct link to ETI and an analysis performed specifically on Entergy. would help to provide a large body of knowledge of investor expectations.

IV. Capital structure

Q. What is a capital structure and how does it impact the revenues that ETI is seeking?

A. The term "capital structure" refers to the relative percentage of debt, equity, and other financial components that are used to finance a company's investments. A company's capital structure typically includes some combination of three principal financing methods.

The first method is to finance an investment with common equity, which essentially represents ownership in a company and its investments. Common equity is comprised of all investments from investors, including common stock, retained earnings, and additional paid in capital. Returns on common equity, which in part take the form of dividends to stockholders, are not tax deductible which, on a pre-tax basis alone, makes this form of financing about 21% more expensive than debt financing.

The second form of corporate financing is preferred stock, which is normally used to a much smaller degree in capital structures. Dividend payments associated with preferred stock are not tax deductible.

Debt is the third major form of financing used in the corporate world. There are two basic types of corporate debt: long-term and short-term. Long-term debt is generally understood to be debt that matures in a period of more than one year. Short-term debt is debt that matures in a year or less. Long-term debt and short-term debt, both of which are "above the line" expenses for tax purposes, represent liabilities on the company's books that must be repaid prior to any common stockholders or preferred stockholders receiving a return on their investment.

Q. How is a utility's total return calculated?

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A. A utility's total return is developed by multiplying the component percentages of its capital structure, represented by the percentage ratios of the various forms of capital financing relative to the total financing on the company's books, by the cost rates associated with each form of capital and then totaling the results over all of the capital components. When these percentage ratios are applied to various cost rates, a total after-tax rate of return is developed. Because the utility must pay dividends associated with common equity and preferred stock with after-tax funds, the post-tax returns are then converted to pre-tax returns by grossing up the common equity and preferred stock dividends for taxes. The final pre-tax return is then multiplied by the Company's rate base in order to develop the amount of money that customers must pay to the utility for return on investment and tax payments associated with that investment.

Q. How does capital structure impact this calculation?

A. Costs to consumers are greater when the utility finances a higher proportion of its rate base investment with common equity and preferred stock versus long-term debt. However, long-term debt, which is first in line for repayment, imposes a contractual obligation to make fixed payments on a pre-established schedule, as opposed to common equity where no similar obligations exist.

Q. Why should the Commission be concerned about how ETI finances its rate base investment?

A. There are two reasons that the Commission should be concerned about how ETI finances its rate base investment. First, ETI's cost of common equity is higher than the cost of long-term debt, meaning that a relatively higher equity percentage will translate into higher costs to ETI's customers without any corresponding improvement in quality of service. Long-term debt is a financial promise made by a company and is carried as a liability on the company's books. Common stock is ownership in the company. Due to the contingent nature of an equity investment, common stockholders require higher rates of return to compensate them for the

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extra risk involved in owning part of the company versus having a more senior claim against the company's assets.

The second reason the Commission should be concerned about ETI's capital structure is due to the tax treatment of debt versus common equity. Corporations can deduct payments associated with debt financing. Corporations are not, however, allowed to deduct common stock dividend payments for tax purposes. All dividend payments must be made with after-tax funds, which are more expensive than pre-tax funds. The regulatory process allows utilities to recover reasonable and prudent expenses, including taxes, within their rates. Accordingly, if a utility is allowed to use a capital structure for ratemaking purposes that is top-heavy in common stock, customers will be forced to cover the higher income tax burden, which can result in unjust, unreasonable, and unnecessarily high rates. Setting rates through the use of a capital structure that is weighted too heavily in common equity violates the fundamental principles of utility regulation that rates must be just and reasonable and only high enough to support the utility's provision of safe, adequate, and reliable service at a fair price.

Q. Does a utility subsidiary like ETI set its own capital structure?

A. No. ETI's stock is owned by Entergy. As the owner of ETI, Entergy is able to set the capital structure of these utilities as it sees fit. For example, Entergy, which had a common equity ratio at the conclusion of 2021 of 40.3%[15], could issue debt and then infuse this debt into ETI and call it common equity. In such a circumstance, Entergy Corp. uses the regulatory system to transform debt that costs it 4.5% at the parent company level into equity at the subsidiary level where those same funds can earn over 11% on a pre-tax basis.

Q. Please explain how a utility can use the regulatory system to generate an 11% return from a 4.5% investment.

[15] *The Value Line Investment Survey*, July 22, 2022

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A. A utility parent holding company can issue debt at, for example, 4.5%. It will then invest that debt into its utility subsidiary and label the invested proceeds as common equity which, on a pre-tax basis, will be allowed a ROE of 9.0% to 9.5% in most current day regulatory proceedings. However, utilities must pay tax on net income so the 9.0% to 9.5% ROE must be grossed up for taxes. As a result, consumers must pay the tax on the utility net income. In the end, the taxes and the 9.0% to 9.5% ROE flow to the parent company so that the parent receives a total return of over 11%. Hence, the parent holding company can use the regulatory process to turn a 4.5% investment into a return of over 11%.

Q. How does a utility's selection of equity versus debt impact ratepayers?

A. Entities in more competitive markets have a profit motive that provides an incentive for such entities to select the most efficient capitalization ratio. However, utilities operating in monopoly, rate-regulated service territories have an incentive to maximize the amount of common equity in their capital structure, to increase revenues and, correspondingly, the utility profit. Rate-regulated utilities should only be allowed to recover in rates a revenue requirement derived from a capitalization ratio that allows the utility to provide reliable service at the least cost. Therefore, finding the right balance between debt and equity is critical.

If a utility issues more common equity and less debt for a certain project, the rates could potentially be set at an unbalanced debt to equity level. This could result in the ratepayer paying higher rates to support a capital structure that is neither prudent nor reasonable to support the company's current credit rating or the company's adequate access to the capital markets.

If, on the other hand, the utility incurs too much debt, the utility's capitalization ratios present excess financial risk to the capital markets, thereby driving up the costs required by the equity markets to compensate for the added risk. In this case, the consumer would also be negatively impacted because the cost it must pay the utility for accessing the capital markets would be higher than it would be using a less debt-leveraged capital structure.

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Q. Have you reviewed the capital structure requested by the company in this proceeding?

A. Yes, I have.

Q. What capital structure is the company proposing in this case?

A. ETI has proposed the following capital structure:

Table 2: ETI's Requested Capital Structure[16]

Component	Capital Structure Ratio (%)
Long-Term Debt	47.98%
Preferred Stock	0.81%
Common Equity	51.21%
Total Capitalization	**100.0%**

Q. What is the average common equity ratio of the companies in the proxy group?

- **Table 3** below shows the average common equity ratio of each utility in my electric comparable company proxy group, as well as for Entergy.

[16] Sperandeo Direct Testimony at p. 3.

Table 3: Proxy Group Equity Ratio[17]

Company	2020	2021	2022E*	2025E* - 2027E*
Amer Elec Power	41.50%	41.70%	42.00%	42.50%
ALLETE	59.00%	57.80%	60.50%	59.50%
Alliant Energy	44.90%	47.10%	45.50%	45.00%
Ameren Corp	44.30%	43.30%	44.00%	48.50%
Duke Energy	44.40%	43.10%	42.00%	37.50%
Edison Int'l	39.50%	33.20%	32.00%	34.50%
Evergy Inc.	48.70%	49.90%	48.50%	46.50%
IDACORP Inc	56.10%	57.20%	55.50%	49.50%
NextEra Energy	46.50%	42.20%	41.50%	43.50%
NorthWestern Corp	47.20%	47.80%	50.00%	51.00%
OGE Energy	51.00%	47.40%	53.00%	50.00%
Otter Tail Corp	58.20%	57.40%	58.50%	57.50%
Portland General	46.40%	43.20%	44.00%	42.00%
Southern Co	38.10%	35.60%	36.00%	37.00%
Xcel Energy	42.60%	41.80%	42.00%	42.00%
AVERAGE	**47.23%**	**45.91%**	**46.33%**	**45.77%**
Entergy Corp	33.70%	31.70%	32.50%	33.50%

*E = expected

The Value Line Investment Survey: 7/22/2022 (Electric Utilities West), 8/12/2022 (Electric Utilities East), and 9/9/2022 (Electric Utilities Central),

As can be seen in the table above, the average common equity ratio for the proxy group in 2020 was 47.23%, the average common equity ratio for 2021 was 45.91%, the average expected common equity ratio for 2022 is 46.33%, and the average expected common equity ratio from 2025 – 2027 is 45.77%. Additionally, the ratios for Entergy for the same periods noted above are 33.70%, 31.70%, 32.50%, and 33.50% for the same time periods, respectively.

Q. What is the average common equity ratio granted by utility regulators for electric utilities across the United States?

[17] *The Value Line Investment Survey*: 6/10/2022 (Electric Utilities Central), 7/22/2022 (Electric Utilities West), and 8/12/2022 (Electric Utilities East).

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A. Note that I have sourced the average common equity ratio values granted by utility regulators for electric utilities from across the country from *S&P Global*.[18] In my research into these numbers, I found that four states included within the overall average value of electric utilities across the country report their allowed common equity ratios on an all-capital sources basis (*i.e.*, Long-Term Debt, Short-Term Debt, Common Equity, Preferred Stock, Customer Deposits, Deferred Income Taxes, and Investment Tax Credits). As such, I have removed these four states (*i.e.*, Arkansas, Florida, Indiana, and Michigan) from these numbers to ensure that each of the states included in this average report their allowed common equity ratio percentages only on investor sources of capital (*i.e.*, LT Debt, ST Debt, and Common Equity). I wanted to remove these four states from the overall average to ensure that this represented an appropriate comparison given that ETI's requested equity ratio in this case of 51.21% is based solely off of investor sources of capital.

The resulting average common equity ratio granted by regulators for utilities with these four states removed on an investor sources basis 2021 was 51.01%.[19]

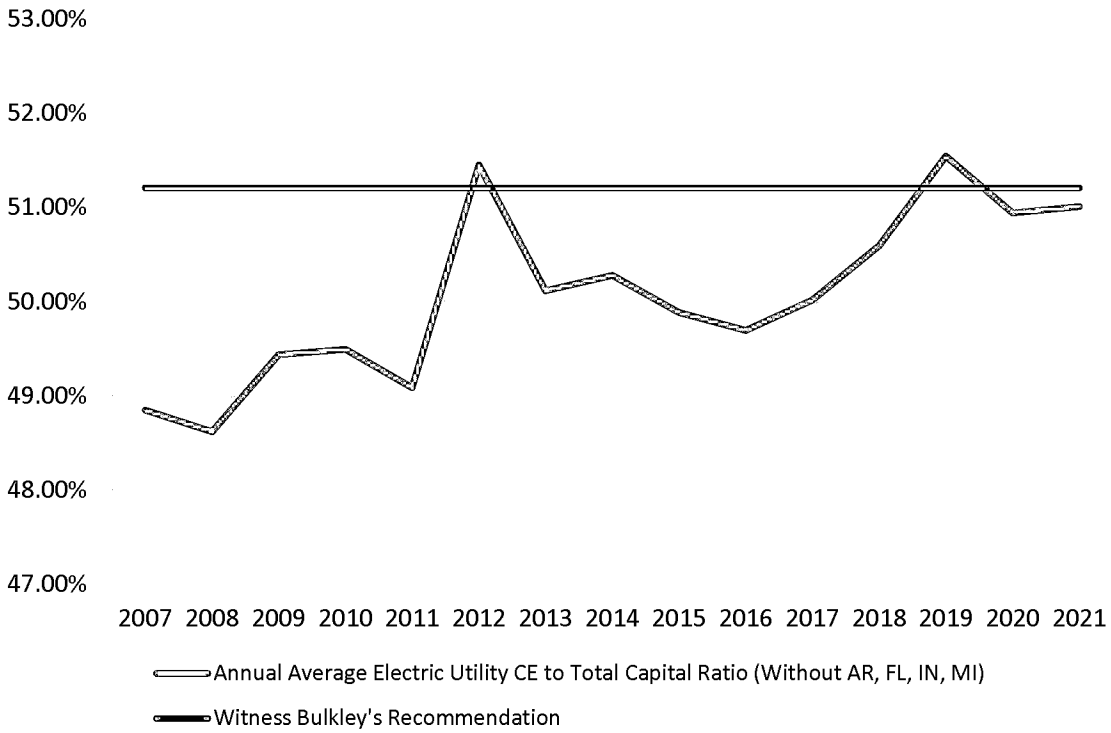
Q. What common equity ratios have state regulators across the United States granted to utilities over the past 15 years?

A. State regulators have been quite consistent in their rulings in cases for allowed common equity ratios based on investor sources of capital over the past 15 years. In **Chart 4** below I have presented the average annual common equity ratio granted by state regulators for each year over the past 15 years.

[18] S&P Global Market Intelligence Rate Case Statistics; Date Range: 15 Years; Service Type: Electric; Chart Items: Common Equity to Total Capital, Return on Equity; Date Accessed: August 11, 2022.

[19] S&P Global Market Intelligence Rate Case Statistics; Date Range: 15 Years; Service Type: Electric; Chart Items: Common Equity to Total Capital, Return on Equity; Date Accessed: August 11, 2022.

Chart 4: Common Equity Ratio Granted by State Regulators (2007 – 2021) Compared to ETI's Request[20]



Q. Please summarize your findings in regard to the requested equity ratio in this case relative to the equity ratio of other electric utilities.

A. **Table 4** below provides a summary of how ETI's request in this case compares to the average equity ratio of the proxy group companies, the common equity ratio of ETI's parent company, Entergy Corp., and the average equity ratio allowed by state regulators to electric utilities across the country in 2021, and the previous 15-year period.

[20] *Id.*

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Table 4: Common Equity Ratio Comparison

ETI's Eq Ratio Request	51.21%
2020 Proxy Group Actual Eq Ratio Average	47.23%
2021 Proxy Group Actual Eq Ratio Average	45.91%
2022E Proxy Group Expected Eq Ratio Average	46.33%
2025E – 2027E Proxy Group Expected Eq Ratio Average	45.77%
2020 Entergy. Actual Eq Ratio Average	33.70%
2021 Entergy Actual Eq Ratio Average	31.70%
2022E Entergy Expected Eq Ratio Average	32.50%
2025E – 2027E Entergy Expected Eq Ratio Average	33.50%
2021 Average Annual Regulator Electric Granted Eq Ratio	51.01%
2007 – 2021 Average Annual Regulator Electric Granted Eq Ratio	50.07%

Q. Given the above, what do you recommend the Commission adopt for the capital structure of ETI in this case?

A. The above-stated ETI common equity ratio of 51.21%, when the preferred stock ratio of 0.81% is added, equates to over 52%. Although ETI's common equity ratio is above the average equity ratio of the proxy group companies, the common equity ratio of ETI's parent company, Entergy Corp., and the average equity ratio allowed by state regulators to electric utilities across the country in 2021, I take a conservative approach and recommend the Commission adopt the capital structure proposed by ETI.

V. Cost of debt and preferred stock

Q. Do you accept the company's cost of long-term debt and its cost of preferred stock?

A. Yes, I accept the Company's 3.47[21] long-term cost of debt and its preferred cost of stock of 5.35%[22].

[21] Sperandeo Direct Testimony at p. 3.
[22] Id

VI. Cost of common equity

Q. Please explain how the issue of determining an appropriate return on a utility's common equity investment fits into a regulatory authority's determination of just and reasonable rates for the utility.

A. A utility's rates must be "just and reasonable."[23] Thus, regulation recognizes that utilities are entitled to an opportunity to recover the reasonable and prudent costs of providing service, and the opportunity to earn a just and reasonable rate of return on the capital invested in a utility's facilities, such as distribution equipment, buildings, vehicles, and similar long-lived capital assets.

Q. How do regulatory authorities determine what would constitute a just and reasonable rate of return on equity for a utility company?

A. Regulatory commissions and boards, as well as financial industry analysts, institutional investors, and individual investors, use different analytical models and methodologies to estimate/calculate reasonable rates of return on equity. Among the measures used are the Discounted Cash Flow ("DCF") Model, the Comparable Earnings Analysis ("CEA"), and the Capital Asset Pricing Model ("CAPM"). I believe the most useful methodology is the DCF analysis, but I have also presented the CEA and the CAPM within this testimony as checks for my DCF results.

Q. Can you explain why regulatory authorities and financial analysts need to use these methodologies to derive a company's estimated rate of return on equity?

A. Yes. There is no direct, observable way to determine the rate of return required by equity investors in any company or group of companies. Investors must make do with indications from market data and analyst predictions to estimate the appropriate price of a share. The principal and most reliable methodology for obtaining these indications is the DCF Model. Other procedures, such as the CEA and the CAPM, are less reliable than the DCF Model in my opinion.

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[23] *See Bluefield*, 262 U.S. at 692, *Federal Power Comm'n v. Hope Co.*, 320 U.S. 591 (1944).

Q. Please explain why you believe the DCF Model is superior to the CEA and CAPM approaches.

A. The DCF Model is an investor-driven model that incorporates current investor expectations based on daily and ongoing market prices. When a situation develops in a company that affects its earnings and/or perceived risk level, the price of the stock adjusts to reflect those developments. Since the stock price is a major component in the DCF Model, the change in risk level and/or earnings expectations is captured in the investor return requirement with either an upward or downward movement.

The CEA is based on earned returns from book equity, not market equity, as well as a comparison of what other commissions or boards across the country are awarding regulated utilities. There is no direct and immediate stockholder input into the CEA and, as a fault, that model lacks a clear and unmistaken link to stockholder expectations.

The CAPM, which is described later in this testimony, suffers from the same inherent issues as found within the CEA in that there is not a direct and immediate link from stock market prices to the CAPM result. The Beta in the CAPM can reflect changes in the ROE, but the delay can oftentimes make the CAPM results of little-or-no value.

Q. Why did you not use the Risk Premium Model?

A. The Risk Premium Model is very similar in nature to the CAPM. In both models, one examines risk premiums, but from varying comparison points. The CAPM considers the risk premium relative to the risk-free rate whereas the Risk Premium Model often develops the risk premium relative to utility bond yields.

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Q. Could you perform a cost of equity analysis directly on ETI?

A. No. ETI is a subsidiary of Entergy Corp., which is classified as an electric utility by *Value Line* within their industry groupings. As noted in the analysis of the capital structure a stated above, I examined Entergy in this analysis as one of the proxies for ETI.

A. Discounted Cash Flow (DCF) Model

Q. Please explain the DCF Model.

A. The DCF Model is a widely used method for estimating an investor's required return on a firm's common equity. I have worked within the utility industry since 1984. In my experience, first with the Public Staff of the North Carolina Utilities Commission, and later as a consultant, I have seen the DCF Model used much more often than any other method for estimating the appropriate return on common equity. Consumer advocate witnesses, utility witnesses and other intervenor witnesses have used the DCF Model, either by itself or in conjunction with other methods such as the CEA or the CAPM, in their analyses.

The DCF Model is based on the concept that the price which the investor is willing to pay for a stock is the discounted present value (*i.e.*, its present worth) of what the investor expects to receive in the future as a result of purchasing that stock. This return to the investor is in the form of future dividends and price appreciation. However, price appreciation is only realized when the investor sells the stock, and subsequent purchasers are presumably also focused on dividend growth following their purchase of the stock. Mathematically, the relationship is:

Let D	=	dividends per share in the initial future period
g	=	expected growth rate in dividends
k	=	cost of equity capital
P	=	price of asset (or present value of a future stream of dividends)

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$$\text{then } P = \frac{D}{(1+k)} + \frac{D(1+g)}{(1+k)^2} + \frac{D(1+g)}{(1+k)^3} + \ldots\ldots + \frac{D(1+g)}{(1+k)^t}$$

This equation represents the amount (P) an investor will be willing to pay *today* for a share of common equity with a given dividend stream over (t) periods.

Reducing the formula to an infinite geometric series, we have:

$$P = \frac{D}{k - g}$$

Solving for k yields:

$$k = \frac{D}{P + g}$$

Q. Do investors in utility common stocks really use the DCF Model in making investment decisions?

A. Yes, they do. There are two primary reasons for my conclusion. First, there is much literature that supports the fact that, while emotional or so-called "irrational" behavior in the short term may affect (and has affected) share prices, over the long term, a company's financial fundamentals drive the market.[24] Secondly, analysts give great weight to earnings, dividend, and book value growth in formulating their recommendations to clients.

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[24] *See*, TIM KOLLER, ET AL., MCKINSEY & COMPANY INC., VALUATION: MEASURING AND MANAGING THE VALUE OF COMPANIES (4th Ed. 2010) *available at* http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/do-fundamentalsor-emotionsdrive-the-stock-market (Date Accessed March 2, 2016)("Provided that a company's share price eventually returns to its intrinsic value in the long run, managers would benefit from using a discounted-cash-flow approach for strategic decisions. What should matter is the long-term behavior of the share price of a company, not whether it is undervalued by 5 or 10 percent at any given time."). *See also* Joe Weisenthal, *And Now We Know for Sure What's Really Been Driving the Market the Last Few Years...* (Aug. 15, 2012) *at* http://www.businessinsider.com/what-drives-the-stock-market-2012-8 (Date Accessed March 2, 2016).

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Thus, in today's market environment, investors will likely calculate (or seek a calculation of) the amount of funds they will receive relative to the initial investment, which is defined as the current dividend yield, as well as the amount of funds that the investor can expect in the future from the growth in the dividend. The combination of the current dividend yield and the future growth in dividends is central to the basic tenet of the DCF Model.

Q. Is the DCF formula straightforward?

A. Yes. While the DCF formula as outlined above may appear complicated, it is a relatively straightforward model. To determine the total rate of return one expects from investing in a particular equity security, the investor adds the dividend yield, which they expect to receive in the future, to the expected growth in dividends over time.

Q. Can you provide an example?

A. Yes. If investors expect a current dividend yield of 5%, and also expect that dividends will grow at 4%, then the DCF model indicates that investors would buy the utility's common stock if it provided an ROE of 9%.

Q. What dividend yield do you think is appropriate for use in the DCF Model?

A. I have calculated the appropriate dividend yield by averaging the dividend yield expected to be paid over the next 12 months for each comparable company, as reported by the *Value Line Investment Survey*. The period covered is from July 8, 2022, through September 30, 2022. To study the short-term, as well as long-term, movements in dividend yields, I examined the 13-week, 4-week, and 1-week dividend yields for my comparable group. These results appear in **Exhibit KWO-2** and show an average dividend yield of 3.3% for the 13-week period, 3.3% for the 4-week period, and 3.3% for the 1-week period for the comparable company proxy group and 3.6% for Entergy for the 13-week period, 3.4% for the 4-week period, and 3.5% for the current one-week period.

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Q. Please explain how you developed the dividend yield ranges discussed above.

A. I developed the dividend yield range for my comparable company proxy group by averaging each company's *Value Line* forecasted 12-month dividend yield over the above-stated periods, as well as examining the most recent forecasted 12-month dividend yield reported by *Value Line* for each company. I averaged the dividend yield over multiple time periods in order to minimize the possibility of an isolated event skewing the DCF results.

Q. How did you derive the expected dividend growth rate?

A. I used several methods in determining the growth in dividends that investors expect. These methods are: (1) historical earnings per share ("EPS"), dividends per share ("DPS"), and book value per share ("BPS") growth rates, (2) forecasted EPS, DPS, and BPS growth rates, and (3) the plowback ratio.

Q. Please describe the first method you used to develop the expected dividend growth rate.

A. A key component in the DCF Model is the expected growth in dividends. In analyzing the proper dividend growth rate to use in the DCF Model, the analyst must consider how dividends are created. Since over the long-term, dividends cannot be paid out without a corporation first earning the funds paid out, earnings growth is a key element in analyzing what, if any, growth can be expected in dividends. Similarly, what remains in a corporation after it pays its dividend is reinvested, or "plowed back", into the corporation in order to generate future growth. As a result, book value growth is another element that, in my opinion, must be considered in analyzing a corporation's expected dividend growth.

Therefore, to analyze the expected growth in dividends, the analyst should also examine the historical record of past earnings, dividends, and book value. Hence, the first method I used to estimate the expected growth rate was to analyze the historical 10-year and 5-year compound annual rates of change for EPS, DPS, and BPS as reported by *Value Line* for each of the relevant companies. My reasoning for also utilizing historical growth rates for EPS, DPS, and BPS, rather

than solely relying upon forecasted growth rates is that historical growth rates capture the actual growth of the various rates over time based upon a Company's reported results. In contrast, forecasted growth rates are derived entirely from analyst projections, which vary from analyst to analyst, and which also have a tendency to be overstated. As such, I have always found it important to use both historical and forecasted growth rates.

Q. Do all analysts utilize historical growth rates within their DCF models?

A. No, certain analysts do not present historical growth rates in their DCF analyses. This is true for Ms. Bulkley as evidenced in her sole use of forecasted earnings growth rates.[25] Specifically, Ms. Bulkley used only forecasted growth rates from First Call, Zacks, and Value Line.[26]

I believe that analysts who do not present the readily available historical data fail to provide the full extent of information on which investors base their expectations. While it is true that growth rates are inherently the rate that one would expect a company's stock to grow into future years, both historical growth rates and forecasted growth rates provide valuable data for what one can expect the ultimate growth rate for an individual stock will be. To present the full breadth of the available information, both historical and forecasted growth rates should be used. I believe this to be even more important given the current economic climate and market uncertainty caused by the COVID-19 pandemic. By focusing their analysis on forecasted growth rates, a witness is ignoring the value in historical growth rates that are readily available.

I note that *Value Line* is the most recognized investment publication in the industry and, as such, is used by professional money managers, financial analysts, and individual investors worldwide. A prudent investor tries to examine all aspects of an enterprise's performance when making a capital investment decision. As such, it is only practical to examine historical growth rates, in addition to the forecasted growth rates, for the corporation on which the analysis is being performed. **Exhibit**

[25] Bulkley Prefiled Direct, p. 43
[26] Id

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KWO-2 lists the historical and forecasted growth rates for the comparable company proxy group, and **Exhibit KWO-4** lists the related calculations and results for this method, with the historical and forecasted growth rate values being added to the dividend yield averages for the time periods of 1-week, 4-weeks, and 13-weeks.

Q. Should only Earning Per Share growth rates be considered in the DCF methodology?

A. No, I do not believe it is appropriate to strictly rely upon EPS growth rates on either an historical or forecasted basis. Since the DCF formula is dependent on future *dividend* growth, I believe that it would be inaccurate to use only earnings (*i.e.*, EPS) growth rates in the DCF Model. To mitigate this problem, I have presented EPS, DPS, and BPS figures and have explained my rationale for arriving at the corresponding growth rates. I believe it is incumbent upon every analyst to present such a robust analysis.

Q. Please describe the second method you used to develop the expected dividend growth rate.

A. The second method I used was forecasted growth rates. I obtained forecasted growth rates from the following data sources:

- Forecasted compound annual rates of change for EPS, DPS, and BPS as provided by *Value Line*;
- Average "plowback" percent retained to common equity as provided by *Value Line*;
- Forecasted 3-year projected rate of change for EPS as recorded by the *Center for Financial Research and Analysis* ("*CFRA*"), a publication of *S&P Global Market Intelligence*; and
- Forecasted LT 3-5-year EPS growth rates, as provided by *Charles Schwab & Co.* ("*Schwab*"). This forecasted rate of change is not a forecast developed solely by *Schwab*, but is – instead – a compilation of forecasts by industry analysts.

As such, the data sources referenced above all represent forecasted growth rates, but are sourced from three separate financial evaluation agencies, *Value Line, CFRA,* and *Schwab*.

Exhibit KWO-2 lists the forecasted growth rates for the comparable company proxy group and **Exhibit KWO-4** lists the related calculations & results for this method with the forecasted growth rate values being added to the dividend yield averages for the time periods of 1-week, 4-weeks, and 13-weeks.

Q. Please describe the third method you used to develop the expected dividend growth rate.

A. The third method I used is an analysis commonly referred to as the "plowback ratio" method. If a company is earning a rate of return ("r") on its common equity, and it retains a percentage of these earnings ("b"), then each year a Company's EPS is expected to increase by the product ("br") of its EPS in the previous year. Therefore, br is a good measure of growth in dividends per share. For example, if a company earns 10% on its equity and retains 50% of that 10% (*i.e.,* with the other 50% of the 10% earnings on equity being paid out in dividends), then the expected growth rate in earnings and dividends is 5% (*i.e.,* 50% of 10%). To calculate a plowback for the comparable group, I used the following formula:

$$g = \frac{br(2020) + br(2021) + br(2022E) + br(2025E\text{-}2027E\ Avg)}{4}$$

The plowback estimates for all companies in the comparable company proxy group can be obtained from *The Value Line Investment Survey* under the title "percent retained to common equity". **Exhibit KWO-2** and **Exhibit KWO-3** list the plowback ratios for each company in the comparable company proxy group as well as Entergy.. **Exhibit KWO-4** shows the related calculations and results for this method with the plowback values being added to the dividend yield averages for the time periods of 1-week, 4-weeks, and 13-weeks.

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Q. What is the investor return requirement from the DCF analysis from a historical growth rate perspective?

A. In terms of the proper dividend growth rate to employ for the comparable company proxy group in the DCF analysis, it is appropriate to examine the recent history of earnings and dividend growth to assess and provide the best estimate of the dividend growth that investors expect in the future.

Within **Exhibit KWO-2**, I have presented the complete set of data for the entirety of the comparable company proxy group without any of the companies removed from the comparable company proxy group as published by *Value Line*. The data and calculations shown therein at **Exhibit KWO-2** is the information that my recommendation was developed from.

An examination of the 10-year and 5-year historical growth rates for the comparable company proxy group within this exhibit show a difference between the average earnings and dividend growth rates. For the 10-year history, EPS (5.7%) grew faster than DPS (5.3%) and BPS (4.3%) in the comparable company proxy group. For the 5-year history, DPS (5.9%) grew slightly faster than EPS (5.5%) and BPS (4.3%). The forecasted EPS growth rates (Value line, CFRA, and Schwab) all indicate higher earnings growth than forecasted dividend (5.4%) and book value (4.7%) growth as provided by Value Line. The ostensible reason for the higher growth rates in earnings is the expected plant investment related to transitioning towards renewable energy and away from fossil fuel generation.

These growth rates indicate that the utility industry has historically experienced solid and steady growth in earnings, dividends, and book value. The DCF results based on the set of data previously mentioned for the entirety of the proxy group can be found in **Exhibit KWO-2.**

The growth rates for Entergy are much lower for the historical time periods as well as the forecasted time periods. The historical time period ranges from only 0% to 2.0% for the past 10 years, 4.9% for the plowback growth, and then 4.0% to 6.2% for the forecasted time period. The results for Entergy can also be seen in Exhibit KWO-2.

I believe the proper growth rate to employ in the DCF for the comparable group is in the range of 4.5% to 6.5% as this range encompasses most of the historical time period as well as the forecasted period. As for Entergy, I believe one must focus on the forecasted time periods given the poor historical growth of Entergy. As a result, I believe the proper growth rate range for Entergy is in the range of 4.0% to 6.0%.

Q. Please provide the specific results of your DCF analysis.

A. The average dividend yield for the comparable company proxy group for the 13-week period was 3.3% for all three studied time periods. With the second portion of the DCF analysis relating to growth rates, I determined the growth rate range to be in the range of 4.5% to 6.5% which, when combined with the 3.3% dividend yield, produces a range of 7.8% to 9.8%.

For Entergy, the dividend yield has averaged from 3.4 to 3.6%. I determined the growth rate range to be 4.0% to 6.0% which, when combined with the yield of 3.1% equates to 7.1% to 9.1%.

Considering the comparable group growth rate range of 7.8% to 9.8% and the Entergy growth rate range of 7.1% to 9.1%, I believe the most appropriate DCF result for this proceeding is 7.50% to 9.50% as that range is in the middle of the above-stated ranges.

B. Comparable Earnings Analysis (CEA)

Q. Please explain how you performed the CEA?

A. I have conducted two different CEAs. The first examines returns on book value equity for the comparable group. The second examines allowed utility returns over an extended period of time to evaluate the trend in returns for companies of similar risk. However, as I stated previously, I believe the CEA to be inferior to the DCF Model and that it should be given less weight in the determination of the ROE recommended in this case.

Q. Please describe your first CEA.

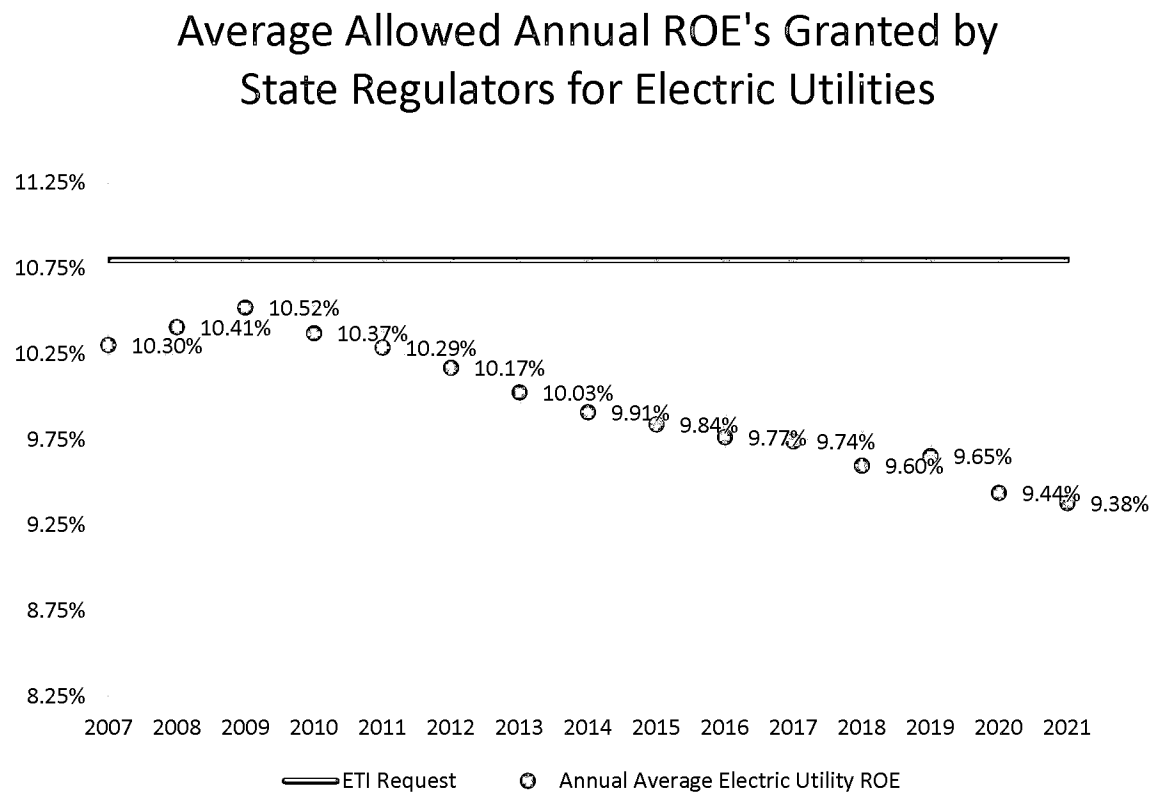
A. As noted above, an appropriate CEA should be applied to comparable companies of similar risk. **Exhibit KWO-5** presents a list of historic and forecasted earned returns *on book value equity* of the proxy group over the period from 2020 through 2027E. I picked this range to provide the Commission with at least two periods of historical returns (*i.e.,* 2020 and 2021) and a forecasted return period of at least 5 years (*i.e.,* 2022E through 2027E). As can be seen in this exhibit, the average earned returns on equity for the comparable company proxy group range from 9.9% (2020) to 10.9% (2025E – 2027E). For Entergy, the range is 11.0% (2022E) to 12.7% (2020).

Q. Please describe your second CEA.

A. It is important to understand what state regulatory commissions/boards across the country are allowing for authorized ROEs. Allowed ROEs are widely known and discussed in the financial community and investors take these regulatory decisions into account when they bid prices in the open market for which they are willing to purchase the stock of a regulated utility.

As this Commission is likely aware, regulated ROE's have trended down over the past 15 years. Below, **Chart 5** shows the ROEs authorized for electric utilities by state regulators across the United States from 2007 through 2021, which ranges from 9.38% (2021) to 10.52% (2009).

Chart 5: Allowed ROEs 2007 – 2021[27]



As for the most recent year, 2021, the overall allowed ROE for electric utilities was 9.38%, which is the lowest figure over the previous 15-year period, and also a notable 142-basis points below Ms. Bulkley's recommendation of 10.8%.

Q. What conclusions do you draw from your two CEAs?

A. Based on the above-stated findings, I believe the proper rate of return using a CEA is in the range of 9.50% to 10.50%. The 9.50% low end of this range is placed between the 2021 ROE granted by state regulators of 9.38% and the average ROE granted by state regulators over the previous 15-year period of 9.96% (see **Chart**

[27] *S&P Global Market Intelligence* Rate Case Statistics; Date Range: 15 Years; Service Type: Chart Items: Common Equity to Total Capital, Return on Equity; Date Accessed: August 11, 2022.

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5). The 10.50% high end of the range is in between the high end of the range for the comparable group (10.9%) and Entergy (10.5%).

I have completed the CEA's as referenced above to provide the relevant data for the comparable group's book value equity. However, as previously noted, it is my opinion that the DCF Model produces the most reliable results in determining an appropriate ROE. Furthermore, given the current volatile economic climate brought on by the COVID-19 pandemic, the CEA does not appropriately capture the volatile economic impacts of the pandemic within the output of the model. As such, I believe that the CEA should be given much less weight in the determination of the ROE recommended in this case. Additionally, I view the CAPM as a model that is more appropriate to utilize as a check on the results of the DCF Model.

Q. Please explain why you believe the comparable earnings based on allowed ROEs included in Exhibit KWO-5 are higher than the results of your DCF analysis.

A. As noted above, there has been a clear declining trend in the cost of capital and return on equity figures allowed by utility regulators, and this downward trend is continuing. However, market returns are much more dynamic and change every day. Regulators may not move at the pace of the general market in terms of the decline in the market cost of capital, but regulators are, without a doubt, moving in that direction as exhibited by the decline in the annual allowed return national averages included in the Q&A's above.

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C. Capital Asset Pricing Model (CAPM)

Q. Have you previously presented the CAPM in cost of equity testimonies?

A. Yes, but I have not given it as much weight in comparison to the DCF Model. I have long maintained the application of the CAPM can lead one to erroneous results when it is applied in an inaccurate manner, such as when forecasted risk premiums or forecasted interest rates are employed. However, I am aware that some commissions and boards around the country seek a review of models other than the DCF. As a result, I have included the CAPM in my analyses to supplement my DCF analysis, as well as the CEA to a lesser degree.

Q. Please explain the CAPM.

A. The CAPM is a risk premium model that determines a firm's ROE relative to the overall market ROE. The formula for the CAPM is as follows:

ROE = Rf + Beta [E(RM) – Rf]

Where:

Rf is the risk-free rate;

Beta is the risk of the studied company relative to the overall market; and

E(RM) is the expected return on the market.

To be specific, the CAPM is a measure of firm-specific risk, known as unsystematic risk and measured by Beta, as well as overall market risk, otherwise known as systematic risk and measured by the expected return on the market.

The CAPM calculates ROE based on a company's risk and can be restated as follows:

ROE = Rf + (Beta * Risk Premium)

Where:

Risk Premium represents the adjusted company-specific risk of the company.

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Q. How is the risk-free rate measured?

A. The risk-free rate is designated as the yield on United States government bonds as the risk of default is seen as highly unlikely. Utility witnesses and consumer witnesses all use United States government bond yields as the risk-free rate in the CAPM. However, what is often debated in the risk-free portion of the CAPM is the term of those bonds. In my analysis for this case, I have developed risk premiums relative to the 30-year U.S. Treasury bonds as this time period is the longest available in the marketplace, thereby affording consumers the longest protection at the risk-free rate.

Q. How is beta measured in the CAPM?

A. Beta is a statistical calculation of a company's stock price movement relative to the overall stock movement. A company whose stock price is less volatile than the overall market will have a Beta less than 1.0. A company whose stock price is more volatile than the overall market will have a Beta more than 1.0. In consideration of the fact that utilities are generally viewed as more conservative equity investments, Betas for utilities are almost always less than 1.0 under normal economic circumstances.

Q. What is the current market risk premium appropriate for use in the CAPM?

A. The development of the current market risk premium is, undoubtedly, the most controversial aspect of the CAPM calculations. To gauge the historical risk premium, I turned to the Ibbotson database published by *Morningstar, Duff & Phelps,* and the *CFA Institute Research Foundation.*[28] In **Table 5** below, I have presented both the long-term geometric mean and arithmetic mean returns for equities and fixed income securities and the resulting risk premiums.

[28] ROGER G. IBBOTSON & JAMES P. HARRINGTON, STOCKS, BONDS, BILLS AND INFLATION (SBBI): 2021 SUMMARY EDITION (2021), *available at* https://www.cfainstitute.org/-/media/documents/book/rf-publication/2021/sbbi-summary-edition-2021.ashx.

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Table 5: Equity Risk Premium Calculations[29]

Asset Class	Geometric Mean	Arithmetic Mean
Large Company Stocks	10.8%	12.3%
Long-Term Govt. Bonds	8.2%	8.8%
Resulting Risk Premium	2.6%	3.5%

Note that the data from **Table 5** above shows the statistics of annual total returns for large company stocks and long-term government bonds from 1972 to 2019. This data is more recent than similar data provided by other sources and analysts over the period from 1926 to 2019 and adds more credence to what a reasonable investor can expect for a return.

Q. What market returns are reputable professional investors expecting for the foreseeable future?

A. On January 14, 2022, *Morningstar.com* published an article entitled "*Experts Forecast Stock and Bond Returns 2022 Edition.*"[30] This article was provided as part of *Morningstar's* annual stock and bond return forecast series. Immediately below are some of the market return forecasts from the article. Note that when the experts refer to future returns, they mean the overall total market returns, and not just the equity risk premium.

Blackrock

6.7% 10-year expected nominal return from U.S. equities.[31]

Grantham Mayor Van Otterloo ("GMO")

Negative 6.7% real (inflation-adjusted) returns for U.S. large caps over the next seven years.[32]

JP Morgan

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[29] *Id.*
[30] Christine Benz, *Experts Forecast Stock and Bond Returns: 2022 Edition* (Jan. 14, 2022) at *https://www.morningstar.com/articles/1074631/experts-forecast-stock-and-bond-returns-2022-edition*
[31] *Id.*
[32] *Id.*

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4.1% nominal returns for U.S. equities over a 10–15-year horizon.[33]

Morningstar Investment Management

1.6% 10-year nominal returns for U.S. stocks.[34]

Research Affiliates

1.6% nominal (negative 1% real) returns for U.S. large caps during the next 10 years.[35]

Vanguard

Nominal median U.S. equity market returns of 3.3% during the next decade.[36]

The above-stated equity returns display a very large range. On the low side is *GMO*, which forecasts that U.S. large caps will, after inflation, lose 6.7% of their value annually over the next seven years. On the more positive side is *Blackrock*, which expects market returns of 6.7% over the next decade.

As another point of reference, *Charles Schwab* published an article on May 3, 2021 titled "*Why Market Returns May be Lower and Global Diversification More Important in the Future*".[37] This article noted that "Market returns on stocks and bonds over the next decade are expected to fall short of historical averages"[38] and that *Schwab's* "estimates show that, over the next 10 years, stocks and bonds will likely fall short of their historical returns from 1970 to December 2020. The estimated annual expected return for U.S. large-capitalization stocks from January 2021 to December 2030 is 6.6%, for example, compared with an annualized return of 10.8% during the historical period."[39] This article also includes a chart that shows the overall market return, and overall market premium, for U.S. large capitalization stocks are expected to be 6.6% and 4.5%, respectively, and that the

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[33] *Id.*
[34] *Id.*
[35] *Id.*
[36] *Id.*
[37] Veeru Perianan, *Why Market Returns May be Lower and Global Diversification More Important in the Future*, May 3, 2021, https://www.schwab.com/resource-center/insights/content/why-market-returns-may-be-lower-in-the-future.
[38] *Id.*
[39] *Id.*

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same figures for U.S. small capitalization stocks are expected to be 7.1% and 5.0%, respectively.[40]

Q. What is your conclusion as to the estimated equity risk premium for use in the CAPM?

A. Using historical data, as well as *ex ante* (forecast) data, the evidence would suggest the equity risk premium is within the range of 3.75% to 5.75%.

Q. How did you determine the beta you used in the CAPM?

A. I used the *Value Line* derived Beta sourced from the most recent *Value Line* editions for each company in the comparable company proxy group.

Q. What were your CAPM results?

A. The actual calculations for the CAPM for my comparable company proxy group can be seen in **Exhibit KWO-6**.

As shown above in **Chart 1**, I provided the change in the 30-year U.S. Treasury bonds over the last year (*i.e.,* September 23, 2021 through September 23, 2022). Note that over this period, the yield on 30-year U.S. Treasury bonds has ranged from 1.69% to 3.65%. Refer above to **Chart 1** for further details.

The average Beta for the comparable company proxy group is 0.89 which, when multiplied by the risk premium range of 3.75% to 5.75%, produces a Beta-adjusted risk premium of 3.28% to 5.03%. The 30-year U.S. Treasury yield ("Rf") range of 1.69% to 3.65% is next added to the Beta-adjusted risk premium range of 3.28% to 5.03% to arrive at the comparable company proxy group CAPM result range of 5.0% (3.28% + 1.69% = 4.97%, rounded to 5.0%) to 8.7% (5.03% + 3.65% = 8.68%, rounded to 8.7%).

Going through the same process for Entergy produces a CAPM range of 5.3% to 9.1%.

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[40] *Id.*

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Based on this range of results for the CAPM, as found in **Exhibit KWO-5**, I find the proper ROE derived from the CAPM is in the range of 7.0% to 9.0%. The low-end (7.0%) of this range recognizes that interest rates have increased since the start of the CAPM analysis dating back one year. The high end of the range of 9.0% is above the high end CAPM result for the comparable group and slightly below the high-end CAPM result for Entergy.

D. Return on Equity (ROE) Summary

Q. Please summarize the results of your ROE analyses in this case.

A. **Table 7** below lists the results of my DCF, CEA, and CAPM analyses as outlined within **Exhibit KWO-1**.

Table 6: ROE Method Results

	ROE Results	
Method	Low	High
DCF	7.50%	9.50%
CEA	9.50%	10.50%
CAPM	7.00%	9.00%

Q. What is your finding as to the market-based ROE for ETI at the current time?

A. As can be seen in **Table 6**, the range of ROE results is from 7.00% to 10.50%. The appropriate range for ratemaking purposes is 8.0% to 10.0%. My specific recommendation for the market-based ROE for ETI is 9.0%, which is at the top of my DCF range as well as my CAPM range and is slightly below my CEA range.

Q. What is your overall recommended rate of return in this proceeding?

A. The overall rate of return I am recommending is 6.32%, based upon a 50.21% common equity capital structure, 0.81% preferred stock ratio, a 47.98% long-term

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debt ratio, and a 9.00% ROE, a 5.35% preferred stock cost rate, and a 3.47% long-term cost of debt as summarized again in **Table 7**, below.

Table 7: O'Donnell Recommended Overall Rate of Return

O'Donnell ROR Recommendation			
	Capital Structure Ratio (%)	Cost Rate (%)	Weighted Cost Rate (%)
Long-Term Debt	47.97%	3.47%	1.66%
Preferred Stock	0.81%	5.35%	0.04%
Common Equity	51.21%	9.00%	4.61%
	100.00%		6.32%

VII. Review of cost of equity analysis of witness Bulkley

Q. What methods did Ms. Bulkley use in his analysis of the cost of equity in this proceeding?

A. Ms. Bulkley used the Constant Growth Discounted Cash Flow ("DCF") Model, the Capital Asset Pricing Model ("CAPM"), and the Bond Yield Plus Risk Premium Analysis. Since the CAPM is a risk premium model similar in nature to the Bond Yield Plus Risk Premium model, two of her three models (CAPM and RP) are risk premium models in nature.

Q. Do you agree with the methods that Ms. Bulkley used to estimate ETI's cost of equity?

A. No. I do not believe the Commission should rely upon Ms. Bulkley's risk-premium models (*i.e.,* the CAPM and risk premium model) for the reasons discussed below. My recommendation is the Commission rely on the results of my application of the DCF model, with some consideration of the results of the CAPM and Comparable Earnings method as I have set forth above, to estimate the cost of equity for ETI.

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A. Review of Ms. Bulkley's Capital Market Outlook

Q. Do you agree with the comments made by Ms. Bulkley on p. 12 of her prefiled direct testimony that the capital markets are dealing with high inflation, changes in monetary policy rising interest rates and volatile market conditions of-late?

A. Yes, I will agree with Ms. Bulkley that the world economy is slowing down and that the war between Russia and Ukraine has led to declines in stock markets around the world and increases in inflation. I will also agree with Ms. Bulkley that utility investors have also faced higher risks due to changes in monetary policy. However, I disagree with Ms. Bulkley that the prospect for higher interest rates and a slowing economy represents an increased cost of capital for utilities.

Q. Why do you believe that higher interest rates and a slowing economy does not necessarily translate into a higher cost of capital for utilities?

A. During an economic downturn, investors look for safe investors as somewhat "ports in a storm" mentality. The current economic downturn is no different. Below is a chart of the Dow Jones Industrial Average (DJIA) since the start of this year.

As I demonstrated earlier in this testimony, the DJIA has lost about 20% of its value from the start of the year as compared to the DJUA that has essentially been flat. An increase in interest rates has, in the past, meant a decrease in utility values as investors recognize that utilities depend on the use of debt and that higher debt costs may hurt utilities' abilities to generate higher earnings in the future.

However, utilities are recognized as safe havens in times of economic distress. Given that we are either in a recession or may soon be in a recession, the market drop that may occur to the utility market should be less severe than that of the overall market. Hence, Ms. Bulkley's concerns about increasing risk in the utility markets may be overstated given current economic conditions where investors are looking for safe investments at a time of economic stress. However, in her prefiled direct testimony, Ms. Bulkley has already predetermined a higher

cost of equity capital. Evidence can be seen on p. 13 of his direct testimony when she states:

> The combination of high inflation, the Federal Reserve's changes in monetary policy, and the dramatic shifts in market conditions all contribute to an expectation of increased market risk and an increase in the return on equity required by investors. [41]

The charts I have shown above deny Ms. Bulkley's picture of an increasing ROE need for ETI and other utilities.

Q. Does Ms. Bulkley recognize the impact of the changes in the marketplace impacting the overall market and the utility equity market, in particular?

A. Yes. She recognizes the overall market impact when she states:

> Q33. HAVE ELECTRIC UTILITY STOCK PRICES RECENTLY INCREASED?
> A. Yes. Utility stock prices had trended down as interest rates moved higher; however, as a result of the political turmoil associated with the war in Ukraine, investors have recently returned to utility stocks as a safe haven seeking to lower risk, resulting in higher electric utility stock prices and thus lower dividend yields.[42]

However, Ms. Bulkley then prognosticates on utility stocks and claims they will underperform when interest rates increase.

> Q34. HOW DO EQUITY ANALYSTS EXPECT THE UTILITIES SECTOR TO PERFORM IN AN INCREASING INTEREST RATE ENVIRONMENT?
> A. Even with the recent increase in electric utility stock prices, equity analysts project that utilities are expected to underperform the broader market as interest rates increase.[43]

The utility equity market is behaving exactly as it should during troubled economic times. When the market is down, investors flood into utility stocks keeping their

[41] Bulkley Direct Testimony, p. 13
[42] Bulkley, p. 27
[43] Id, p. 28

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stocks elevated. When the overall market heads back up, utilities underperform since they are low-risk investments. Hence, utility stocks don't go down as much as the overall market during bad times and they don't go up as much as the overall market during good times.

B. Review of Ms. Bulkley's DCF Analysis

Q. What are the primary differences between your application of the DCF model and Ms. Bulkley's application of the DCF model?

A. Ms. Bulkley relies exclusively on earnings forecasts[44] whereas I used historical and forecasted earnings, dividends, and book value growth rates.

Q. Why do you disagree with Ms. Bulkley's sole use of earnings forecasts in the DCF analysis?

A. I believe that analysts should provide the Commission with as much information as possible to help in making ROE determinations. Providing a well-rounded analysis is key to helping the Commission make its decision.

In addition, there are various academic articles and journals that specifically call into question the accuracy of earnings predictions and forecasts. For example, in November 2003, Louis K. C. Chan, Jason Karceski and Josef Lakonishok published an article entitled "The Level and Persistence of Growth Rates" in the *Journal of Finance*. The conclusion of the paper stated:

> . . . it is commonly suggested that one group of informed participants, security analysts, may have some ability to predict growth. The dispersion in analysts' forecasts indicates their willingness to distinguish boldly between high- and low-growth prospects. IBES long-term growth estimates are associated with realized growth in the immediate short-term future. Over long

[44] Bulkley Direct, p. 43.

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horizons, however, there is little forecastability in earnings, and analysts' estimates tend to be overly optimistic.[45]

I recognize that there are other academic articles and journals that support the opposite viewpoint. However, given the fact that this remains a debated topic within the financial community, it is appropriate to include earnings per share (EPS), dividends per share (DPS), and book value per share (BPS) from both an historical and forecasted perspective, as well as plowback growth rates, and the associated DCF results for each, within my analysis. In contrast, placing undue reliance upon forecasted EPS growth rates produces unrealistically high returns on equity numbers that cannot be sustained indefinitely.

Q. Do you have any last comments on the DCF analysis?

A. Yes. I urge the Commission to look at the results of Ms. Bulkley's DCF results found in Figure 12 of her direct testimony.[46] The range of results is in the median category is from 9.53% to 9.65%. However, her recommendation in this case is 10.50% with a 30-basis point management adder to arrive at a final recommendation of 10.80%.[47] The fact that her recommendation is 85-basis points higher than the highest DCF result pre-management adder shows that, in essence, Ms. Bulkley abandoned the DCF altogether.

[45] K. Chan, L., Karceski, J., & Lakonishok, J., "The Level and Persistence of Growth Rates," *Journal of Finance* (April, 2003), page 683. https://www.jstor.org/stable/3094553?read-now=1&refreqid=excelsior%3A56e3abef88c26fdcde5d92e271f7c114&seq=41#page_scan_tab_contents

[46] Bulkley Direct Testimony at p. 44

[47] Id, p. 6

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C. Review of Ms. Bulkley's CAPM Analysis

Q. Please explain how Ms. Bulkley applies the CAPM.

A. In her analysis, Ms. Bulkley analyzes three 30-year US Treasury bonds with one being a historical forecast and two being forecasts. She places more weight on the forecasts. I disagree with her statement that reads:

> While I have included the results of a CAPM analysis that relies on a current 30-day average risk-free rate, this analysis fails to take consideration the effect of the market's expectations for interest rate increases on the cost of equity.[48]

I disagree with Ms. Bulkley's views on this matter as I feel that current rates reflect market expectations of forecasted rates.

However, the largest difference in the risk premium between Ms. Bulkley and myself is her belief that the S&P 500 Index will return 12.68%. From Ms. Bulkley's 12.68% market forecast, she determines an implied risk premium of 9.68% to 10.13%, the top end of which is very close to the top of her recommendation in this case. As a comparison, I used a 3.75% to 5.75% premium in my CAPM analysis.

My first concern with Ms. Bulkley's analysis is the 12.68% market return estimate. The total market returns as stated previously in my testimony from BlackRock Investment (6.7% nominal return), Vanguard (3.3% nominal return), and JP Morgan (4.1% nominal return) is well below Ms. Bulkley's forecast. Simply put, Ms. Bulkley's forecast is far from what mainstream investment professionals are saying about the market going forward.

Ms. Bulkley's ECAPM analysis produces a similar risk premium result of 7.31%, which is far above what market analysis such as Vanguard, and BlackRock have

[48] Id, p. 46-47

forecasted in the future. I urge the Commission to consider her risk premiums in light of what market professionals estimate the ranges will be over the long term.

Ms. Bulkley's application of the CAPM is complicated but, when the analysis is boiled down to simplistic everyday terms, one can see that her values simply do not make sense, either in the financial sense or in basic common sense.

Q. How does Ms. Bulkley's expected market return of 12.68% compare to historical returns in the market?

A. As noted in **Table 6** (p. 59) above, the historical market return based on the period of 1972-2019 was 10.70% on a geometric return and 12.10% on an arithmetic return basis. Ms. Bulkley's forecast is far higher than even historical returns.

Whether the comparison is to the forecasts from current day analysts or to historical returns, Ms. Bulkley's forecasts have no underlying fundamental support or reasoning.

E. Review of Ms. Bulkley's Risk Premium Method

Q. Please explain the difference between the risk premium model and the CAPM?

A. The CAPM and the Risk Premium models are both essentially risk premium models. The primary difference is the CAPM is more company-specific due to its use of beta to measure systematic risk. The risk premium model is more generic in terms of overall returns for the utility industry. However, both models compare market returns (either total market or utility markets) to bond yields.

Q. Please explain Ms. Bulkley's application of his utility Risk Premium model.

A. In her application of the Risk Premium model, Ms. Bulkley compares the 30-year Risk Premium, which is the difference between the authorized ROEs and the yield of 30-year US Treasury bonds) to 30-year Treasury bonds. She then applied the

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statistical resulting correlation to arrive at a corresponding risk-premium to arrive at a range of 10.0% to 10.13%.[49]

Q. Do you agree with Ms. Bulkley's presentation of the risk premium model?

A. No. I disagree with the use of forecasted bond yields. The best predictor of future yields is the current yield curve. If the market feels interest rates are going to increase in the future, it will bid down current bond prices so that yields correspondingly increase. The reverse is also true in that, when the market feels interest rates will soon fall, it will bid up bond prices thereby reducing bond yields. However, Ms. Bulkley has ignored the most important predictor of future bond yields and, instead, used her own estimate of future bond yields.

F. Regulatory and Business Risks

Q. Do you agree with Ms. Bulkley's assertion that capital expenditures represent added risk to the utility?

A. I will agree with Ms. Bulkley that sizable capital expenditures on a company increases the need to increase debt and equity in the future. However, Ms. Bulkley rightfully notes that ETI has a Distribution Cost Recovery Factor (DCRF), a Transmission Cost Recovery Factor (TCRF) and a General Cost Recovery Rider (GRRR) that are tracking mechanisms to ensure recovery of these costs.[50] Ms. Bulkley also notes the regulatory lag associated with these programs but, overall, most companies in her comparable group have similar tracking mechanisms. I will also note that regulatory lag is inherent within the electric utility industry so I don't see any increase in risk between ETI and its comparable group in this regard.

[49] Bulkley Direct, p. 53-54
[50] Bulkley at 58.

Q. How do you respond to Ms. Bulkley's discussion on authorized returns and the drop in the stop price of ETI?

A. On p. 66 of her prefiled testimony, Ms. Bulkley discussed the "recent negative rate case determination" for Arizona Public Service Commission that resulted in a 24% drop in the share price for Pinnacle West Corp. This statement concerns me because it is almost like the tail wagging the dog. ROEs should never be set to satisfy market participants. ROEs should be set by what regulators feel is appropriate and markets can react accordingly.

The same is true for Ms. Bulkley's discussion of credit rating agencies.[51] A ROE should never be set to peg a certain credit rating. First the cost of common equity is much higher than the cost of debt on a pre-tax basis. Hence, when the difference in the pre-tax equity and debt is calculated, the difference is quite large. Paying an exorbitant amount for a high ROE to prevent a possible downgrade in debt that has a fraction of the cost of pre-tax equity is non-sensical.

Q. Please explain Ms. Bulkley's adjustments to customer concentrations.

A. Ms. Bulkley discusses how ETI's customer mix is predominantly devoted to oil and natural gas customers. I agree with Ms. Bulkley's analysis in this case but, instead of a detriment, I see such customer allocation as a positive. The oil and natural gas industry is booming right now due to geopolitical factors. I don't see such a sales allocation factor as a negative. I see it as a positive. If the world has learned anything in the recent invasion of Ukraine by Russia, it is that the United States oil and natural gas industry is the world standard by which we can rely upon. For that reason, I disagree with Ms. Bulkley's assertion that the customer concentration on oil and gas is a negative for the Company.

[51] Bulkley Prefiled Direct, p. 66-67

VIII. Company Request for Management Adder

Q. How do you respond to the Company's request for a 30-basis point adder for management performance?

A. I defer to the testimony of Cities Witness Garrett in this matter and recommend that the 30-basis point adder for management performance be denied.

IX. Summary

Q. Please summarize your testimony.

A. ETI's requested rate of return on equity in this case is excessive, unnecessary, and burdensome on the ratepayers of Texas. My specific recommendations in this case are as follows:

- 51.21% common equity, 0.81% preferred stock, and 47.98% long-term debt is an acceptable capital structure to use in this proceeding;
- The appropriate cost of long-term debt is 3.47%, as recommended by the Company;
- The appropriate cost of preferred stock is 5.35% as recommended by the Company;
- The market-required ROE for ETI is 9.0%; and
- The overall rate of return that ETI should be allowed to earn in this proceeding should be set at 6.32%.
- Ms. Bulkley's application of the DCF is erroneous as it only examines forecasted earnings growth rates;
- Ms. Bulkley's CAPM and risk premium methods are based on an excessively high market return estimate of 12.68% that invalidates the results of her models; and
- The 30-basis point adder for management performance should be denied.

Q. Does this conclude your direct testimony?

A. Yes.

Appendix A

Kevin W. O'Donnell, CFA

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Kevin W. O'Donnell, is the founder of Nova Energy Consultants, Inc. in Cary, NC. Mr. O'Donnell's academic credentials include a B.S. in Civil Engineering - Construction Option from North Carolina State University as well as a MBA in Finance from Florida State University. Mr. O'Donnell is also a Chartered Financial Analyst (CFA).

Mr. O'Donnell has over thirty-four years of experience working in the electric, natural gas, and water/sewer industries. He is very active in municipal power projects and has assisted numerous southeastern U.S. municipalities cut their wholesale cost of power by as much as 67%. On Dec. 12, 1998, ***The Wilson Daily Times*** made the following statement about O'Donnell.

> **Although we were skeptical of O'Donnell's efforts at first, he has shown that he can deliver on promises to cut electrical rates.**

Mr. O'Donnell has completed close to 30 wholesale power projects for municipal and university-owned electric systems throughout North and South Carolina. In May of 1996 Mr. O'Donnell testified before the U.S. House of Representatives, Committee on Commerce, Subcommittee on Energy and Power regarding the restructuring of the electric utility industry.

Mr. O'Donnell has appeared as an expert witness in over 110 regulatory proceedings before the North Carolina Utilities Commission, the South Carolina Public Service Commission, the Virginia Corporation Commission, the Minnesota Public Service Commission, the New Jersey Board of Public Utilities, the Colorado Public Service Commission, the Wisconsin Public Service Commission, the Maryland Public Service Commission, the District of Columbia Public Service Commission, the Pennsylvania Public Utility Commission, the Indiana Public Utility Commission, the California Public Service Commission, and the Florida Public Service Commission. His area of expertise has included rate design, cost of service, rate of return, capital structure, asset valuation analyses, fuel adjustments, merger transactions, holding company applications, as well as numerous other accounting, financial, and utility rate-related issues.

Mr. O'Donnell is the author of the following two articles: "Aggregating Municipal Loads: The Future is Today" which was published in the Oct. 1, 1995 edition of *Public Utilities Fortnightly;* and "Worth the Wait, But Still at Risk" which was published in the May 1, 2000 edition of *Public Utilities Fortnightly.* Mr. O'Donnell is also the co-author of "Small Towns, Big Rate Cuts" which was published in the January, 1997 edition of *Energy Buyers Guide.* All of these articles discuss how rural electric systems can use the wholesale power markets to procure wholesale power supplies.

Regulatory Cases of Kevin W. O'Donnell, CFA
Nova Energy Consultants, Inc.

Year	Name of Applicant	State Jusrisdiction	Docket No.	Client/ Employer	Case Issues
1985	Public Service Company of NC	NC	G-5, Sub 200	Public Staff of NCUC	Return on equity, capital structure
1985	Piedmont Natural Gas Company	NC	G-9, Sub 251	Public Staff of NCUC	Return on equity, capital structure
1986	General Telephone of the South	NC	P-19, Sub 207	Public Staff of NCUC	Return on equity, capital structure
1987	Public Service Company of NC	NC	G-5, Sub 207	Public Staff of NCUC	Return on equity, capital structure
1988	Piedmont Natural Gas Company	NC	G-9, Sub 278	Public Staff of NCUC	Return on equity, capital structure
1989	Public Service Company of NC	NC	G-5, Sub 246	Public Staff of NCUC	Return on equity, capital structure
1990	North Carolina Power	NC	E-22, Sub 314	Public Staff of NCUC	Return on equity, capital structure
1991	Duke Energy	NC	E-7, Sub 487	Public Staff of NCUC	Return on equity, capital structure
1991	North Carolina Natural Gas	NC	G-21, Sub 306	Public Staff of NCUC	Natural gas expansion fund
1991	North Carolina Natural Gas	NC	G-21, Sub 307	Public Staff of NCUC	Natural gas expansion fund
1991	Penn & Southern Gas Company	NC	G-3, Sub 186	Public Staff of NCUC	Return on equity, capital structure
1995	North Carolina Natural Gas	NC	G-21, Sub 334	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1995	Carolina Power & Light Company	NC	E-2, Sub 680	Carolina Utility Customers Assoc.	Fuel adjustment proceeding
1995	Duke Power	NC	E-7, Sub 559	Carolina Utility Customers Assoc.	Fuel adjustment proceeding
1996	Piedmont Natural Gas Company	NC	G-9, Sub 378	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1996	Piedmont Natural Gas Company	NC	G-9, Sub 382	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1996	Public Service Company of NC	NC	G-5, Sub 356	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1996	Cardinal Extension Company	NC	G-39, Sub 0	Carolina Utility Customers Assoc.	Capital structure, cost of capital
1997	Public Service Company of NC	NC	G-5, Sub 327	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1998	Public Service Company of NC	NC	G-5, Sub 386	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1998	Public Service Company of NC	NC	G-5, Sub 386	Carolina Utility Customers Assoc.	Natural gas transporation rates
1999	Public Service Company of NC/SCANA Corp	NC	G-5, Sub 400	Carolina Utility Customers Assoc.	Merger case
1999	Public Service Company of NC/SCANA Corp	NC	G-43	Carolina Utility Customers Assoc.	Merger Case
1999	Carolina Power & Light Company	NC	E-2, Sub 753	Carolina Utility Customers Assoc.	Holding company application
1999	Carolina Power & Light Company	NC	G-21, Sub 387	Carolina Utility Customers Assoc.	Holding company application
1999	Carolina Power & Light Company	NC	P-708, Sub 5	Carolina Utility Customers Assoc.	Holding company application
2000	Piedmont Natural Gas Company	NC	G-9, Sub 428	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2000	NUI Corporation	NC	G-3, Sub 224	Carolina Utility Customers Assoc.	Holding company application
2000	NUI Corporation/Virginia Gas Company	NC	G-3, Sub 232	Carolina Utility Customers Assoc.	Merger application
2001	Duke Power	NC	E-7, Sub 685	Carolina Utility Customers Assoc.	Emission allowances and environmental compliance costs
2001	NUI Corporation	NC	G-3, Sub 235	Carolina Utility Customers Assoc.	Tariff change request.
2001	Carolina Power & Light Company/Progress E	NC	E-2, Sub 778	Carolina Utility Customers Assoc.	Asset transfer case
2001	Duke Power	NC	E-7, Sub 694	Carolina Utility Customers Assoc.	Restructuring application
2002	Piedmont Natural Gas Company	NC	G-9, Sub 461	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2002	Cardinal Pipeline Company	NC	G-39, Sub 4	Carolina Utility Customers Assoc.	Cost of capital, capital structure
2002	South Carolina Public Service Commission	SC	2002-63-G	South Carolina Energy Users Committee	Rate of return, accounting, rate design, cost of service
2003	Piedmont Natural Gas/North Carolina Natura	NC	G-9, Sub 470	Carolina Utility Customers Assoc.	Merger application
2003	Piedmont Natural Gas/North Carolina Natura	NC	G-9, Sub 430	Carolina Utility Customers Assoc.	Merger application
2003	Piedmont Natural Gas/North Carolina Natura	NC	E-2, Sub 825	Carolina Utility Customers Assoc.	Merger application
2003	Carolina Power & Light Company	NC	E-2, Sub 833	Carolina Utility Customers Assoc.	Fuel case
2004	South Carolina Electric & Gas	SC	2004-178-E	South Carolina Energy Users Committee	Return on equity, capital structure, rate design, cost of service
2005	Carolina Power & Light Company	NC	E-2, Sub 868	Carolina Utility Customers Assoc.	Fuel case
2005	Piedmont Natural Gas Company	NC	G-9, Sub 499	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2005	South Carolina Electric & Gas	SC	2005-2-E	South Carolina Energy Users Committee	Fuel application
2005	Carolina Power & Light Company	SC	2006-1-E	South Carolina Energy Users Committee	Fuel application
2006	IRP in North Carolina	NC	E-100, Sub 103	Carolina Utility Customers Assoc.	Submitted rebuttal testimony in investigation of IRP in NC.
2006	Piedmont Natural Gas Company	NC	G-9, Sub 519	Carolina Utility Customers Assoc.	Creditworthiness issue
2006	Public Service Company of NC	NC	G-5, Sub 481	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2006	Duke Power	NC	E-7, 751	Carolina Utility Customers Assoc.	App to share net revenues from certain wholesale pwr trans

Regulatory Cases of Kevin W. O'Donnell, CFA
Nova Energy Consultants, Inc.

Year	Name of Applicant	State Jusrisdiction	Docket No.	Client/ Employer	Case Issues
2006	South Carolina Electric & Gas	SC	2006-192-E	South Carolina Energy Users Committee	Fuel application
2007	Duke Power	NC	E-7, Sub 790	Carolina Utility Customers Assoc.	Application to construct generation
2007	South Carolina Electric & Gas	SC	2007-229-E	South Carolina Energy Users Committee	Rate of return, accounting, rate design, cost of service
2008	South Carolina Electric & Gas	SC	2008-196-E	South Carolina Energy Users Committee	Base load review act proceeding
2009	Western Carolina University	NC	E-35, Sub 37	Western Carolina University	Rate of return, accounting, rate design, cost of service
2009	Duke Power	NC	E-7, Sub 909	Carolina Utility Customers Assoc.	Cost of service, rate design, return on equity, capital structure
2009	South Carolina Electric & Gas	SC	2009-261-E	South Carolina Energy Users Committee	DSM/EE rate filing
2009	Duke Power	SC	2009-226-E	South Carolina Energy Users Committee	Return on equity, capital structure, rate design, cost of service
2009	Tampa Electric	FL	080317-EI	Florida Retail Federation	Return on equity, capital structure
2010	Duke Power	SC	2010-3-E	South Carolina Energy Users Committee	Fuel application - assisted in settlement
2010	South Carolina Electric & Gas	SC	2009-489-E	South Carolina Energy Users Committee	Return on equity, capital structure, rate design, cost of service
2010	Virginia Power	VA	PUE-2010-00006	Mead Westvaco	Rate design
2011	Duke Energy	SC	2011-20-E	South Carolina Energy Users Committee	Nuclear construction financing
2011	Northern States Power	MN	E002/GR-10-971	Xcel Large Industrials	Return on equity, capital structure
2011	Virginia Power	VA	PUE-2011-0027	Mead Westvaco	Capital structure, revenue requirement
2011	Duke Energy	NC	E-7, Sub 989	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2011	Duke Energy	SC	2011-271-E	South Carolina Energy Users Committee	Accounting, cost of service, rate design, ROE, capital structure
2011	Dominion Virginia Power	VA	PUE-2011-00073	Mead Westvaco	Rate design
2012	Town of Smithfield/Partners Equity Group	NC	ES-160, Sub 0	Partners Equity Group	Rate design, asset valuation
2012	Florida Power & Light	FL	120015-EI	Florida Office of Public Counsel	Capital structure
2012	South Carolina Electric & Gas	SC	2012-218-E	South Carolina Energy Users Committee	Accounting, cost of service, rate design, ROE, capital structure
2013	Progress Energy Carolinas	NC	E-2, Sub 1023	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2013	Duke Energy Carolinas	NC	E-7, Sub 1026	Carolina Utility Customers Assoc.	Rate design
2013	Jersey Central Power & Light	NJ	BPU ER12111052	Gerdau Ameristeel	Return on equity, capital structure
2013	Duke Energy Carolinas	SC	2013-59-E	South Carolina Energy Users Committee	Accounting, cost of service, rate design, ROE, capital structure
2013	Tampa Electric	FL	130040-EI	Florida Office of Public Counsel	Capital structure and financial integrity
2013	Piedmont Natural Gas	NC	G-9, Sub 631	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2014	Dominion Virginia Power	VA	PUE-2014-00033	Mead Westvaco	Recoverable fuel costs, hedging strategies
2014	Public Service Company of Colorado	CO	14AL-0660E	Colorado Healthcare Electric Coordinating Council	Return on equity, capital structure
2015	WEC Acquisition of Integrys	WI	9400-YO-100	Staff of Wisconsin Public Service Commission	Merger analysis
2015	Dominion Virginia Power	VA	PUE-2015-00027	Federal Executive Agencies	Return on equity
2015	South Carolina Electric & Gas	SC	2015-103-E	South Carolina Energy Users Committee	Return on equity
2015	Western Carolina University	NC	E-35, Sub 45	Western Carolina University	Accounting, cost of service, rate design, ROE, capital structure
2016	Sandpiper Energy	MD	9410	Maryland Office of People's Counsel	Return on equity, capital structure
2016	Washington Gas Light	DC	FC 1137	Washington, DC Office of People's Counsel	Return on equity, capital structure
2016	Florida Power & Light	FL	160021-EI	Florida Office of Public Counsel	Capital Structure
2016	Jersey Central Power & Light	NJ	EM15060733	NJ Division of Rate Counsel	Asset valuation
2016	Rockland Electric Company	NJ	ER16050428	NJ Division of Rate Counsel	Rate design
2016	Dominon NC Power	NC	E-22, Sub 532	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2017	Potomac Electric Power	DC	FC 1139	Healthcare Council of the National Capitol Area (HCNCA)	ROE and capital structure
2017	Columbia Gas of Maryland	MD	FC 9447	Maryland Office of People's Counsel	ROE and capital structure
2017	Washington Gas Light	DC	FC 1142	Washington, DC Office of People's Counsel	Merger analysis
2017	Duke Energy Progress	NC	E-2, Sub 1142	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2018	Public Service Electric & Gas	NJ	GR17070776	NJ Division of Rate Counsel	ROE and capital structure
2018	Duke Energy Carolinas	NC	E-7, Sub 1146	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2018	Elkton Gas/SJI	MD	FC 9475	Maryland Office of People's Counsel	Merger analysis
2018	Entergy Texas	TX	PUC 48371	Entergy Texas Cities	ROE
2018	Duke Energy Carolinas	SC	2018-3-E	South Carolina Energy Users Committee	Fuel case

Regulatory Cases of Kevin W. O'Donnell, CFA
Nova Energy Consultants, Inc.

Year	Name of Applicant	State Jusrisdiction	Docket No.	Client/ Employer	Case Issues
2018	Elkton Gas Company	MD	FC 9488	Maryland Office of People's Counsel	Accounting, ROE, capital structure
2018	Baltimore Gas & Electric	MD	FC9484	Maryland Office of People's Counsel	ROE, capital structure
2018	South Carolina Electric & Gas	SC	2017-370-E	South Carolina Energy Users Committee	Creditworthiness issue
2018	Jersey Central Power & Light	NJ	EO18070728	NJ Division of Rate Counsel	ROE and capital structure
2019	Duke Energy Carolinas	SC	2018-319-E	South Carolina Energy Users Committee	Accounting, rate design
2019	Duke Energy Progress	SC	2018-318-E	South Carolina Energy Users Committee	Accounting, rate design
2019	Public Service Electric and Gas	NJ	EO18060629	NJ Division of Rate Counsel	ROE and capital structure
2019	Potomac Electric Power	MD	FC 9602	Maryland Office of People's Counsel	ROE, capital structure
2019	Oklahoma Gas and Electric	OK	PUD 201800140	Sierra Club	Creditworthiness issue
2019	Peoples Natural Gas	PA	R-2018-3006818	Pennsylvania Office of Consumer Advocate	ROE, capital structure
2019	UGI Natural Gas	PA	R-2018-3006814	Pennsylvania Office of Consumer Advocate	ROE, capital structure
2019	Dominion Virginia Power	VA	PUR-2019-00050	Federal Executive Agencies	Return on Equity
2019	Piedmont Natural Gas	NC	G-9, Sub 743	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE
2019	Pacific Gas & Electric, Southern California Edison, San Diego Gas & Electric	CA	A-1904014, et al	Federal Executive Agencies	ROE, capital structure
2019	Duke Energy Indiana	IN	Cause 45253	Federal Executive Agencies	ROE, capital structure
2020	Duke Energy Carolinas	NC	E-7 Sub 1214	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE
2020	Duke Energy Progress	NC	E-2 Sub 1219	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE
2020	Dominion Virginia Power	VA	PUR-2019-00154	Southern Environmental Law Center	Financial analysis of plant investment
2020	Southwest Electric Power Company	LA	U-35324	Alliance for Affordable Energy	Financial analysis of plant investment
2020	Texas Gas Company	TX	PUC 10928	Texas Gas Cities	ROE, capital structure
2020	Potomac Electric Power	DC	FC 1156	District of Columbia Office of Peoples Counsel	ROE, capital structure
2020	UGI Gas	PA	R-2019-3015162	Pennsylvania Office of Consumer Advocate	ROE, capital structure, creditworthiness
2020	Columbia Gas of Maryland	MD	FC 9644	Maryland Office of People's Counsel	ROE, capital structure
2020	Columbia Gas of Pennsylvania	PA	R-2020-3018835	Pennsylvania Office of Consumer Advocate	ROE, capital structure
2020	New Mexico Gas Company	NM	19-00317-UT	Federal Executive Agencies	ROE, capital structure, accounting, rate design, cost of service
2020	Washington Gas Light	DC	FC 1162	District of Columbia Office of Peoples Counsel	ROE, capital structure
2020	Dominion Energy South Carolina	SC	2020-125-E	South Carolina Energy Users Committee	Accounting, rate design
2021	Suez Water Company	NJ	BPU WR2011	NJ Division of Rate Counsel	ROE, capital structure, rate design
2021	Columbia Gas of Pennsylvania	PA	R-2021-3024296	Pennsylvania Office of Consumer Advocate	ROE, capital structure
2021	Florida Power & Light	FL	20210015-EI	Florida Office of Public Counsel	Capital structure, financial rate analysis
2021	Piedmont Natural Gas Company	NC	G-9 Sub 781	Carolina Utility Customers Assoc.	Rate of return, cost of service, rate design
2021	Dominion Virginia Power	VA	PUR-2021-00058	Federal Executive Agencies	ROE, capital structure
2021	Public Service Company of NC	NC	G-5 Sub 632	Carolina Utility Customers Assoc.	Rate of return, cost of service, rate design
2022	Entergy Texas	TX	52487	Texas Gas Cities	Generation plant feasibility analysis
2022	New Mexico Gas Company	NM	21-00267-UT	Federal Executive Agencies	ROE, capital structure, accounting, rate design, cost of service

O'Donnell ROR Recommendation			
	Capital Structure Ratio (%)	Cost Rate (%)	Weighted Cost Rate (%)
Long-Term Debt	47.98%	3.47%	1.66%
Preferred Stock	0.81%	5.35%	0.04%
Common Equity	51.21%	9.00%	4.61%
	100.00%		6.32%

O'Donnell Proxy Group
DCF Summary

Company	Forecasted Annualized Dividend Yield			Value Line									Average Plowback Growth Rate [4]	CFRA 3-Year Projected EPS CAGR [5]	Schwab LT Growth Rate 3-5 Years EPS [6]
				10-Year			5-Year			Forecasted (Est'd '19-'21 to '25-'27)					
	13-Wks [1]	4-Wks [2]	Current [3]	EPS [4]	DPS [4]	BPS [4]	EPS [4]	DPS [4]	BPS [4]	EPS [4]	DPS [4]	BPS [4]	Exhibit KWO-3		
Amer Elec Power	3.3%	3.2%	3.2%	4.5%	5.0%	4.0%	4.0%	6.0%	3.5%	6.5%	6.0%	6.0%	4.3%	6.0%	6.3%
ALLETE	4.4%	4.3%	4.4%	4.0%	3.5%	5.0%	1.0%	4.0%	3.5%	6.0%	3.5%	3.5%	2.4%	---	---
Alliant Energy	2.9%	2.8%	2.8%	7.0%	6.5%	5.5%	8.0%	6.5%	7.0%	6.0%	6.0%	5.0%	4.4%	6.0%	6.3%
Ameren Corp	2.6%	2.6%	2.6%	3.0%	3.0%	1.0%	7.5%	4.0%	4.5%	6.5%	7.0%	6.5%	4.3%	7.0%	6.4%
Duke Energy	3.7%	3.7%	3.8%	3.0%	3.0%	2.0%	4.5%	3.5%	1.0%	5.0%	2.0%	2.5%	2.4%	6.0%	5.6%
Evergy Inc.	3.5%	3.5%	3.5%	-	-	-	-	-	-	7.5%	7.0%	3.5%	3.1%	7.0%	6.0%
IDACORP Inc	3.4%	3.6%	3.6%	4.5%	8.5%	5.0%	4.0%	7.0%	4.5%	4.0%	6.5%	4.0%	3.5%	---	2.7%
NextEra Energy	2.7%	2.7%	2.7%	7.0%	10.5%	8.5%	9.5%	12.0%	9.0%	10.0%	10.0%	6.0%	5.5%	8.0%	9.4%
NorthWestern Corp	2.1%	2.1%	2.1%	4.5%	5.5%	6.0%	2.0%	5.5%	4.5%	3.0%	2.0%	3.0%	2.1%	----	---
OGE Energy	4.5%	4.7%	4.7%	4.0%	8.0%	5.5%	4.5%	8.5%	3.5%	6.5%	3.0%	5.5%	4.0%	---	---
Otter Tail Corp	4.1%	4.0%	4.0%	19.0%	2.0%	2.0%	13.0%	4.0%	6.0%	4.5%	7.0%	8.0%	8.5%	---	---
Portland General	3.0%	3.0%	3.0%	5.0%	4.5%	3.5%	4.5%	6.0%	3.0%	4.5%	6.0%	3.0%	3.4%	---	3.2%
Southern Co	2.9%	2.8%	2.7%	3.0%	3.5%	3.0%	3.0%	3.5%	2.5%	6.5%	3.5%	3.5%	3.5%	7.0%	6.6%
Xcel Energy	2.9%	2.8%	2.8%	6.0%	5.5%	5.0%	6.0%	6.0%	5.0%	6.0%	6.5%	5.5%	4.1%	6.0%	7.0%
AVERAGE	**3.3%**	**3.3%**	**3.3%**	**5.7%**	**5.3%**	**4.3%**	**5.5%**	**5.9%**	**4.4%**	**5.9%**	**5.4%**	**4.7%**	**4.0%**	**6.6%**	**6.0%**
Entergy Corp	3.6%	3.4%	3.5%	-	1.5%	1.5%	1.5%	2.0%	1.5%	4.0%	5.0%	5.0%	4.9%	6.0%	6.2%

Notes:

EPS = earnings per share
DPS = dividends per share
BPS = book value per share
Est'd '19-'21 to '25-'27

Sources:

[1] The Value Line Investment Survey, Summary and Index: 7/8/2022, 7/15/2022, 7/22/2022, 7/29/2022, 8/5/2022, 8/12/2022, 8/19/2022, 8/26/2022, 9/2/2022, 9/9/2022, 9/16/2022, 9/23/2022, 9/30/2022

[2] The Value Line Investment Survey, Summary and Index: 9/9/2022, 9/16/2022, 9/23/2022, 9/30/2022

[3] The Value Line Investment Survey, Summary and Index: 9/30/2022

[4] The Value Line Investment Survey: 7/22/2022 (Electric Utilities West), 8/12/2022 (Electric Utilities East), and 9/9/2022 (Electric Utilities Central),

[5] CFRA Stock Report earnings estimates as of 10/4/2022 as provided by Schwab.com

[6] Schwab Equity Report earnings estimates as of 10/4/2022 as provided by Schwab.com

O'Donnell Proxy Group
Plowback Ratios

Company	2020	2021	2022E*	2025E* - 2027E*	AVERAGE
Amer Elec Power	3.8%	4.3%	4.5%	4.5%	4.3%
ALLETE	2.0%	1.5%	2.5%	3.5%	2.4%
Alliant Energy	4.2%	4.3%	4.5%	4.5%	4.4%
Ameren Corp	4.2%	4.4%	4.5%	4.0%	4.3%
Duke Energy	2.3%	1.9%	2.5%	3.0%	2.4%
Evergy Inc.	1.8%	4.1%	3.0%	3.5%	3.1%
IDACORP Inc	3.9%	3.7%	3.5%	3.0%	3.5%
NextEra Energy	5.0%	5.4%	6.0%	5.5%	5.5%
NorthWestern Corp	1.7%	2.5%	1.5%	2.5%	2.1%
OGE Energy	2.8%	3.6%	4.0%	5.5%	4.0%
Otter Tail Corp	4.1%	11.3%	13.5%	5.0%	8.5%
Portland General	4.1%	3.5%	2.5%	3.5%	3.4%
Southern Co	2.8%	3.1%	3.0%	5.0%	3.5%
Xcel Energy	4.2%	4.2%	4.0%	4.0%	4.1%
AVERAGE	**3.4%**	**4.1%**	**4.3%**	**4.1%**	**4.0%**
Entergy Corp	5.9%	5.2%	4.0%	4.5%	4.9%

*E = expected

Plowback = Percent retained to common equity

The Value Line Investment Survey: 7/22/2022 (Electric Utilities West), 8/12/2022 (Electric Utilities East), and 9/9/2-22 (Electric Utilities Central)

O'Donnell: Proxy Group
DCF Results

O'Donnell DCF Calculation

	VL 13-Weeks **a**	VL 4-Weeks **b**	VL 1-Week **c**
	Exhibit KWO-2 →		
VL DIVIDEND YIELD AVERAGES	3.1%	3.1%	3.1%

Growth Rates	VL EPS **d**	VL DPS **e**	VL BPS **f**
	Exhibit KWO-2 →		
10-Year Growth Rate Averages	5.7%	5.3%	4.3%
5-Year Growth Rate Averages	5.5%	5.9%	4.4%
VL HISTORICAL GROWTH RATE AVERAGES	**5.6%**	**5.6%**	**4.4%**

	VL EPS **g**	VL DPS **h**	VL BPS **i**	CFRA EPS **j**	Schwab EPS **k**
	Exhibit KWO-2 →				
FORECASTED GROWTH RATE AVERAGES	**5.9%**	**5.4%**	**4.7%**	**6.6%**	**6.0%**

	13-Weeks VL EPS **= a + d**	13-Weeks VL DPS **= a + e**	13-Weeks VL BPS **= a + f**
	Rx →		
VL HISTORICAL GROWTH RATE AVERAGES + VL DIV YIELD AVERAGES	8.7%	8.7%	7.5%
	4-Weeks VL EPS **= b + d**	4-Weeks VL DPS **= b + e**	4-Weeks VL BPS **= b + f**
	Rx →		
	8.7%	8.7%	7.4%
	1-Week VL EPS **= c + d**	1-Week VL DPS **= c + e**	1-Week VL BPS **= c + f**
	Rx →		
	8.7%	8.7%	7.5%

	MIN **ABOVE** →	**AVG**	**MAX**
VL HISTORICAL GROWTH RATE AVERAGES + VL DIV YIELD RANGE	**7.4%**	**8.3%**	**8.7%**

	13-Weeks VL EPS **= a + g**	13-Weeks VL DPS **= a + h**	13-Weeks VL BPS **= a + i**	13-Weeks CFRA EPS **= a + j**	13-Weeks Schwab EPS **= a + k**
	Rx →				
FORECASTED GROWTH RATE AVERAGES + VL DIV YIELD AVERAGES	9.0%	8.5%	7.8%	9.7%	9.0%
	4-Weeks VL EPS **= b + g**	4-Weeks VL DPS **= b + h**	4-Weeks VL BPS **= b + i**	4-Weeks CFRA EPS **= b + j**	4-Weeks Schwab EPS **= b + k**
	Rx →				
	9.0%	8.5%	7.7%	9.7%	9.0%
	1-Week VL EPS **= c + g**	1-Week VL DPS **= c + h**	1-Week VL BPS **= c + i**	1-Week CFRA EPS **= c + j**	1-Week Schwab EPS **= c + k**
	Rx →				
	9.0%	8.5%	7.8%	9.7%	9.0%

	MIN **ABOVE** →	**AVG**	**MAX**
FORECASTED GROWTH RATE AVERAGES + VL DIV YIELD RANGE	**7.7%**	**8.8%**	**9.7%**

O'Donnell Proxy Group
Returns on Book Value

Company	2020	2021	2022E*	2025E* - 2027E*
Amer Elec Power	10.7%	11.1%	11.0%	11.0%
ALLETE	7.6%	7.0%	7.5%	9.0%
Alliant Energy	10.8%	11.0%	11.0%	11.5%
Ameren Corp	9.7%	10.2%	10.0%	10.0%
Duke Energy	8.2%	8.5%	8.5%	9.0%
Evergy Inc.	7.1%	9.5%	8.5%	10.0%
IDACORP Inc	9.3%	9.2%	9.0%	9.5%
NextEra Energy	12.5%	13.5%	14.5%	15.0%
NorthWestern Corp	7.5%	8.0%	7.0%	8.0%
OGE Energy	11.5%	11.6%	12.0%	13.0%
Otter Tail Corp	11.0%	17.8%	19.5%	11.5%
Portland General	9.5%	9.0%	8.5%	9.5%
Southern Co	12.4%	13.1%	13.0%	14.5%
Xcel Energy	10.1%	10.2%	10.5%	11.0%
AVERAGE	**9.9%**	**10.7%**	**10.8%**	**10.9%**
Entergy Corp	12.7%	11.9%	11.0%	11.5%

*E = expected

The Value Line Investment Survey: 7/22/2022 (Electric Utilities West), 8/12/2022 (Electric Utilities East), and 9/9/2022 (Electric Utilities Central),

O'Donnell Proxy Group
CAPM Results

Electric Utility Proxy Comparable Group

	30-Yr. Risk-Free Rate [1]	Average Proxy Group Beta [2]	Equity Risk Premium	Beta Adjusted Equity Risk Premium	Equity Cost Rate	Rounded Equity Cost Rate	
	a	b	c	d = b * c	= a + d	Rnd	
Treasury - Maximum	3.65%	0.88	3.75%	3.28%	6.93%	6.9%	
Treasury - Average	2.58%	0.88	3.75%	3.28%	5.86%	5.9%	
Treasury - Minimum	1.69%	0.88	3.75%	3.28%	4.97%	5.0%	LOW

	30-Yr. Risk-Free Rate [1]	Average Proxy Group Beta [2]	Equity Risk Premium	Beta Adjusted Equity Risk Premium	Equity Cost Rate	Rounded Equity Cost Rate	
	a	b	c	d = b * c	= a + d	Rnd	
Treasury - Maximum	3.65%	0.88	5.75%	5.03%	8.68%	8.7%	HIGH
Treasury - Average	2.58%	0.88	5.75%	5.03%	7.61%	7.6%	
Treasury - Minimum	1.69%	0.88	5.75%	5.03%	6.72%	6.7%	

Source:

[1] US Treasury Yields, September 23, 2021 through September 23, 2022
https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?

[2] The Value Line Investment Survey: 7/22/2022 (Electric Utilities West), 8/12/2022 (Electric Utilities East), and 9/9/2022 (Electric Utilities Central),

Entergy

	30-Yr. Risk-Free Rate [1]	Average Proxy Group Beta [2]	Equity Risk Premium	Beta Adjusted Equity Risk Premium	Equity Cost Rate	Rounded Equity Cost Rate	
	a	b	c	d = b * c	= a + d	Rnd	
Treasury - Maximum	3.65%	0.95	3.75%	3.56%	7.21%	7.2%	
Treasury - Average	2.58%	0.95	3.75%	3.56%	6.14%	6.1%	
Treasury - Minimum	1.69%	0.95	3.75%	3.56%	5.25%	5.3%	LOW

	30-Yr. Risk-Free Rate [1]	Average Proxy Group Beta [2]	Equity Risk Premium	Beta Adjusted Equity Risk Premium	Equity Cost Rate	Rounded Equity Cost Rate	
	a	b	c	d = b * c	= a + d	Rnd	
Treasury - Maximum	3.65%	0.95	5.75%	5.46%	9.11%	9.1%	HIGH
Treasury - Average	2.58%	0.95	5.75%	5.46%	8.04%	8.0%	
Treasury - Minimum	1.69%	0.95	5.75%	5.46%	7.15%	7.2%	

Source:

[1] US Treasury Yields, September 23, 2021 through September 23, 2022
https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?

[2] The Value Line Investment Survey: 8/26/2022 (Nat Gas)