

Before the North Dakota Public Service Commission
State of North Dakota

In the Matter of the Application of Otter Tail Power Company
For Authority to Increase Rates for Electric Utility
Service in North Dakota

Case No. PU-23-342

Exhibit____(AEB-2)

RETURN ON EQUITY

Rebuttal Testimony and Schedules of

ANN E. BULKLEY

November 4, 2024

TABLE OF CONTENTS

I.	INTRODUCTION AND QUALIFICATIONS	1
II.	SUMMARY OF REBUTTAL TESTIMONY	2
III.	UPDATED COST OF EQUITY MODEL RESULTS	5
IV.	PROSPECTIVE CAPITAL MARKET CONDITIONS	8
V.	RESPONSE TO DR. GRIFFING AND MR. CHRISS.....	10
A.	Change in Capital Market Conditions Since OTP's Last Rate Proceeding	12
B.	Appropriate Use of Authorized ROEs	15
C.	Griffing Analytical Models.....	21
1.	Constant Growth DCF	21
2.	Multi-Stage DCF	23
3.	CAPM	30
4.	Dr. Griffing's Overall Recommendation	37
D.	Risk Factors and Selection of ROE.....	39
E.	Proxy Group.....	42
F.	Small Size.....	45
G.	Capital Structure.....	49

ATTACHED SCHEDULES

<u>Schedule</u>	<u>Description</u>
Schedule 1	Summary of Updated Model Results
Schedule 2	Constant Growth DCF Model Results
Schedule 3	Capital Asset Pricing Model and Empirical CAPM
Schedule 4	Long-term Beta estimates
Schedule 5	Market return calculation
Schedule 6	Bond Yield Plus Risk Premium
Schedule 7	Adjustments to Griffing Constant Growth DCF
Schedule 8	Adjustments to Griffing Multi-Stage DCF
Schedule 9	SSA GDP growth rate
Schedule 10	Estimated long-term GDP growth rate
Schedule 11	Calculation of Griffing IBES CAPM
Schedule 12	Corrections to Griffing Value Line CAPM
Schedule 13	Griffing Kroll CAPM quartiles
Schedule 14	Weighted range of Griffing model results
Schedule 15	Proxy Group Market Capitalization
Schedule 16	PSC Response to DR ND-OTP-403
Schedule 17	Griffing Otter Tail Exhibits 4-20 Corrected
Schedule 18	PSC Response to DR ND-OTP-400

1 **I. INTRODUCTION AND QUALIFICATIONS**

2 Q. PLEASE STATE YOUR NAME AND CURRENT EMPLOYER

3 A. My name is Ann E. Bulkley. I am a Principal at The Brattle Group (Brattle). My
4 business address is One Beacon Street, Suite 2600, Boston, Massachusetts 02108.

5 Q. ARE YOU THE SAME ANN E. BULKLEY WHO PREVIOUSLY SUBMITTED
6 DIRECT TESTIMONY IN THIS PROCEEDING?

7 A. Yes. I submitted direct testimony in this proceeding on November 2, 2023 on
8 behalf of Otter Tail Power Company (OTP or the Company), a wholly-owned
9 subsidiary of Otter Tail Corporation (OTTR).

10 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

11 A. The purpose of my rebuttal testimony is to respond to the October 4, 2024 direct
12 testimony of Marlon F. Griffing, Ph.D. (Griffing Direct Testimony) on behalf of the
13 Advocacy Staff of the North Dakota Public Service Commission (NDPSC or the
14 Commission) and to the October 4, 2024 direct testimony of Steve W. Chriss
15 (Chriss Direct Testimony) on behalf of the Midwest Large Energy Consumers
16 (MLEC) regarding the just and reasonable return on equity (ROE) and the
17 appropriate capital structure for the Company. I have not attempted to respond to
18 every argument made by either Dr. Griffing or Mr. Chriss, however the fact that I
19 may not have responded to any particular position or statement does not indicate
20 my agreement with that position or statement.

21 Q. ARE YOU SPONSORING ANY SCHEDULES AS PART OF YOUR REBUTTAL
22 TESTIMONY IN THIS CASE?

23 A. Yes. I am sponsoring Exhibit____(AEB-2), Schedules 1 through 18.

1 Q. HAVE YOU UPDATED THE COST OF EQUITY ANALYSES THAT YOU
2 PRESENTED IN YOUR DIRECT TESTIMONY TO REFLECT CURRENT MARKET
3 CONDITIONS?

4 A. Yes. As discussed in more detail herein, I have updated my cost of equity analyses
5 based on market data through September 30, 2024. These results provide
6 additional support for my recommended ROE of 10.60 percent. My conclusion
7 continues to be based on not only the results of multiple cost of equity models, but
8 also other factors, including capital market conditions, the capital attraction and
9 comparable return standards, and the Company's specific risks.

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

11 A. The remainder of my rebuttal testimony is organized as follows:

- 12 • Section II provides a summary and overview of my rebuttal testimony and
13 the important factors to be considered in establishing the authorized ROE
14 for the Company.
- 15 • Section III provides the update to my cost of equity analyses based on
16 market data as of September 30, 2024.
- 17 • Section IV provides an update to current and prospective capital market
18 conditions.
- 19 • Section V provides my response to the recommendations of Dr. Griffing and
20 Mr. Chriss.

21 **II.SUMMARY OF REBUTTAL TESTIMONY**

22 Q. HAVE YOU REVISED YOUR RECOMMENDATIONS REGARDING THE
23 APPROPRIATE ROE AND CAPITAL STRUCTURE FOR THE COMPANY?

24 A. No. Nothing in the testimony of Dr. Griffing or Mr. Chriss has caused me to change
25 my recommendations. Based on my review of their testimony and the updates to
26 my cost of equity estimates that reflect current market data, my key conclusions
27 regarding the appropriate ROE and capital structure for the Company are as
28 follows:

- 29 • Updating the cost of equity estimation models that I relied upon in my direct
30 testimony to reflect market data through September 30, 2024 demonstrates
31 that the model results continue to support my recommended ROE of 10.60
32 percent.

- The Company's capital structure, which is composed of 53.50 percent common equity, 43.55 percent long-term debt and 2.95 percent short-term debt, is within the range established by the proxy group, when reviewing the operating company data and the market capitalization of the proxy group and therefore is reasonable and should be adopted.

Q. DID YOU IDENTIFY ANY ERRORS IN DR. GRIFFING'S ANALYSES?

A. Yes. I have identified several methodological errors and inconsistencies, as well as several calculation errors, in the analyses presented by Dr. Griffing that materially affect his reported results as identified below.

Methodological Errors and Inconsistencies

- Current capital market conditions indicate a higher cost of equity than at the time of the Company's last rate proceeding, yet Dr. Griffing's recommendation inexplicably is 21 basis points *lower* than the 9.77 percent ROE that was authorized in 2018 as part of the Company's last rate proceeding in 2018:
 - Long-term interest rates have increased 98 basis points since the Company's last rate proceeding.
 - Dr. Griffing has not provided any support or justification for his ROE recommendation to be lower than the Company's currently authorized ROE of 9.77 percent given the change in market conditions and increase in the cost of equity relative to the market conditions that existed in 2017-2018.
 - Dr. Griffing's recommended ROE of 9.56 percent is even more puzzling when compared to the testimony he filed on May 13, 2024 in the current proceeding, where he recommended an ROE of 10.25 percent for OTP. His May 13, 2024 testimony reasonably reflected an increase in the cost of equity since the Company's last rate proceeding, which is consistent with the increase in the cost of equity indicated by the change in market conditions.¹
- Authorized ROEs
 - In developing the range of authorized returns for electric utilities that he uses to assess the reasonableness of his DCF and CAPM results, Dr. Griffing incorrectly includes: 1) the returns for transmission and distribution electric utilities, which have a different risk profile than OTP, a vertically integrated electric utility; and 2) authorized returns from 2021, which reflected a much lower interest rate environment.
- Multi-Stage DCF

¹ As shown in Exhibit ____ (AEB-2), Schedule 16, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged and corrected calculation errors in his Constant Growth and Multi-Stage DCF analyses, and also revised his recommended ROE to 9.68 percent. See Exhibit MFG 20, Schedule 1, a copy of which is provided in Exhibit ____ (AEB-2), Schedule 17.

- Since Dr. Griffing relies on the Federal Energy Regulatory Commission (FERC) for a number of the assumptions used in his DCF and CAPM analyses, he should have also applied the weights to the short-term and long-term growth rates that FERC recommends when calculating the growth rates in his multi-stage DCF analysis.

- CAPM

- Dr. Griffing, without explanation or justification, changed one of the sources of market risk premium data that he used in his original analysis in May 2024. In addition to being unexplained and unjustified, the newly selected market risk premium cannot be reconciled with current market conditions and produces unreasonably low cost of equity results.

Calculation Errors

- Constant Growth DCF:

- Dr. Griffing relied on incorrect Value Line projected EPS growth rates for Evergy, Inc. and OGE Energy Corporation in his constant growth and multi-stage DCF analyses. Correcting this error materially increases the results of his constant growth DCF analysis: the mean and median result of his constant growth DCF analysis would increase by 21 and 35 basis points, from 10.16 percent and 9.96 percent to 10.37 percent and 10.31 percent, respectively.²

- Multi-Stage DCF

- Dr. Griffing incorrectly calculates the weighted growth rate in his multi-stage DCF analysis that relies on projected EPS and EIA's nominal projected GDP growth rate. Correcting this error (as well as the incorrect projected growth rates for Evergy, Inc. and OGE Energy Corporation) increases the mean and median results of his multi-stage DCF analysis by 82 and 80 basis points, from 8.88 percent and 8.82 percent to 9.70 percent and 9.62 percent, respectively.³

- CAPM:

- Dr. Griffing incorrectly relies on the 5-year historical earnings per share growth rates reported by Value Line instead Value Line's projected EPS growth rates when estimating the market return in his Value Line CAPM.

² As shown in Exhibit____(AEB-2), Schedule 16, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged these calculation errors. In response to that discovery request, Dr. Griffing has updated his analysis to correct these calculation errors identified in this rebuttal testimony. His updated results are in agreement with the adjustments identified in this rebuttal testimony. Further, Dr. Griffing attached to the response noted previously, Exhibit MFG 20, Schedule 1, corrected, wherein Dr. Griffing revises his recommended ROE to 9.68 percent.

³ Id.

Q. WHAT IS THE EFFECT OF CORRECTING THESE ERRORS?

A. Once Dr. Griffing’s analyses are corrected, the results are reasonably close to the results of my models and generally confirm my recommended ROE of 10.60 percent.

Figure 1: Dr. Griffing’s Cost of Equity Results, As-Filed versus As-Corrected/Adjusted Cost of Equity Results⁴

	Griffing As Filed		Griffing Adjusted ⁵	
	Mean	Median	Mean	Median
Constant Growth DCF	10.16%	9.96%	10.37%	10.31%
Multi-Stage DCF	Excluded	Excluded	10.09%	10.09%
CAPM - Kroll	8.96%	9.04%	Excluded	Excluded
CAPM - Value Line	Excluded	Excluded	10.68%	10.79%
CAPM - IBES	N/A	N/A	11.26%	11.39%
Mean	9.56%⁶	9.50%	10.60%	10.65%

III. UPDATED COST OF EQUITY MODEL RESULTS

Q. HAVE YOU UPDATED YOUR COST OF EQUITY ANALYSES?

A. Yes. I have updated the results of the cost of equity analyses that I relied upon in my direct testimony based on market data through September 30, 2024.

⁴ Grey shading indicates result was excluded from the determination of the ROE for OTP due to being outside the range of recently authorized returns for electric utilities. The filed results rely on the range of authorized returns considered by Dr. Griffing while the corrected/adjusted results rely on the adjusted range of comparable returns for vertically integrated electric utilities since 2023 shown in Figure 5.

⁵ As shown in Exhibit ____ (AEB-2), Schedule 16, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged the calculation errors in his Constant Growth and Multi-Stage DCF analyses as discussed previously. His updated results to his Constant Growth and Multi-Stage DCF analyses are in agreement with the adjustments shown in Figure 1.

⁶ In Dr. Griffing’s response to discovery request ND-OTP-403 on October 29, 2024, in addition to correcting calculation errors in his Constant Growth and Multi-Stage DCF analyses, he also revised his recommended ROE to 9.68 percent. See Exhibit MFG 20, Schedule 1, which is provided in Exhibit ____ (AEB-2), Schedule 16.

1 Q. HAVE YOU ADJUSTED THE PROXY GROUP THAT WAS RELIED UPON IN
2 YOUR DIRECT TESTIMONY?

3 A. Yes, I have. On May 6, 2024, ALLETE announced an agreement to be acquired
4 and as a result must be excluded from the proxy group.⁷

5 Q. WHAT ARE THE UPDATED RESULTS OF YOUR COST OF EQUITY ANALYSES?

6 A. The updated results of my cost of equity analyses are summarized in Figure 2 (see
7 also Exhibit ____ (AEB-2), Schedule 1 through Schedule 6), which summarizes
8 the updated results of the cost of equity analyses based on market data through
9 September 30, 2024, using the same analytical methods presented in my direct
10 testimony.⁸ In addition, in these schedules, I also provide an update using Dr.
11 Griffing's proxy group.

⁷ Dr. Griffing also excluded ALLETE from his proxy group as a result of the acquisition agreement.

⁸ The Bond Yield Risk Premium analysis in my rebuttal testimony was updated to include electric authorized returns and Treasury bond yields starting 1980, while the Bond Yield Risk Premium analysis in my direct testimony included data starting in 1992, and this change does not have a meaningful impact on the results.

1

Figure 2: Updated Model Results

<i>Constant Growth DCF</i>			
	Mean Low	Mean	Mean High
30-Day Average	9.20%	10.35%	11.17%
90-Day Average	9.46%	10.61%	11.43%
180-Day Average	9.69%	10.85%	11.67%
Constant Growth Average	9.45%	10.60%	11.42%
	Median Low	Median	Median High
30-Day Average	9.49%	10.23%	10.81%
90-Day Average	9.77%	10.49%	11.04%
180-Day Average	9.99%	10.73%	11.34%
Constant Growth Average	9.75%	10.48%	11.06%
<i>CAPM</i>			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.49%	11.49%	11.51%
Bloomberg Beta	10.25%	10.24%	10.30%
Long-term Avg. Beta	10.12%	10.11%	10.18%
<i>ECAPM</i>			
Value Line Beta	11.63%	11.63%	11.64%
Bloomberg Beta	10.70%	10.69%	10.74%
Long-term Avg. Beta	10.60%	10.60%	10.65%
<i>Risk Premium</i>			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Risk Premium Results	10.37%	10.34%	10.50%

2

3 Q. DO THESE UPDATED RESULTS CONTINUE TO SUPPORT YOUR
4 RECOMMENDED ROE OF 10.60 PERCENT IN THIS PROCEEDING?

5 A. Yes. The range of results reflecting the most updated market data continues to
6 support my recommended ROE of 10.60 percent. DCF results generally have
7 increased since filing direct testimony, with the mean and median results of my
8 constant growth DCF increasing by approximately 80 basis points on average. The
9 Bond Yield Risk Premium results also increased slightly from my direct testimony.
10 The results of my CAPM analysis decreased slightly; however, are still in the range
11 of 10.10 percent to 11.50 percent.

1 **IV. PROSPECTIVE CAPITAL MARKET CONDITIONS**

2 Q. WHAT IS THE EXPECTED PATH OF THE MONETARY POLICY OVER THE
3 NEAR-TERM?

4 A. At the September Federal Open Market Committee (FOMC) meeting, Chairman
5 Powell noted that while over the past two years the risks associated with inflation
6 have far exceeded the risks associated with the labor market, the FOMC's current
7 view is that the risks associated with both inflation and the labor market have
8 become more balanced given the effectiveness of restrictive monetary policy in
9 combatting inflation. As a result, the FOMC indicated it was time to change
10 monetary policy in order to continue to achieve the Federal Reserve's dual
11 mandate of maximum employment and price stability, and as a result, decided to
12 lower the target range for the federal funds rate by 50 basis points, to a range of
13 4.75 percent to 5.00 percent.⁹ However, Chairman Powell stated that while there
14 was a 50 basis point reduction at the September FOMC meeting that they "are not
15 on any preset course" and will "continue to make our decisions meeting to
16 meeting."¹⁰ Chairman Powell further explained that reducing the federal funds
17 rate too quickly could hinder the progress on inflation while too slowly could
18 unduly weaken economic activity, leading the FOMC to conclude that they will
19 carefully assess incoming data before making any further decisions on policy rate
20 changes.

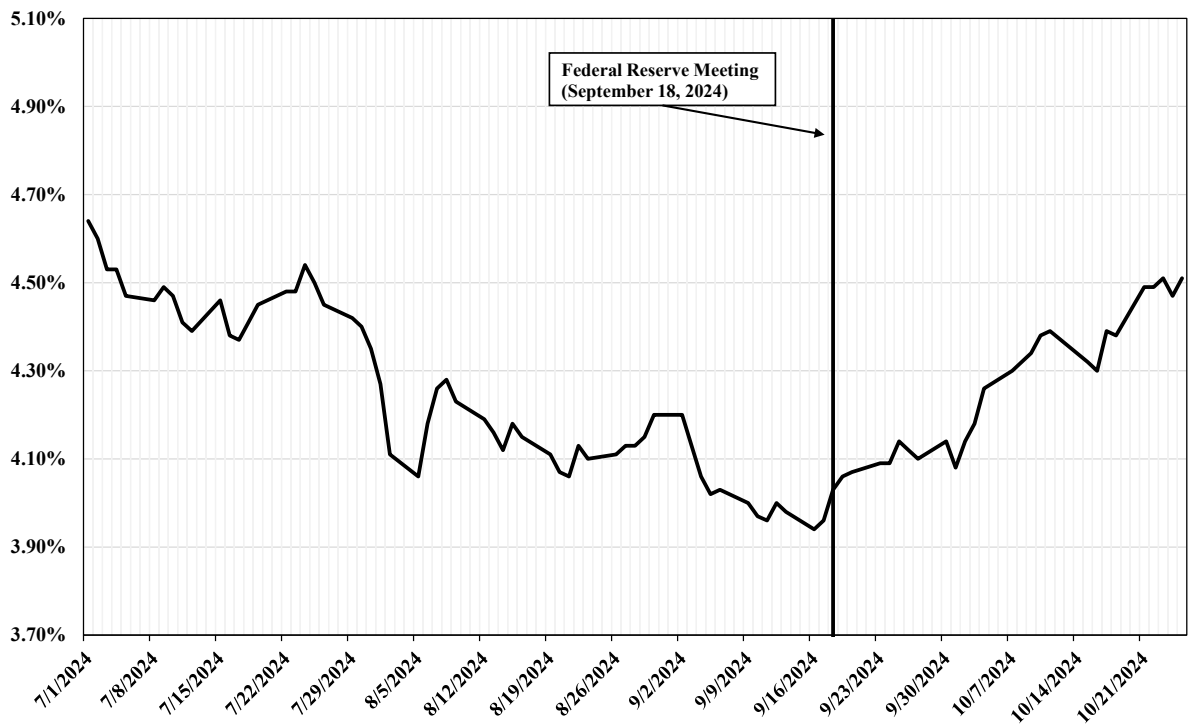
21 Q. WHAT HAS HAPPENED TO INTEREST RATES SINCE THE FEDERAL RESERVE
22 CUT THE FEDERAL FUNDS RATE?

23 A. As shown in Figure 3 below, interest rates dipped at or around the time of the rate
24 cut but have been increasing since that time and are now currently at levels higher
25 than prior to the reduction in the federal funds rate.

⁹ <https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20240918.pdf>, September 18, 2024.

¹⁰ Id.

Figure 3: 30-year Treasury Bond Yield – July 1, 2024 – October 25, 2024¹¹



Q. WHAT ARE ECONOMISTS' PROJECTIONS OF LONG-TERM GOVERNMENT BOND YIELDS OVER THE NEAR-TERM?

A. Economists' consensus estimate of the yield on the 30-year Treasury bond is expected to remain relatively stable over the next several quarters, despite the expectations for the reduction in the federal funds rate. The *Blue Chip Financial Forecasts* provides a forecast of both the federal funds rate and the yield on the 30-year Treasury bond. The yield on the 30-year Treasury bond as reported by *Blue Chip Financial Forecasts* is expected to range from 4.1 percent in Q4/2024 to 4.0 percent in Q1/2026 while economists projected the federal funds rate to decline from 4.6 percent in Q4/2024 to 3.1 percent in Q1/2026.¹² Therefore, economists, who consider the expected policy of the Federal Reserve, expect the yield on the 30-year Treasury bond to remain elevated over the near-term.

¹¹ S&P Capital IQ Pro.

¹² *Blue Chip Financial Forecasts*, Vol. 43, No. 10, October 1, 2024, at 2.

1 Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE EFFECT OF CURRENT
2 MARKET CONDITIONS ON THE COST OF EQUITY FOR THE COMPANY?

3 A. Due to their effect on the estimated cost of equity, it is important that current and
4 projected market conditions be considered in setting the forward-looking ROE in
5 this proceeding. While the FOMC decreased the federal funds rate at its September
6 2024 meeting, economists have considered the expected path of monetary policy
7 and are forecasting interest rates to remain at elevated levels during the period that
8 the Company's rates will be in effect. Further, as shown in Figure 3, long-term
9 government bond yields have **increased** since the FOMC reduced the federal
10 funds rate in September 2024. As a result, it is reasonable to expect that the change
11 in monetary policy will not result in a decrease in the cost of equity over the near-
12 term.

13 **V. RESPONSE TO DR. GRIFFING AND MR. CHRISS**

14 Q. PLEASE SUMMARIZE DR. GRIFFING'S ROE AND CAPITAL STRUCTURE
15 RECOMMENDATIONS.

16 A. Dr. Griffing performs constant growth and multi-staged DCF analyses, as well as
17 two CAPM scenarios. However, he disregards the results of his multi-stage DCF
18 analysis because the results are below the lowest authorized ROE in 2024.
19 Similarly, he disregards the results of his one of his CAPM scenarios because the
20 results are greater than the highest authorized ROE over the period of 2021-2024.
21 Dr. Griffing calculates the mean and median results of his constant growth DCF
22 and remaining CAPM scenario and appears to rely on the average results, using his
23 CAPM and his mean growth rate DCF, of 9.56 percent as his final recommended

1 ROE.¹³ This result is entirely inconsistent with the results of his analyses filed on
2 May 13, 2024, which resulted in a recommended ROE of 10.25 percent.¹⁴

3
4 Dr. Griffing opposes the Company's proposed capital structure consisting of 43.55
5 percent long-term debt, 2.95 percent short-term debt and 53.50 percent common
6 equity. Instead, Dr. Griffing recommends a capital structure that is composed of
7 45.02 percent long-term debt, 2.98 percent short-term debt and 52.00 percent
8 common equity, which he contends considers both the Company's requested
9 capital structure and his analysis of the capital structures of the companies
10 included in his proxy group.¹⁵

11 Q. PLEASE SUMMARIZE MR. CHRISS'S ROE RECOMMENDATIONS.

12 A. Mr. Chriss does not present a formal ROE recommendation, but rather asks the
13 Commission to:

14 [T]horoughly and carefully consider the impact on customers in
15 examining the requested ROE, in addition to all other facets of this
16 case, to ensure that any increase in the Company's rates reflects the
17 minimum amount necessary to compensate the Company for
18 adequate and reliable service, while also providing OTP an
19 opportunity to earn a reasonable return for its shareholders.¹⁶

20
21 He also presents information regarding recent Commission approved ROEs and
22 national trends in the authorized ROEs for electric utilities.

13 Griffing Direct Testimony, at 46. As shown in Exhibit____(AEB-2), Schedule 17, Exhibit MFG 20, Schedule 1, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged and corrected calculation errors in his Constant Growth and Multi-Stage DCF analyses and also revised his recommended ROE to 9.68 percent.

14 Griffing Direct Testimony, May 13, 2024, at 44-46.

15 Griffing Direct Testimony, at 49.

16 Chriss Direct Testimony at 10.

A. Change in Capital Market Conditions Since OTP's Last Rate Proceeding

Q. DOES DR. GRIFFING ADDRESS THE CHANGE IN CAPITAL MARKET CONDITIONS SINCE THE COMPANY'S LAST RATE PROCEEDING?

A. No.

Q. DO CHANGES IN CAPITAL MARKET CONDITIONS SINCE THE COMPANY'S LAST RATE PROCEEDING CONTINUE TO INDICATE AN INCREASE IN THE COST OF EQUITY?

A. Yes. Changes in long-term bond yields since the Company's last rate proceeding demonstrate an increase in the cost of capital. Specifically, as shown in Figure 4, both short-term and long-term interest rates have increased substantially since 2018 when the Commission approved the settlement agreement authorizing an ROE of 9.77 percent for OTP in its last rate proceeding, which is indicative of an increase in the cost of equity. Additionally, core inflation also is currently higher than at the time of the Company's last rate proceeding and continues to remain above the Federal Reserve's long-term target value of 2.0 percent.

Figure 4: Change in Market Conditions Since OTP's Last Rate Proceeding¹⁷

Case	Date	Federal	30-Day Avg	Core	Auth'd
		Funds	of 30-Year	Inflation	
		Rate	Treasury	Rate	ROE
			Bond Yield		
<hr/>					
PU-17-398					
Decision Date	9/26/2018	1.93%	3.09%	2.20%	9.77%
PU-23-342					
Company Direct	7/31/2023	5.33%	3.92%	4.75%	
Company Rebuttal	9/30/2024	4.83%	4.07%	3.26%	
Change from Sep-18 to Sep-24:		2.90%	0.98%	1.06%	

¹⁷ St. Louis Federal Reserve Bank; Bureau of Labor Statistics.

1 Q. DOES DR. GRIFFING'S ROE RECOMMENDATION IN THIS PROCEEDING
2 APPROPRIATELY REFLECT THE CHANGE IN MARKET CONDITIONS SINCE
3 THE COMPANY'S 2018 RATE PROCEEDING?

4 A. No. Dr. Griffing's recommended ROE in his current testimony in this proceeding,
5 which is a substantial reduction from the recommendation that he offered this
6 Commission in his May 13, 2024 testimony, is unreasonable when taking into
7 consideration the changes in market conditions since the Company's last rate
8 proceeding and the analysis prepared in his testimony filed on May 13, 2024. At
9 that time, Dr. Griffing recommended an ROE of 10.25 percent, which was within
10 the range of reasonable results based on then-current market conditions. In his
11 current testimony, despite the undeniable increase in the cost of equity
12 demonstrated by current market conditions, Dr. Griffing abandons his prior
13 recommendation of 10.25 percent and now recommends **decreasing** the
14 Company's authorized ROE by 21 basis points to 9.56 percent.¹⁸ This
15 recommendation cannot be reconciled with his prior testimony, nor can it be
16 reconciled with the differences in market conditions since the Company's last rate
17 proceeding when it was authorized a 9.77 percent ROE.

18 Q. PLEASE SUMMARIZE THE DIFFERENCES IN DR. GRIFFING'S CURRENT ROE
19 RECOMMENDATION AND HIS RECOMMENDATION THAT WAS FILED IN
20 MAY 2024?

21 A. In his testimony filed on May 13, 2024, Dr. Griffing recommended an ROE for OTP
22 of 10.25 percent based on the results of his DCF and CAPM analyses, which was
23 48 basis points higher than the Company's currently authorized ROE of 9.77
24 percent.¹⁹ The specification of his models in his Direct Testimony filed in May

¹⁸ As shown in Exhibit____(AEB-2), Schedule 17, Exhibit MFG 20, Schedule 1, Dr. Griffing responded to discovery ND-OTP-403 on October 29, 2024, where he has acknowledged and corrected calculation errors in his Constant Growth and Multi-Stage DCF analyses and also revised his recommended ROE to 9.68 percent. This revised recommendation still would be a decrease to the Company's current authorized ROE.

¹⁹ Direct Testimony of Marlon F. Griffing, Ph.D., May 13, 2024, at 44-46.

1 2024 correctly indicated that the cost of equity was higher than at the time of the
2 Company's last rate proceeding. However, in his updated testimony, which was
3 filed only five months later, Dr. Griffing recommends an ROE of 9.56 percent,²⁰
4 decreasing his recommendation by 69 basis points since May 2024, to an ROE that
5 is lower than the Company's currently authorized ROE. His current
6 recommendation is directionally incorrect based on changes in market conditions
7 since the Company's last rate proceeding.

8 Q. PLEASE EXPLAIN WHY DR. GRIFFING'S ROE RECOMMENDATION IS
9 DIRECTIONALLY INCONSISTENT WITH THE CHANGE IN MARKET
10 CONDITIONS.

11 A. Whereas Dr. Griffing's May 2024 testimony reasonably reflected an increase in the
12 ROE from the ROE authorized in 2018 to reflect increasing capital costs, his
13 current recommendation incorrectly proposes that the Commission reduce the
14 Company's authorized ROE below the Company's currently authorized ROE –
15 even though capital costs have increased. Dr. Griffing has provided no evidence to
16 indicate that the changes in capital market conditions that occurred since May
17 2024 would warrant such a drastic reduction in his recommendation, nor can he
18 support a reduction in the cost of equity since the Company's last rate proceeding.

19
20 I will discuss Dr. Griffing's calculation errors in more detail in Section V.C, but in
21 summary, errors in the calculation of his constant growth, multi-stage DCF and
22 CAPM analyses, as well as a significant change in the market risk premium he
23 relied on in one of his CAPM scenarios results in: 1) the significant change in his
24 ROE recommendation since May 2024; and 2) an ROE recommendation that is

²⁰ As shown in Exhibit ____ (AEB-2), Schedule 17, Exhibit MFG 20, Schedule 1, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged and corrected calculation errors in his Constant Growth and Multi-Stage DCF analyses and also revised his recommended ROE to 9.68 percent. This revised recommendation only addresses some of the errors he made, and still would be a decrease to the Company's current authorized ROE.

1 directionally inconsistent with the change in market conditions since the
2 Company's last rate proceeding.

3
4 **B. Appropriate Use of Authorized ROEs**

5 Q. ARE AUTHORIZED RETURNS IN OTHER JURISDICTIONS A RELEVANT
6 BENCHMARK TO EVALUATE THE REASONABLENESS OF ROE
7 RECOMMENDATIONS?

8 A. Yes, they can be when the corresponding market conditions are considered. The
9 *Hope* and *Bluefield* cases establish that authorized ROEs must be comparable to
10 other investments of commensurate risk. Therefore, the regulatory decisions of
11 other utility regulatory commissions provide a range of reasonableness and a
12 benchmark that investors consider in assessing the authorized ROE of one utility
13 against the returns available from other regulated utilities with comparable risk.

14 Q. HOW DO DR. GRIFFING AND MR. CHRISS DISCUSS ROES PREVIOUSLY
15 AUTHORIZED BY OTHER REGULATORY COMMISSIONS IN THE U.S. FOR
16 VERTICALLY INTEGRATED ELECTRIC UTILITIES?

17 A. Dr. Griffing calculates the annual average and range of authorized returns from
18 2021 through August 21, 2024, for all electric utilities. According to Griffing, the
19 annual average returns for electric utilities have ranged from 9.58 percent to 9.76
20 percent from 2021 to 2024 while the overall range of authorized returns over the
21 period was 8.80 percent to 10.50 percent.²¹

22
23 Mr. Chriss reviews the authorized returns for vertically integrated electric utilities
24 over the period of 2022 through 2024. Mr. Chriss calculates an average return for
25 vertically integrated electric utilities of 9.7 percent from 2022-2024 and

²¹ Griffing Direct Testimony, at 45-47.

1 demonstrates that the annual average authorized return increased from 9.60
2 percent in 2022 to 9.82 percent in 2024.²²

3 Q. DO YOU AGREE WITH THE ANALYSES OF AUTHORIZED ROES THAT WERE
4 CONDUCTED BY DR. GRIFFING AND MR. CHRISS?

5 A. No. I disagree with Dr. Griffing's analysis because he includes authorized returns
6 for transmission and distribution only (T&D) utilities, as well as vertically-
7 integrated electric utilities. OTP is a vertically integrated utility. Therefore, the
8 most appropriate comparable group to OTP consists of vertically integrated
9 electric utilities. The authorized ROEs for T&D utilities are less comparable to OTP
10 and should be excluded from the analysis.

11
12 I also disagree with the time periods used in Dr. Griffing's and Mr. Chriss's
13 analyses because they include data from 2021 and 2022, which are not similar to
14 current market conditions. As shown in Figure 4 of my direct testimony, the yield
15 on the 10-year Treasury bond has increased substantially since the beginning of
16 2022. Therefore, it is incorrect to rely on authorized returns starting in 2021 (Dr.
17 Griffing) or 2022 (Mr. Chriss), since the authorized returns were based on market
18 data that did not account for the significant increase in long-term interest rates
19 that has occurred in 2023 and 2024. Demonstrating this point, Mr. Chriss's
20 analysis shows that the annual average authorized returns for vertically integrated
21 electric utilities increased from 9.60 percent in 2022 to 9.82 percent in 2024.

22
23 Finally, as I will discuss in more detail below, both Dr. Griffing and Mr. Chriss rely
24 primarily on annual average authorized returns instead of also considering the full
25 range of authorized returns for vertically integrated electric utilities. For example,
26 Dr. Griffing relies on the average annual authorized returns for all electric utilities

²² Chriss Direct Testimony, at 8.

1 to conclude that his recommendation is reasonable. However, it is important to
2 consider the range of authorized returns due to the recent change in market
3 conditions discussed above, as well as to consider the business risk of the
4 Company.

5
6 Q. WHAT ARE THE AVERAGE AUTHORIZED ROES NATIONALLY WHEN THIS
7 ANALYSIS IS CORRECTED TO PROPERLY REFLECT COMPARABILITY AND
8 MARKET CONDITIONS?

9 A. I have analyzed the recently authorized returns for electric utilities and applied the
10 following screening criteria to establish returns for vertically integrated
11 companies:

- 12 • I have excluded limited-issue rider cases because these cases address only a
13 specific issue or issues, such as the construction of generation assets and the
14 associated incremental risk, and not a utility's entire operations.
- 15 • I have excluded jurisdictions that set ROEs using a formula as opposed to
16 following an approach that is similar to what the Commission has typically
17 considered in setting the ROE.
- 18 • Lastly, I have excluded returns authorized in Arizona because those
19 determinations are based on fair value ratemaking adjustments. Therefore,
20 the ROE that was established in the Arizona cases may have been set on a
21 different basis.

22 As shown in Figure 5, the average and median authorized ROEs for vertically
23 integrated electric utilities have increased from 2021 to 2024, consistent with the
24 increase in long-term interest rates. Based on this corrected analysis, Dr. Griffing's
25 recommended ROE of 9.56 percent²³ is well below the average and median
26 authorized ROEs for vertically integrated electric utilities in the United States over
27 the time period that is more appropriate to consider, which is the 2023-2024 time
28 period. In fact, Dr. Griffing's recommendation is below the historical averages for
29 even the periods where interest rates were at their lowest levels in decades.

²³ As shown in Exhibit ____ (AEB-2), Schedule 17, Exhibit MFG 20, Schedule 1, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged and corrected calculation errors in his Constant Growth and Multi-Stage DCF analyses and also revised his recommended ROE to 9.68 percent.

Considering this comparison, it would be unreasonable to conclude that his recommendation reflects the investor-required return on equity for a vertically integrated electric utility in current market conditions.

Figure 5: Authorized ROEs for Vertically Integrated Electric Utilities, 2021-2024²⁴

Year	Mean	Median	Low	High
2021	9.60%	9.50%	9.00%	10.60%
2022	9.75%	9.70%	9.30%	10.50%
2023	9.72%	9.70%	9.25%	11.45%
2024	9.82%	9.86%	9.26%	10.30%

Q. WHY IS IT IMPORTANT TO CONSIDER THE RANGE OF RETURNS THAT HAVE BEEN AUTHORIZED FOR VERTICALLY INTEGRATED UTILITIES ACROSS THE U.S., RATHER THAN JUST THE ANNUAL AVERAGE?

A. While the analysis in Figure 5 provides the annual average authorized ROEs, as noted above, the more meaningful analysis of this data is to consider the **range** of authorized returns for vertically integrated electric utilities for two reasons: (1) the effect of capital market conditions; and (2) the business risk of the Company.

It is important to recognize that there is a lag between the data relied upon to make a decision on the appropriate ROE and the date on which an ROE is authorized. Since a typical rate proceeding lasts approximately 8 to 12 months, it is reasonable to expect that authorized returns included in the sample for each year were based on market conditions that differ from current and expected market conditions and therefore, may not reflect the current and expected investor-required return during the period when OTP's rates will be in effect. In this case, given the substantial increase in interest rates over the last two years, it is likely that the

²⁴ S&P Capital IQ Pro.

1 annual averages for 2021 through 2024, while increasing, do not reflect the full
2 effect of the increase in the cost of equity.

3
4 Further, it is important to consider the business risk of OTP. As noted in my direct
5 testimony, I undertook an analysis to compare the business risk of the Company
6 relative to the proxy group and concluded that OTP has greater risk relative to the
7 proxy group due to its small size and significant concentration in industrial load in
8 North Dakota.²⁵ Based on these risk factors, the Company's ROE would reasonably
9 be placed above the mean results for the proxy group. As shown in
10 Exhibit____(AEB-2), Schedule 1, the mean and median results of the DCF model
11 are 10.60 percent and 10.48 percent respectively and the mean and median using
12 the higher growth rates are 11.42 percent and 11.06 percent respectively. This
13 range is also supported by the CAPM and Risk Premium models shown in Schedule
14 1. Additionally, the results of the cost of equity models are generally consistent
15 with the high end of the range of recently authorized ROEs. Further, while my
16 conclusion that OTP has greater business risk relative to the proxy group assumed
17 the Company's sales adjustment proposal would be approved, it is important to
18 note that OTP's business risk would increase substantially relative to the proxy
19 group if the Commission were not to approve the sales adjustment proposal,
20 warranting an ROE at the very high-end of the range of cost of equity results.²⁶
21

²⁵ Bulkley Direct Testimony, at 43-69.

²⁶ *Id.*, at 3.

1 Finally, at 9.56 percent,²⁷ Dr. Griffing's recommended ROE does not fully reflect
2 the market conditions, nor the risk factors for OTP as demonstrated by the model
3 results and therefore is unreasonable.

4 Q. DOES DR. GRIFFING AGREE THAT HISTORICAL AUTHORIZED ROES ARE
5 NOT A SUBSTITUTE FOR CURRENT, FORWARD-LOOKING ROE ANALYSES?

6 A. Yes. Dr. Griffing and I agree that recently authorized ROEs reflect the results of
7 rate cases conducted in a variety of market conditions, with different general
8 economic indicators, inflation rates and other important characteristics that affect
9 the cost of equity. They are not substitutes for market-based estimates of the cost
10 of equity.

11 Q. IS THE INFORMATION IN FIGURE 5 STILL RELEVANT TO THE
12 COMMISSION'S DECISION IN THIS CASE?

13 A. Yes. While historical authorized ROEs are not a substitute for forward looking
14 analyses, they do provide evidence that regulators have incorporated the change in
15 market conditions into their decision making, resulting in a general increase to
16 authorized ROEs. The same should occur in this case given the material
17 differences between current (and expected) market conditions and those that
18 existed at the time of OTP's last North Dakota rate case.

²⁷ As shown in Exhibit ____ (AEB-2), Schedule 17, Exhibit MFG 20, Schedule 1, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged and corrected calculation errors in his Constant Growth and Multi-Stage DCF analyses and also revised his recommended ROE to 9.68 percent.

1 Q. IS MR. CHRISS'S PROPOSAL TO SET THE COMPANY'S RETURN AT "THE
2 MINIMUM AMOUNT NECESSARY TO COMPENSATE THE COMPANY FOR
3 ADEQUATE AND RELIABLE SERVICE" CONSISTENT WITH THE
4 REGULATORY PRINCIPLES ESTABLISHED BY THE U.S. SUPREME COURT
5 AND THE PRINCIPLES THAT HAVE BEEN RELIED UPON BY THIS
6 COMMISSION?²⁸

7 A. No. Mr. Chriss's proposal is inconsistent with traditional utility ratemaking and
8 the precedent established by the U.S. Supreme Court and the Commission. As
9 noted in my direct testimony, The United States (U.S.) Supreme Court's *Hope* and
10 *Bluefield* decisions²⁹ established the standards for determining a fair and
11 reasonable authorized ROE for public utilities, including consistency of the
12 allowed return with the returns of other businesses having similar risk, adequacy
13 of the return to provide access to capital and support credit quality, and the
14 requirement that the result lead to just and reasonable rates. This standard
15 establishes that the return that should be authorized for investors in regulated
16 utilities should be based on the risk of the investment.

17 **C. Griffing Analytical Models**

18 *I. Constant Growth DCF*

19 Q. PLEASE SUMMARIZE THE CONSTANT GROWTH DCF ANALYSIS PREPARED
20 BY DR. GRIFFING.

21 Dr. Griffing prepared a constant growth DCF using the proxy group discussed
22 previously, which consisted of 15 companies. He relied on projected earnings per
23 share growth rates, annualized the current dividend and relied on an average of
24 the stock prices for his proxy companies for the period from July 22, 2024, through

²⁸ Chriss Direct Testimony at 10.

²⁹ *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) (*Hope*); *Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923) (*Bluefield*).

1 August 16, 2024 to calculate the dividend yield.³⁰ Dr. Griffing also calculates
2 flotation costs, but does not apply the flotation cost in his DCF analysis. The mean
3 and median results of Dr. Griffing's constant growth DCF analysis were 10.16
4 percent and 9.96 percent.

5 Q. PLEASE SUMMARIZE THE AREAS OF AGREEMENT BETWEEN YOUR
6 ANALYSIS AND DR. GRIFFING'S CONSTANT GROWTH DCF ANALYSIS.

7 A. Dr. Griffing and I agree on the use of an average stock price to reduce the effect of
8 daily volatility on the cost of equity estimate. In addition, we agree on the use of
9 projected EPS growth rates as the basis for growth in the dividend. Finally, we
10 agree that it is necessary to use the most current dividend, annualized as the first-
11 year dividend in the model.

12 Q. HAVE YOU IDENTIFIED ANY ERRORS IN DR. GRIFFING'S CONSTANT
13 GROWTH DCF MODEL?

14 A. Yes. Dr. Griffing's projected EPS growth rates from Value Line for Evergy, Inc.
15 (EVRG) and OGE Energy Corporation (OGE) are incorrect. Dr. Griffing testifies
16 that he relied on the Value Line reports published on June 7, 2024 for both EVRG
17 and OGE, which contains projected EPS growth rates for EVRG and OGE of 7.50
18 percent and 6.50 percent, respectively. However, as shown in Exhibit MFG-17,
19 Schedule 1, Dr. Griffing's calculations use projected EPS growth rates of 0.50
20 percent for EVRG and 5.00 percent for OGE. Therefore, the growth rates that Dr.
21 Griffing has relied for these companies are substantially below the actual projected
22 EPS growth rates reported by Value Line for both companies. Dr. Griffing's error
23 biases the results of his constant growth DCF model downwards.³¹

³⁰ Dr. Griffing applied the FERC low-end outlier test, excluding results that were below 7.26 percent, which is calculated as the yield on the Moody's 10-year Baa Corporate Bonds plus 20 percent of the CAPM risk premium. This test did not result in the elimination of any of the DCF results for the companies included in Dr. Griffing's proxy group as they were all above this threshold.

³¹ As shown in Exhibit____(AEB-2), Schedule 16, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged the calculation errors in his Constant Growth DCF analyses as discussed herein.

1 Q. HOW WOULD DR. GRIFFING'S CONSTANT GROWTH DCF RESULTS CHANGE
2 IF HE HAD RELIED ON THE CORRECT PROJECTED EPS GROWTH RATES
3 FROM VALUE LINE FOR EVRG AND OGE?

4 A. As shown in Exhibit____(AEB-2), Schedule 7, the mean and median result of his
5 constant growth DCF analysis would increase 21 to 35 basis points from 10.16
6 percent and 9.96 percent to 10.37 percent and 10.31 percent, respectively.³²

7 2. *Multi-Stage DCF*

8 Q. HOW DID DR. GRIFFING DEVELOP HIS MULTI-STAGE DCF ANALYSIS?

9 A. Dr. Griffing conducted two blended growth rate DCF analyses that are generally
10 consistent with the form relied upon by the FERC. In this model, the short-term
11 and long-term growth rates are weighted into one growth rate, which is then used
12 in a constant growth form of the DCF model. Dr. Griffing's multi-stage DCF model
13 differs from his constant growth form of the model only in the calculation of the
14 growth rate. His blended growth rate is a weighted average of projected EPS
15 growth rates as the short-term growth rate and two measures of GDP growth as
16 the long-term growth estimate. Dr. Griffing assigned a two-thirds weighting to the
17 short-term growth rate and a one-third weighting to the long-term growth rate in
18 each multi-stage DCF scenario. Dr. Griffing then averaged the results of these two
19 scenarios to get his mean and median multi-stage DCF results of 8.88 percent and
20 8.82 percent, respectively.³³

21 Q. DID DR. GRIFFING RELY ON THE RESULTS OF HIS MULTI-STAGE DCF
22 ANALYSIS TO DETERMINE HIS RECOMMENDED ROE?

23 A. No. Dr. Griffing excluded the results of his multi-stage DCF analysis on the basis
24 that the results were below the lowest authorized ROE for electric utilities in

³² As shown in Exhibit____(AEB-2), Schedule 17, MFG-17, Schedule 1 DCF Corrected, Dr. Griffing's corrected results of his Constant Growth DCF analysis are consistent with the adjusted results that I present in Exhibit____(AEB-2), Schedule 7.

³³ Griffing Direct Testimony, at 37.

2024.³⁴ As discussed in more detail below, after correcting for the methodological and calculation errors, the results of his multi-stage DCF analysis would be high enough to meet his criteria for consideration in establishing the Company's authorized ROE.

Q. DID YOU FIND ERRORS IN DR. GRIFFING'S MULTI-STAGE DCF ANALYSIS?

A. Yes. As discussed above, the projected Value Line EPS growth rates for EVRG and OGE that Dr. Griffing relied on in both his constant growth and multi-stage DCF analyses are incorrect.³⁵

Q. WERE THERE OTHER ERRORS IN DR. GRIFFING'S MULTI-STAGE DCF ANALYSIS?

A. Yes. Dr. Griffing made an error in his estimate of the long-term growth rate in his EIA GDP growth rate scenario. Dr. Griffing's analysis calculates the DCF result for each proxy group company and therefore estimates a blended growth rate for each company using projected EPS and the long-term GDP growth rate. In his EIA long-term GDP growth rate scenario, Dr. Griffing did not properly calculate the blended growth rate for 14 of the 15 companies included in his proxy group. In these 14 proxy company calculations, Dr. Griffing places two-thirds weight on the projected EPS growth rates, but mistakenly omits EIA's projected nominal GDP growth rate and instead places one-third weight on a growth rate of **0 percent**. This error significantly reduces the blended growth rate and biases the results of his multi-stage DCF downwards.³⁶

³⁴ *Id.*, at 45.

³⁵ As shown in Exhibit____(AEB-2), Schedule 16, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged these calculation errors in his Multi-Stage DCF analyses.

³⁶ As shown in Exhibit____(AEB-2), Schedule 16, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged these calculation errors in his Multi-Stage DCF analyses.

1 Q. WHAT ARE THE RESULTS OF DR. GRIFFING'S MULTI-STAGE DCF ANALYSIS
2 WHEN CORRECTED FOR THE ERRORS YOU IDENTIFIED?

3 A. As shown in Exhibit____(AEB-2), Schedule 8, when I corrected 1) the projected
4 EPS growth rates from Value Line for EVRG and OGE; and 2) his calculation of the
5 blended growth rate in the scenario that relied on EIA's projected nominal GDP
6 growth rate, the mean and median results of his multi-stage DCF analysis increase
7 80 to 82 basis points from 8.88 percent and 8.82 percent to 9.70 percent and 9.62
8 percent, respectively. Further, the corrected results will no longer be below the
9 lowest authorized ROE for electric utilities in 2024 of 9.40 shown in Exhibit MFP-
10 19. Therefore, it is likely that Dr. Griffing would have considered the corrected
11 results of his multi-stage DCF model in the determination of his ROE
12 recommendation for OTP.³⁷

13 Q. DO YOU HAVE ANY CONCERNS WITH THE ASSUMPTIONS DR. GRIFFING
14 RELIED ON IN HIS MULTI-STAGE DCF MODEL?

15 A. Yes, I do. First, I disagree with the weightings applied to the short and long-term
16 growth rate assumptions. In addition, I disagree with the range of growth rates
17 considered.

18 Q. PLEASE EXPLAIN WHY YOU DISAGREE WITH THE WEIGHTINGS APPLIED
19 BY DR. GRIFFING.

20 A. Dr. Griffing cited to the FERC as support for many of the methodologies he relies
21 on in his direct testimony, however the weightings that he has applied are not
22 consistent with the FERC's current policies regarding the weighting of short and
23 long-term growth rates for electric utilities. Specifically, the FERC revised its
24 weighting on the short- and long-term growth rates in Opinion No. 569-A

³⁷ As shown in Exhibit____(AEB-2), Schedule 17, MFG-17, Schedule 6 Multi-stage DCF Corrected, Dr. Griffing's corrected results of his Constant Growth DCF analysis are consistent with the adjusted results that I present in Exhibit ____ (AEB-2), Schedule 8.

(affirmed in Opinion No. 575)³⁸ to 80 percent and 20 percent respectively, thereby increasing the weight on the short-term growth rate from the two-thirds relied upon by Dr. Griffing. As shown in Exhibit____(AEB-2), Schedule 8, had Dr. Griffing placed 80 percent weight on his short-term growth rate and 20 percent weight on his long-term growth rate similar to the FERC, his mean and median multi-stage DCF results would be 9.97 percent and 9.98 percent, respectively.³⁹

Q. WHAT DOES DR. GRIFFING PROVIDE AS SUPPORT FOR THE WEIGHTINGS HE APPLIES TO THE GROWTH RATES USED IN HIS MULTI-STAGE DCF MODEL?

A. While he cites to the FERC as support for his low-end outlier test in the DCF and the market return calculation in his CAPM, Dr. Griffing cites to a 2006 book written by Dr. Morin as the source for the weightings on the growth rates.⁴⁰ However, Dr. Griffing fails to note that: (1) Dr. Morin's *New Regulatory Finance* was published in 2006 prior to Opinion No. 569-A where the FERC revised the weights to place 80 percent weight on the short-term growth rate and 20 percent weight on the long-term growth rate; and (2) the weightings he references in the Morin textbook are in an illustrative example of how to apply a blended growth rate DCF model.⁴¹

Q. DOES DR. MORIN ENDORSE THE WEIGHTINGS THAT DR. GRIFFING HAS APPLIED IN HIS MOST RECENT PUBLICATION?

A. No. Reviewing Dr. Morin's most recent publication "Modern Regulatory Finance," which was published in 2021, Dr. Morin notes that his calculation of the blended growth rate is an example of the approach. Further, in Dr. Morin's most recent

³⁸ Federal Energy Regulatory Commission, Docket No. EL14-12-004, Opinion No. 569-A, May 21, 2020, P2 and P57., FERC Docket Nos. ER13-1508-0001, ER13-1509-0001, ER13-1510-0001, ER13-1511-0001, ER13-1512-0001, ER13-1513-0001, Opinion No. 575, May 20, 2021, P. 129.

³⁹ This scenario reflects the correct projected EPS growth rates from Value Line for EVRG and OGE and ensures the projected nominal GDP growth rate for EIA is included in the calculation of weighted long-term growth rate.

⁴⁰ Griffing Direct Testimony, at 36, footnote number 47.

⁴¹ Roger Morin, *New Regulatory Finance*, 309 (2006).

1 publication, he addresses the shortcomings of using GDP growth like Dr. Griffing
2 has as the long-term growth rate estimate in the Multi-Stage DCF:

3 One central assumption in Multi-Stage DCF models, and a potential
4 Achilles' heel, in my view, is that utility growth rates will eventually
5 match the growth of the macroeconomy usually measured by the
6 growth of the Gross Domestic Product (GDP). I am not aware of any
7 financial literature supporting the notion that utility earnings per
8 share are expected to grow at the average growth of the economy, or
9 GDP growth.

10 ***

11 Multi-Stage DCF applications appear somewhat disconnected from
12 the assumptions of the method and the consensus expectations of
13 investors. The investment community does not look to GDP growth
14 over the next several decades when evaluating an investment in
15 utility stocks, nor does it anticipate a series of discrete multi-stage
16 decennial stages. I am not aware of any evidence that investors
17 evaluate the future based on the assumptions and data sources
18 required to apply the two-stage or three stage DCF model.⁴²

19 Dr. Morin also identifies specific concerns about the validity of the multi-stage
20 DCF model:

21 The DCF model assumes that changes in the growth rates are
22 inversely related to the dividend yield. There are two moving
23 interrelated parts in the DCF model: the growth rate and the
24 dividend yield (D/P). As the expected growth increases, the stock
25 price increases and the dividend yield (D/P) decreases. The reverse
26 is true as well. As growth decreases, the stock price decreases, that is
27 the dividend yield increases. If we believe that a 4.0% GDP growth
28 rate applies to all the utility companies in a given peer group in
29 contrast to analyst growth rates embedded in current stock prices
30 that are higher, say in the 5%-6% range, it behooves us to accept that
31 the dividend yield will increase from its base level. The reverse is also
32 true.

33 A two-stage DCF erroneously assumes that one factor can change
34 while all others remain constant... In short, any DCF model that
35 alters only growth and leaves discount rates, dividend yields and
36 payout ratios unchanged is misspecified.⁴³

⁴² Roger Morin, *Modern Regulatory Finance*, 486 (2021).

⁴³ *Id.*, at 487.

1 Q. ARE THERE OTHER ESTIMATES OF LONG-TERM GROWTH THAT COULD BE
2 CONSIDERED IN THE MULTI-STAGE DCF MODEL?

3 A. Yes. The Social Security Administration (SSA), which is the source of one of Dr.
4 Griffing's GDP growth rate estimates, produces a range of assumptions regarding
5 GDP growth. As shown in Exhibit ____ (AEB-2), Schedule 9, if the "low cost"
6 scenario of the SSA publication were to be more accurate than the base case, the
7 long-term growth rate would be 5.39 percent.

8
9 Further, Morningstar, which was the historical publisher of the Ibbotson SBBI
10 Valuation Yearbook, recommends that the long-term growth rate reflect the sum
11 of the long-term historical average real GDP growth rate and the expected inflation
12 rate.

13 Another approach to estimating long-term growth rates is to focus
14 on estimating the overall economic growth rate. Again, this is the
15 approach used in the *Ibbotson Cost of Capital Yearbook*. To obtain
16 the economic growth rate, a forecast is made of the growth rate's
17 component parts. Expected growth can be broken into two main
18 parts: expected inflation and expected real growth. By analyzing
19 these components separately, it is easier to see the factors that drive
20 growth.

21 Once the long-term expected inflation rate is estimated, the real
22 growth rate must be determined. The growth rate in real Gross
23 Domestic Product (GDP) for the period 1929 to 2012 was
24 approximately 3.22 percent. Growth in real GDP (with only a few
25 exceptions) has been reasonably stable over time; therefore, its
26 historical performance is a good estimate of expected long-term
27 (future) performance.

28 By combining the inflation estimate with the real growth rate
29 estimate, a long-term estimate of nominal growth is formed.⁴⁴

⁴⁴ Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook, p. 52.

1 Q. HAVE YOU ESTIMATED THE LONG-TERM GROWTH RATE BASED ON THE
2 *IBBOTSON* METHODOLOGY?

3 A. Yes. As shown in Exhibit ____ (AEB-2), Schedule 10, relying on the historical real
4 growth in GDP and three estimates of inflation, including EIA, which was relied
5 upon by Dr. Griffing, results in a long-term growth rate of 5.51 percent.

6 Q. IS IT REASONABLE TO CONSIDER A BROADER RANGE OF POTENTIAL LONG-
7 TERM GROWTH RATES IN THE MULTI-STAGE DCF ANALYSIS?

8 A. Yes. The long-term growth rate assumption is intended to reflect a change in
9 growth in the out years of the model. While Dr. Griffing considers two sources,
10 there is little variability between the growth rate estimates he relies on. However,
11 as noted previously, there is a wider range of potential long-term growth scenarios
12 depending on the assumptions relied upon. Therefore, it would be reasonable to
13 reflect this broader range in the average long-term growth rate relied upon by Dr.
14 Griffing.

15 Q. HAVE YOU CONDUCTED A MULTI-STAGE DCF SCENARIO THAT REFLECTS
16 THIS RANGE?

17 A. Yes. As discussed previously, Dr. Griffing relied on the average of two estimates for
18 long-term growth in his multi-stage DCF models. As shown in Exhibit ____ (AEB-
19 2), Schedule 8, in my last scenario, in order to consider the potential broader range
20 of long-term growth referenced previously, I replaced his EIA growth rate
21 assumption with the growth rate that results from the Morningstar calculation
22 (5.51 percent). The multi-stage DCF result then reflect the average of these two
23 long-term growth rate scenarios; the SSA 4.04 percent and the Morningstar
24 calculation that results in a 5.51 percent growth rate. Both the mean and median
25 results of the adjusted multi-stage DCF model are 10.09 percent, which is a

significant increase from Dr. Griffing's mean result of 8.88 percent and median result of 8.82 percent.⁴⁵

3. CAPM

Q. PLEASE SUMMARIZE DR. GRIFFING'S CAPM ANALYSES.

A. Dr. Griffing develops two CAPM analyses using different market risk premium calculations, 1) the Kroll 2024 equity risk premium estimate of 5.0 percent and 2) a forward-looking market risk premium based on a market return that is calculated using a constant growth DCF model of the S&P 500 minus the 30-day average yield on the 30-year Treasury bond.⁴⁶ Both CAPM analyses rely the average yield on the 30-year Treasury bond, over the period from July 22, 2024, through August 16, 2024 as the risk-free rate and both rely on betas reported by Value Line. In evaluating the results of his analyses, Dr. Griffing applies the FERC outlier tests,⁴⁷ although Dr. Griffing's application of the FERC outlier test did not result in the exclusion of any of the individual CAPM results for the companies in his proxy group. The mean and median results of his CAPM analyses using the Kroll market risk premium are 8.96 percent and 9.04 percent, respectively, while the mean and median results of his CAPM analyses using the Value Line market risk premium are 13.88 percent and 14.06 percent, respectively.

Q. DO YOU HAVE CONCERNS WITH DR. GRIFFING'S CAPM ANALYSES?

A. Yes. My concerns fall into three categories. First, Dr. Griffing, without explanation or justification, changed one of the sources of market risk premium data from what

⁴⁵ This scenario relies on the correct Value Line projected EPS growth rate for EVRG and OGE as well as places place 80 percent weight on Dr. Griffing's short-term growth rate and 20 percent weight on his long-term growth rate.

⁴⁶ The market return calculation uses a constant growth DCF model that relies on projected EPS growth rates from Value Line, excluding growth rates less than 0 percent and greater than 20 percent.

⁴⁷ The low end test eliminates results that are lower than the Moody's 10-year Baa Corporate Bond Yield Index value of 5.73 percent plus 20 percent of the CAPM risk premium. The high-end outlier test he applies is 200 percent of the median value of all companies included in the analysis.

1 he used in May 2024. As discussed below, that source (Kroll) data does not reflect
2 the inverse relationship between interest rates and the risk premium and
3 therefore, cannot be reconciled with current capital market conditions. Second,
4 once the correct reasonableness check is applied (as discussed in Section V.B,
5 above), the Kroll CAPM results would be excluded from consideration. Third, Dr.
6 Griffing's other CAPM analysis (based on Value Line data) contains material
7 calculation errors. Once those errors are fixed, this analysis passes the corrected
8 reasonableness check and would be considered in establishing the authorized
9 ROE.

10 Q. PLEASE EXPLAIN DR. GRIFFING'S CHANGE IN MARKET RISK PREMIA DATA.

11 A. Dr. Griffing has changed the approach to how he estimates the market risk premia,
12 which affects the results of his CAPM analyses. In his May testimony filed in the
13 current proceeding, Dr. Griffing relied on EPS growth rates from both Yahoo!
14 Finance (IBES) and Value Line to develop two separate estimates of the market
15 return that were used to estimate his two market risk premia. This is a similar
16 method to how I calculated the market return for the CAPM in my direct testimony.
17 However, in his October testimony, Dr. Griffing excludes the projected EPS growth
18 rates from IBES and instead relies on Kroll's estimate of the market risk premium
19 in his second CAPM scenario.

20 Q. DID DR. GRIFFING EXPLAIN THIS CHANGE?

21 A. No. Dr. Griffing has provided no explanation as to why he has changed his
22 methodology for selecting the market risk premium between the filing of his
23 testimony in May 2024 and his October testimony.⁴⁸

⁴⁸ As shown in Exhibit ____ (AEB-2), Schedule 18, Dr. Griffing responded to ND-OTP-400 on October 29, 2024, which requested the rationale for his decision to change his source from IBES to Kroll. Dr. Griffing's response did not indicate that there were any advantages to the use of the Kroll database. Rather, the reason for the change in sources was simply a time management issue, resulting from a change in the manner in which Dr. Griffing could collect the IBES data on the S&P 500.

1 Q. HAS DR. GRIFFING PREVIOUSLY RELIED ON KROLL'S ESTIMATE OF THE
2 MARKET RISK PREMIUM?

3 A. The use of Kroll appears to be a recent methodological change for Dr. Griffing that
4 does not have any analytical foundation. Dr. Griffing has previously relied on IBES
5 and Value Line to prepare his CAPM analyses. That includes his testimony filed in
6 May 2024 in this proceeding. Then, in Case No. PU-23-367 for Northern States
7 Power Company and Case No. PU-23-341 for Montana-Dakota Utilities, Dr.
8 Griffing started to rely on Kroll data rather than IBES.

9 Q. HOW DO THE RESULTS OF HIS CAPM ANALYSES CHANGE BASED ON THE
10 SELECTION OF KROLL DATA?

11 A. The results of his CAPM using the Kroll market risk premium (8.96 percent to 9.04
12 percent) are much lower than the results of his CAPM analysis relying on IBES
13 data (13.08 percent in his testimony filed in May 2024). Further, as shown in
14 Figure 7 below, revising Dr. Griffing's CAPM analysis using a constant growth DCF
15 model that relies on IBES projected EPS growth rates (which he relied on in his
16 testimony filed in May 2024) to estimate the market return results in a mean ROE
17 result of 11.26 percent and a median ROE result of 11.39 percent.

18 Q. ARE THERE METHODOLOGICAL REASONS WHY IT IS NOT APPROPRIATE TO
19 RELY ON THE KROLL EQUITY RISK PREMIUM?

20 A. Yes. Dr. Griffing's use of the Kroll equity risk premium does not reflect the inverse
21 relationship between interest rates and the equity risk premium.

22 Q. PLEASE EXPLAIN WHY THE KROLL EQUITY RISK PREMIUM DOES NOT
23 REFLECT THE INVERSE RELATIONSHIP BETWEEN THE RISK PREMIUM
24 AND INTEREST RATES?

25 A. As discussed in my direct testimony, the equity risk premium is inversely related
26 to the level of interest rates.⁴⁹ Based on data published by Kroll, the historical

⁴⁹ Bulkley Direct Testimony, at 40-41.

1 average market risk premium from 1926–2023 is 7.17 percent, which reflects a
2 historical income-only return on government bonds over this time period of 4.87
3 percent.⁵⁰ However, the 30-day average risk-free rate on long-term government
4 bonds that Dr. Griffing relied on in his CAPM is 4.29 percent, which is below the
5 historical average. Therefore, because interest rates on long-term government
6 bonds are below the historical average of 4.87 percent and given the inverse
7 relationship between interest rates and market risk premia, this indicates that the
8 market risk premium should be above the long-term historical average of 7.17
9 percent. However, Dr. Griffing’s Kroll market risk premium of 5.00 percent is 217
10 basis points lower than the long-term historical average market risk premium of
11 7.17 percent.

12 Q. DO THE RESULTS OF DR. GRIFFING’S CAPM ANALYSIS RELYING ON
13 KROLL’S EQUITY RISK PREMIUM FALL OUTSIDE OF THE CORRECTED
14 RANGE OF RECENTLY AUTHORIZED RETURNS?

15 A. Yes. As shown in shown in Figure 5, developing a sample of authorized returns
16 that are more comparable to OTP and excluding authorized returns from 2021 and
17 2022 due to the significant change in market conditions results in a corrected range
18 of authorized returns for vertically integrated electric utilities of 9.25 percent to
19 11.45 percent. Therefore, the low-end of the range of 9.25 percent is substantially
20 higher than the mean and median results of Dr. Griffing’s CAPM analysis using
21 Kroll’s market risk premium of 8.96 percent and 9.04 percent, respectively.
22 Therefore, it is reasonable to conclude the results of Dr. Griffing’s CAPM analysis
23 using Kroll’s market risk premium would not meet the comparable return standard
24 of *Hope* and *Bluefield*. Further, given that Dr. Griffing excludes the results of cost
25 of equity models that fall outside of the range of recent authorized returns, he

⁵⁰ Kroll, Cost of Capital Navigator, Historical Long-Term (1926-2023) equity risk premium.

1 should have excluded the results of his CAPM analysis using Kroll's market risk
2 premium, to be consistent.

3 Q. DID YOU FIND ANY ERRORS IN DR. GRIFFING'S VALUE LINE CAPM
4 ANALYSIS?

5 A. Yes. Dr. Griffing's calculation of the market return is incorrect because he appears
6 to have relied on historical EPS growth rates rather than projected growth rates.
7 Dr. Griffing contends that he has relied on projected EPS growth rates from Value
8 Line for the companies in the S&P 500 to develop his estimate of the market return
9 using the constant growth DCF model; however, a review of the workpapers
10 identifies that he incorrectly relied on the 5-year historical EPS growth rates
11 reported by Value Line.

12 Q. PLEASE EXPLAIN HOW YOU IDENTIFIED THIS ERROR?

13 A. In his workpaper titled: "S&P 500 Value Line 082224," Dr. Griffing relies on the
14 column titled "EPS Growth 5-year," which is the 5-year historical EPS growth
15 rates, as opposed to the column titled "Proj EPS Growth Rate," which is Value
16 Line's projected 3-5 year EPS growth rates. Figure 6 below provides the EPS
17 growth rates relied on by Dr. Griffing as well as the 5-year historical EPS growth
18 rates and projected EPS growth rates provided by Value Line for five companies in
19 the S&P 500. As shown, for each of the five companies, the growth rate relied on
20 by Dr. Griffing matches the 5-year historical EPS growth rate provided by Value
21 Line and not the projected EPS growth rate. Therefore, Dr. Griffing's CAPM
22 analysis is biased by his incorrect use of the 5-year historical EPS growth rates.

Figure 6: S&P 500 Companies – Comparison of Dr. Griffing’s EPS Growth Rate to the Projected EPS Growth Rates from Value Line

Company	Dr. Griffing’s EPS Growth Rate	Value Line	
		5-year Historical EPS Growth Rate	Projected 5-year EPS Growth Rate
Abbott Labs.	14.5%	14.5%	4.0%
CVS Health	6.5%	6.5%	2.5%
LyondellBasell Inds.	1.5%	1.5%	-1.0%
PepsiCo Inc.	5.5%	5.5%	7.5%
Visa Inc.	14.5%	14.5%	13.5%

Q. WHAT IS THE EFFECT OF DR. GRIFFING’S RELIANCE ON THE 5-YEAR HISTORICAL EPS GROWTH RATES FROM VALUE LINE TO CALCULATE HIS MARKET RETURN?

A. The error significantly biases the results of his Value Line CAPM upwards. As shown in Exhibit___(AEB-2), Schedule 12, if Dr. Griffing had correctly relied on Value Line’s projected EPS growth rates to estimate his market return, his estimated market return would decrease from 14.57 percent to 11.14 percent. The correction would result in a **decrease** in the mean and median results of his CAPM analysis relying on Value Line projected EPS growth rates from 13.88 percent and 14.06 percent to **10.68 percent and 10.79 percent**, respectively.

Q. DID DR. GRIFFING RELY ON THE RESULTS OF HIS VALUE LINE CAPM ANALYSIS?

A. No. The error resulted in the incorrect conclusion that the results of his CAPM analysis relying on Value Line projected EPS growth rates were well above the highest authorized return for electric utilities from 2021-2024 and therefore, Dr. Griffing concluded the results should be excluded from the determination of the ROE for OTP.

Q. IS THAT STILL THE CASE ONCE THE ERROR IS CORRECTED?

A. No. As shown in Figure 5 above, the corrected Value Line CAPM mean and median results of 10.68 percent and 10.79 percent were well within the range of authorized returns from vertically integrated electric utilities since 2023. As a result, when

1 corrected, Dr. Griffing should consider the results of his Value Line CAPM analysis
2 in the determination of his ROE recommendation for OTP.

3 Q. WHAT ARE THE CUMULATIVE RESULTS OF CORRECTING DR. GRIFFING'S
4 CAPM ANALYSES?

5 A. I have prepared two adjusted versions of Dr. Griffing's CAPM models: 1) a version
6 of Dr. Griffing's CAPM analysis using a constant growth DCF model that relies on
7 IBES projected EPS growth rates to estimate the market return as opposed to
8 relying on Kroll's market risk premium, which is consistent with the methodology
9 he relied on in his testimony filed in this proceeding in May 2024; and 2) adjust
10 his Value Line CAPM to correctly rely on the projected EPS growth rates from
11 Value Line as opposed to the 5-year historical EPS growth rates reported by Value
12 Line. Further, I applied the corrected authorized ROE reasonableness check
13 discussed in Section V.B to the Kroll, Value Line and IBES CAPM analyses. As
14 shown in Figure 7 (see also Exhibit____(AEB-2), Schedules 11-13), by applying
15 these reasonable corrections and adjustments, the range of CAPM results that
16 would be relied on to determine the ROE for OTP increases from 8.96 percent to
17 9.04 percent to 10.68 percent to 11.39 percent.

Figure 7: Dr. Griffing's CAPM Results, As Filed vs. Corrected⁵¹

CAPM Scenario	Griffing As Filed		Griffing Adjusted	
	Mean	Median	Mean	Median
Kroll	8.96%	9.04%	8.96%	9.04%
Value Line	13.88%	14.06%	10.68%	10.79%
IBES	N/A	N/A	11.26%	11.39%

4. *Dr. Griffing's Overall Recommendation*

Q. HOW DO THE RESULTS OF DR. GRIFFING'S COST OF EQUITY ANALYSES CHANGE WHEN YOU CORRECT THE ERRORS AND ISSUES THAT YOU HAVE IDENTIFIED AND DISCUSSED HEREIN?

A. Figure 8 summarizes the results of Dr. Griffing's cost of equity models, which reflect the following corrections and adjustments:

- The constant growth DCF analysis is adjusted to: (1) rely on the correct projected EPS growth rates from Value Line for EVRG and OGE and (2) evaluate the reasonableness of the constant growth DCF results using the range of comparable authorized returns for vertically integrated electric utilities since 2023 shown in Figure 5.
- The multi-stage DCF analysis is adjusted to: (1) rely on the correct projected EPS growth rates from Value Line for EVRG and OGE; (2) revise the calculation of the growth rate to place 80 percent weight on the short-term growth rate and 20 percent weight on the long-term growth rate which is consistent with the methodology relied on by FERC; (3) revise the scenario that relies on the EIA projected GDP growth rate to rely on a GDP growth rate calculated using the Morningstar methodology so the analysis is more representative of the range of possible GDP growth rates as intended by Dr. Griffing; and (4) evaluate the reasonableness of the multi-stage DCF results using the range of comparable authorized returns for vertically integrated electric utilities since 2023 shown in Figure 5.
- The CAPM analysis is adjusted to: (1) calculate a version of Dr. Griffing's CAPM analysis using a constant growth DCF model that relies on IBES projected EPS growth rates to estimate the market return; (2) adjust his Value Line CAPM to correctly rely on projected EPS growth rates from Value Line; and (3) evaluate the reasonableness of the Kroll, Value Line and IBES CAPM analyses using the range of comparable authorized returns for vertically integrated electric utilities since 2023 shown in Figure 5.

⁵¹ Grey shading indicates result was excluded from the determination of the ROE for OTP due to being outside the range of recently authorized returns for electric utilities. The filed results rely on the range of authorized returns considered by Dr. Griffing while the adjusted results rely on the adjusted range of comparable returns for vertically integrated electric utilities since 2023 shown in Figure 5.

As shown in Figure 8, by making these reasonable adjustments to Dr. Griffing's cost of equity analyses, the mean result of the cost of equity analyses increases 104 basis points from 9.56 percent⁵² to 10.60 percent while the median result increases 115 basis points from 9.50 percent to 10.65 percent. Therefore, the corrected and adjusted results provide further support for my recommended ROE for OTP of 10.60 percent.

Figure 8: Dr. Griffing's Cost of Equity Results, As-Filed versus As-Adjusted Cost of Equity Results⁵³

	Griffing As Filed		Griffing Adjusted⁵⁴	
	Mean	Median	Mean	Median
Constant Growth DCF	10.16%	9.96%	10.37%	10.31%
Multi-Stage DCF	Excluded	Excluded	10.09%	10.09%
CAPM - Kroll	8.96%	9.04%	Excluded	Excluded
CAPM - Value Line	Excluded	Excluded	10.68%	10.79%
CAPM - IBES	N/A	N/A	11.26%	11.39%
Mean	9.56%⁵⁵	9.50%	10.60%	10.65%

⁵² As shown in Exhibit___ (AEB-2), Schedule 17, Exhibit MFG 20, Schedule 1, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged and corrected calculation errors in his Constant Growth and Multi-Stage DCF analyses and also revised his recommended ROE to 9.68 percent.

⁵³ Grey shading indicates result was excluded from the determination of the ROE for OTP due to being outside the range of recently authorized returns for electric utilities. The filed results rely on the range of authorized returns considered by Dr. Griffing while the adjusted results rely on the adjusted range of comparable returns for vertically integrated electric utilities since 2023 shown in Figure 5.

⁵⁴ As shown in Exhibit___ (AEB-2), Schedule 16, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged the calculation errors in his Constant Growth and Multi-Stage DCF analyses as discussed previously. His updated results to his Constant Growth and Multi-Stage DCF analyses are in agreement with the adjustments shown in Figure 8.

⁵⁵ As shown in Exhibit___ (AEB-2), Schedule 17, Exhibit MFG 20, Schedule 1, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged and corrected calculation errors in his Constant Growth and Multi-Stage DCF analyses and also revised his recommended ROE to 9.68 percent.

D. Risk Factors and Selection of ROE

Q. DO THE MEAN RESULTS OF THE MODELS REFLECT THE RELATIVE RISK OF OTP AS COMPARED WITH THE PROXY GROUP COMPANIES?

A. No. As discussed in my direct testimony, OTP has higher risk than the proxy group companies based on its small size, and significant concentration in industrial load in North Dakota. Based on these factors, it is reasonable to conclude OTP's ROE should be above the mean or median result for the proxy group. Further, while I concluded that OTP's regulatory risk would be more comparable to the proxy group if the Company's sales adjustment proposal was approved, OTP's regulatory risk would increase substantially relative to the proxy group if the Commission were not to approve the sales adjustment proposal thus warranting an ROE at the high-end of the range of results.⁵⁶

Q. PLEASE SUMMARIZE THE RANGE OF RESULTS OF DR. GRIFFING'S COST OF EQUITY MODELS.

A. As shown in Exhibit ____ (AEB-2), Schedule 14, I present a range of model results, based on the analyses filed by Dr. Griffing using his proxy group, as well as based on the corrections I have proposed to his analysis. As shown in this schedule, I calculated the results in quartiles. This analysis is generally consistent with the concept relied upon by the FERC to stratify the results of the cost of equity models, which seems appropriate given Dr. Griffing's reliance on FERC precedent for upper and lower bounds in his analyses. I also show the same quartile analysis using the results of the cost of equity models taking into consideration the changes I proposed to his constant growth DCF, multi-stage DCF and CAPM analyses. As shown in Exhibit ____ (AEB-2), Schedule 14, and Figure 9, I calculated the simple average of his constant growth DCF, multi-stage DCF and CAPM results. As shown in this figure, the second quartile result is 9.50 percent and the fourth quartile

⁵⁶ Direct Testimony of Ann E. Bulkley at 60-65.

1 result is 11.72 percent. The midpoint of that range, which would reflect above
2 average risk, is 10.60 percent. Taking into consideration the corrections and
3 adjustments to Dr. Griffing's DCF models that I have proposed, the second quartile
4 result is 10.65 percent and the fourth quartile result is 12.63 percent, with a
5 midpoint of 11.64 percent. These results demonstrate that an ROE of 10.60
6 percent is reasonable for OTP, given the relative risk of this company, as compared
7 to the proxy group.

1

Figure 9: Summary of Adjusted Griffing Range of Results⁵⁷

	As-Filed	Corrected & Adjusted
Constant Growth DCF		
Quartile 4	13.91%	13.91%
Quartile 3	10.63%	10.80%
Quartile 2	9.96%	10.31%
Quartile 1	9.46%	9.84%
Multi-Stage DCF		
Quartile 4	Excluded	13.01%
Quartile 3	Excluded	10.45%
Quartile 2	Excluded	10.09%
Quartile 1	Excluded	9.59%
CAPM VL		
Quartile 4	Excluded	11.48%
Quartile 3	Excluded	10.79%
Quartile 2	Excluded	10.79%
Quartile 1	Excluded	10.45%
CAPM Kroll		
Quartile 4	9.54%	Excluded
Quartile 3	9.04%	Excluded
Quartile 2	9.04%	Excluded
Quartile 1	8.79%	Excluded
CAPM IBES		
Quartile 4	N/A	12.14%
Quartile 3	N/A	11.39%
Quartile 2	N/A	11.39%
Quartile 1	N/A	11.02%
Average All models		
Quartile 4	11.72%	12.63%
Quartile 3	9.84%	10.86%
Quartile 2	9.50%	10.65%
Quartile 1	9.12%	10.22%
Midpoint Quartiles 2-4	10.61%	11.64%

2

1 Q. ARE THESE RESULTS GENERALLY CONSISTENT WITH THE RESULTS OF
2 YOUR MODELS, AS UPDATED THROUGH THE END OF SEPTEMBER 2024,
3 USING YOUR PROXY GROUP AND DR. GRIFFING'S PROXY GROUP?

4 A. Yes. As summarized in Exhibit ____ (AEB-2), Schedule 1, and Figure 2 of my
5 rebuttal testimony, the results of the cost of equity models using Dr. Griffing's
6 proxy group and my proxy group, updated through the end of September 2024, are
7 generally consistent and support my recommended ROE of 10.60 percent.

8 **E. Proxy Group**

9 Q. HOW IS THE PROXY GROUP USED IN YOUR ANALYSIS AND IN DR.
10 GRIFFING'S ANALYSIS?

11 A. The proxy group is relied upon in my analysis and in Dr. Griffing's analysis of the
12 appropriate capital structure for the Company and the appropriate cost of equity.
13 Therefore, it is important to establish the proxy group and consider any relevant
14 differences in this group prior to a review of the analysis of the capital structure or
15 the cost of equity, both of which are dependent on the data for this group.

16 Q. PLEASE SUMMARIZE THE DIFFERENCES IN THE SCREENING RELIED UPON
17 BY YOU AND DR. GRIFFING.

18 A. Dr. Griffing and I rely on several screening criteria that are similar. There are two
19 differences, however: 1) my use of an owned generation screen to establish my
20 proxy group; and 2) Dr. Griffing's use of multiple operations screening criteria (net
21 income, operating income or revenue) rather than relying on operating income.

22 Q. HOW DO THOSE DIFFERENCES IMPACT THE COMPARABLE GROUPS.

23 A. The different screening criteria resulted in a difference of five companies in Dr.
24 Griffing's proxy group and my proxy group. Dr. Griffing excludes three companies
25 that were included in my proxy group (Avista Corporation (AVA), NextEra Energy,

⁵⁷ As shown in Exhibit ____ (AEB-2), Schedule 16, Dr. Griffing responded to discovery request ND-OTP-403 on October 29, 2024, where he has acknowledged the calculation errors in his Constant Growth and Multi-Stage DCF analyses as discussed previously. His updated results to his Constant Growth and Multi-Stage DCF analyses are in agreement with the adjustments shown in Figure 9.

1 Inc. (NEE), and CMS Energy Corporation (CMS)) from his proxy group and
2 includes two companies that I do not include in my proxy group (Edison
3 International (EIX) and Eversource Energy (ES)).

4 Q. WHY DID DR. GRIFFING NOT INCLUDE AN OWNED-GENERATION SCREEN?

5 A. Dr. Griffing contends that his “S&P credit rating screen captures the influence of
6 generation ownership and the type of generation owned on the risk of utilities.”⁵⁸

7 Q. DO YOU AGREE WITH DR. GRIFFING THAT CREDIT RATINGS ADDRESS THE
8 RISK OF GENERATION?

9 A. No, I do not. Dr. Griffing and I both apply a credit rating screen to ensure all
10 companies included in the proxy group have an investment grade credit rating
11 because companies that have non-investment grade credit ratings have a
12 substantially different risk profile. However, Dr. Griffing implicitly concludes that
13 credit ratings do not address all risk factors and therefore, as he applies additional
14 screens to further narrow the proxy group so that it is more comparable in risk to
15 the operations of OTP.

16 Q. WHY IS IT IMPORTANT TO SCREEN THE PROXY GROUP TO INCLUDE ONLY
17 THOSE COMPANIES THAT OWN GENERATION?

18 A. Since OTP is a vertically integrated electric utility, it is important to reflect the risk
19 related to generation in the development of the proxy group. I disagree with Dr.
20 Griffing that that the credit ratings screen addresses this risk.⁵⁹ Credit ratings are
21 not a comparative analysis of the business and financial risks of OTP relative to the
22 proxy group, but rather reflects the repayment risk on debt of an individual
23 company.

⁵⁸ Griffing Direct Testimony, at 52.

⁵⁹ *Id.*

1 Considering the incremental risk to equity resulting from generation ownership, it
2 is reasonable to limit the proxy group to companies that are vertically integrated,
3 which is consistent with the risk profile of the Company. This would eliminate EIX
4 and ES, both of which own very limited regulated generation, from Dr. Griffing's
5 comparable group.

6 Q. WHY IS OPERATING INCOME THE APPROPRIATE SCREEN TO ESTABLISH A
7 COMPARABLE PROXY GROUP, RATHER THAN REVENUE?

8 A. Operating income is the more appropriate screen criterion because it better reflects
9 the contribution of each business segment to the corporation's earnings. For
10 regulated utilities that collect the cost of purchased gas, fuel, and/or power on a
11 pass-through basis through rates, regulated revenue can fluctuate materially with
12 changes in weather without affecting the corporation's earnings or financial
13 position. In contrast, operating income, which excludes purchased commodity
14 costs, more closely represents the effect of each business segment on the
15 corporation's overall risk profile.

16 Q. DO THE DIFFERENCES IN YOUR PROXY GROUP AND DR. GRIFFING'S PROXY
17 GROUP MEANINGFULLY AFFECT THE RANGE OF RESULTS FROM THE COST
18 OF EQUITY MODELS?

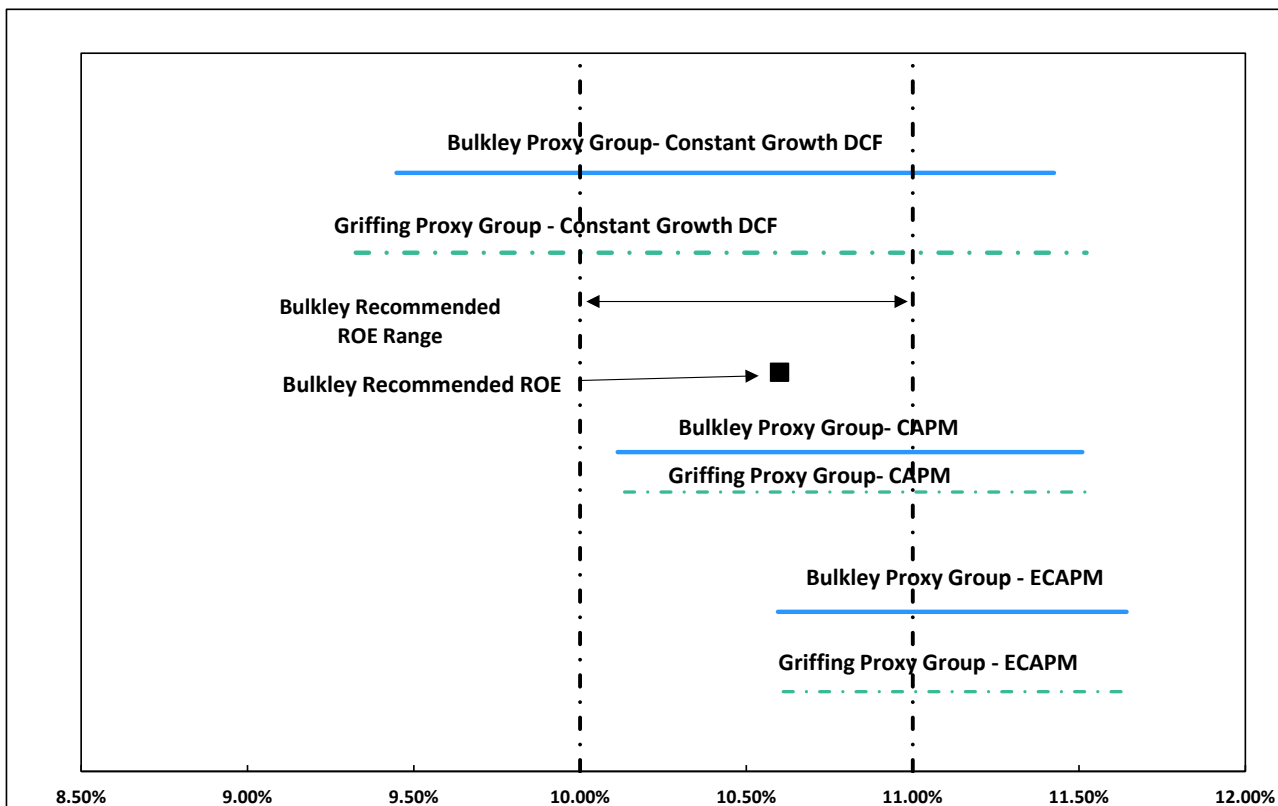
19 A. No. Figure 10 summarizes the results of the constant growth DCF, the CAPM and
20 the ECAPM⁶⁰ using both Dr. Griffing's proxy group and my proxy group and
21 market data through the end of September 2024. The important conclusions from
22 Figure 10 are as follows:

- 23 • The range of results of Dr. Griffing's proxy group generally is consistent with
24 the range established for my proxy group.
- 25 • The ranges established using both proxy groups support my recommended
26 ROE for the Company.

⁶⁰ While I recognize that Dr. Griffing does not prepare an ECAPM result, I have calculated the result of the ECAPM using his proxy group to demonstrate that the proxy group is not a driver of the difference of any of the models relied upon by either witness in this proceeding.

Therefore, since proxy group is not the driver of the differences in our recommendations, I will not further address the specific differences in the companies in our respective groups. I continue to rely on the results of the analyses using my proxy group to support my recommendation.

Figure 10: Comparison of Bulkley and Griffing Model Results



F. Small Size

Q. SUMMARIZE THE ACADEMIC REFERENCES DR. GRIFFING CITES TO INDICATE A SIZE ADJUSTMENT IS NOT APPROPRIATE FOR REGULATED UTILITIES?

A. Dr. Griffing cites a 2015 journal article by Aswath Damodaran titled “The Small Cap Premium: Where is the Beef?”⁶¹ and a 2018 by Clifford S. Ang titled “Absence

⁶¹ Damodaran, Aswath, “The Small Cap Premium: Where is the Beef?” *Business Valuation Review*, Volume 34, No. 4, 2015.

1 of a Size Effect Relevant to the Cost of Equity”⁶² to suggest that investors do not
2 require a size premium for regulated utilities.

3 Q. HAVE YOU REVIEWED DAMODARAN (2015) AND WHAT IS YOUR RESPONSE
4 TO DR. GRIFFING’S RELIANCE ON IT TO SUPPORT HIS CONCLUSIONS
5 REGARDING SIZE PREMIUM?

6 A. Yes. Damodaran (2015) concluded that a small size premium may not be
7 appropriate because then-recent evidence suggested that the size premium: (1) has
8 decreased over time; (2) is explained by the January effect; (3) disappears when
9 firms with market capitalization less than \$5 million are removed from the data
10 set; and (4) comes and goes over time.⁶³ However, in a more recent report titled
11 “Equity Risk Premiums (ERP): Determinants, Estimation and Implication – The
12 2023 Edition Updated: March 23, 2023,” Professor Damodaran estimated a small
13 cap premium of 3.3 percent using market data from 1926-2022.⁶⁴ Additionally,
14 Professor Damodaran noted:

15 The small cap premium is firmly entrenched in practice, with
16 analysts generally adding on 3% to 5% to the conventional cost of
17 equity for small companies, with the definition of small shifting from
18 analyst to analyst.⁶⁵

19
20 Therefore, while Professor Damodaran may not agree with the application of a
21 small size premium, historical data supports the notion of a risk adder for small
22 size. In addition, as Professor Damodaran acknowledged the small size premium

⁶² Ang, Clifford S. “The Absence of a Size Effect Relevant to the cost of Equity.” *Business Valuation Review*, Volume 37, No. 3, 2018.

⁶³ Damodaran, Aswath, “The Small Cap Premium: Where is the Beef?” *Business Valuation Review*, Volume 34, No. 4, 2015.

⁶⁴ Damodaran, Aswath, Equity Risk Premiums: Determinants, Estimation and Implications - The 2023 Edition (March 23, 2023), at 53. NYU Stern School of Business, Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4398884

⁶⁵ *Id.*, at 56.

1 is readily accepted among analysts and investors. As a result, it is important to
2 consider the small size of OTP when determining the ROE for the Company.

3 Q. HAVE YOU REVIEWED THE SMALL SIZE STUDY PUBLISHED BY CLIFFORD
4 ANG (2018), REFERENCED BY DR. GRIFFING?

5 A. Yes. Ang (2018) is opposed a size premium because: (1) small stocks
6 underperformed large stocks over the period of 1981 to 2016; (2) investors do not
7 require higher returns for small size; and (3) the small size studies have not
8 provided an effective response to criticisms that the small size premium lacks a
9 theoretical basis and is susceptible to data mining criticisms.⁶⁶

10 Q. WHAT IS YOUR RESPONSE TO DR. GRIFFING'S RELIANCE ON ANG (2018) TO
11 SUPPORT HIS CONCLUSION REGARDING THE SIZE PREMIUM?

12 A. One of the conclusions reached was that small stocks have underperformed large
13 stocks, thus invalidating the existence of a small size premium. Ang suggests that
14 his study, which uses data from 1981 through 2016, demonstrates that the size
15 effect was eliminated following the creation of small cap mutual funds. Ang cites
16 to other texts that also claim the disappearance of the small-firm effect. However,
17 if this were true and small stocks always underperformed large stocks following
18 the creation of small-cap mutual funds, then Dr. Grabowski's work, which Ang
19 references, would not have identified the size premium beginning in 1990.⁶⁷ In
20 fact, Ang's main criticism of Grabowski (2016), which did find a size effect,
21 invalidates Ang's own conclusions. Specifically, Ang suggests that the size effect
22 "disappeared" since the mid-1980s. However, Ang's critique of Grabowski (2016)
23 is that the analysis relied on an arbitrary time period (1990 - 2014). The fact that
24 a size effect is identified using a different time period other than Ang's study

⁶⁶ Ang, Clifford S. "The Absence of a Size Effect Relevant to the cost of Equity", *Business Valuation Review*, Volume 37, No. 3, 2018.

⁶⁷ Grabowski, Roger. "The Size Effect – It is Still Relevant." *Business Valuation Review*, Volume 35, 2016.

1 demonstrates that the results of Ang's analysis were not definitive. If in fact, small-
2 cap mutual funds had caused the size effect to disappear, then small stocks would
3 consistently have underperformed large stocks when compared over any
4 statistically significant sample periods since the formation of these funds. Clearly
5 that is not the case.

6
7 Grabowski (2018) also noted that the small size premium is cyclical, and that it is
8 not reasonable to assume that small stocks will always outperform large stocks
9 because, if that were the case, then small stocks would not be considered riskier
10 than large stocks:

11 One can argue that advocates of the size effect can find satisfaction
12 in the erratic performance of small-cap stocks. If you believe that
13 small-company stocks are riskier than large-company stocks, then it
14 probably follows that small-company stocks should not always
15 outperform large-company stocks in all periods. This is true even
16 though the expected returns are greater for small-cap stocks over the
17 long-term.⁶⁸

18 Furthermore, while Ang (2018) indicates that the use of a size premium lacks a
19 theoretical basis, as noted in Grabowski (2018), the researchers who have
20 proposed the small size premium have not claimed a theoretical basis for the
21 adjustment but that the adjustment is based on empirical evidence that the
22 estimate of beta used in the CAPM does not effectively capture all of the systematic
23 risk.⁶⁹ Finally, in response to the claim in Ang (2018) that the size premium is
24 susceptible to data mining claims, Grabowski (2018) noted the following:

25 The author [Ang] refers to data mining, which is not statistical error
26 per se. Data mining is finding an empirical relationship that could
27 not hold in all data samples. The fact that SP [*size premium*] is
28 possibly obscured over a certain period by other factors does not
29 negate its existence. The question that academics and other
30 researchers are asking is why it exists over a period and not another,

⁶⁸ Grabowski, Roger J. "The Size Effect Continues to Be Relevant When Estimating the Cost of Capital." *Business Valuation Review*, vol. 37, no. 3, 2018, pp. 93–109., <https://doi.org/10.5791/bvr-d-18-01000.1>, at 104.

⁶⁹ *Id.*, 105.

1 and what economic logic is behind it. Asness et al. argue that all the
2 challenges to SP disappear and it becomes stable over time when
3 controlling for firm quality in twenty-four international equity
4 markets and thirty industries.⁷⁰

5 Dr. Grabowski has provided effective responses to the criticisms of the size
6 premium contained in the Ang study and there continues to be strong empirical
7 evidence of the existence of a small size premium.

8 **G. Capital Structure**

9 Q. PLEASE SUMMARIZE THE CAPITAL STRUCTURE IS DR. GRIFFING
10 RECOMMENDING FOR OTP.

11 A. Dr. Griffing recommends a capital structure that is composed of 45.02 percent
12 long-term debt, 2.98 percent short-term debt and 52.00 percent common equity.
13 This recommendation differs from the Company's proposal, which is composed of
14 43.55 percent long-term debt, 2.95 percent short-term debt, and 53.50 percent
15 common equity.

16 Q. WHAT ANALYSIS DID DR. GRIFFING PERFORM TO DEVELOP THIS
17 RECOMMENDATION?

18 A. Dr. Griffing reviewed the 8-quarter average capital structures of his comparison
19 group for the period from the third quarter of 2022 through the second quarter of
20 2024. The results of Dr. Griffing's book value capital structure analysis, which was
21 conducted at the holding company level for his proxy group companies, indicated
22 an average equity ratio of 40.23 percent. Dr. Griffing states that his recommended
23 capital structure is between the average capital structure for his proxy group and
24 the Company's proposed capital structure.⁷¹

⁷⁰ *Id.*, 100; clarification added.

⁷¹ Griffing Direct Testimony at 49.

1 Q. IS DR. GRIFFING'S COMPARISON OF THE COMPANY'S PROPOSED CAPITAL
2 STRUCTURE TO THE CAPITAL STRUCTURES OF THE HOLDING COMPANIES
3 IN THE PROXY GROUP REASONABLE?

4 A. No. There are two problems with Dr. Griffing's comparison of the Company's
5 proposed equity ratio to the equity ratios of the proxy group. First, it is not
6 appropriate to compare the proposed equity ratio of the Company to the average
7 equity ratio of the proxy group at the holding company level. Second, while it is
8 not appropriate, if the capital structures at the holding company level are
9 considered, the market value of debt and equity must be used to estimate the
10 percentage of debt and equity in the capital structure, not the book value of debt
11 and equity such as Dr. Griffing has done.

12 Q. WHY IS IT INAPPROPRIATE TO RELY ON THE HOLDING COMPANY CAPITAL
13 STRUCTURES TO SET THE CAPITAL STRUCTURE FOR THE OPERATING
14 COMPANY?

15 A. The holding company data on which Dr. Griffing relies includes corporate-level
16 debt that is not part of the regulated or financial capital structure of the operating
17 utilities. The relevant capital structure for comparison purposes to the Company
18 is at the operating company level, not the holding company. The Commission
19 should establish rates using the Company's actual capital structure on a stand-
20 alone basis from its parent. Therefore, it is reasonable and appropriate to rely on
21 the operating company capital structures that have been used to fund utility
22 operations for the comparison of the Company to other electric utilities. This is
23 what I did in my direct testimony. In contrast, Dr. Griffing's approach would result
24 in a ratemaking capital structure for the Company that is hypothetical and would
25 reflect the capital structures, risks, and capital costs of unregulated affiliates,
26 contrary to the stand-alone principal of ratemaking.

1 Q. IS THE COMPANY'S PROPOSED CAPITAL STRUCTURE CONSISTENT WITH
2 THE ACTUAL CAPITAL STRUCTURES OF THE OPERATING UTILITY
3 SUBSIDIARIES OF THE PROXY GROUP?

4 A. Yes. As shown in Exhibit _____(AEB-1), Schedule 15 of my Direct Testimony, the
5 Company's proposed equity ratio of 53.50 percent is well within the range of equity
6 ratios for the utility operating subsidiaries of the proxy group companies and is
7 therefore reasonable.

8 Q. WHY IS IT INAPPROPRIATE FOR DR. GRIFFING TO RELY ON THE BOOK
9 VALUE OF THE HOLDING COMPANY CAPITAL STRUCTURES OF THE PROXY
10 GROUP COMPANIES FOR HIS BENCHMARKING ANALYSIS?

11 A. The use of the book value of debt and equity for the proxy group companies at the
12 holding company level creates a mismatch between the capital structure data that
13 is being used to determine the reasonableness of the Company's equity ratio and
14 the data that is being used in the models to determine the cost of equity for the
15 Company. For example, Dr. Griffing relies on the constant growth DCF model to
16 determine the cost of equity for the Company, which he estimates using the current
17 stock prices (*i.e.*, the current *market value* of their equity) of the proxy group
18 companies.⁷² Similarly, Dr. Griffing also relies on the CAPM to estimate the cost
19 of equity for the Company, and in doing so, he relies on beta coefficients that reflect
20 the returns of each proxy group company based on that company's respective
21 *market value*. Therefore, the cost of equity developed by Dr. Griffing represents
22 the percentage return required by investors on the *market* value of equity not the
23 *book* value.

⁷² Griffing Direct Testimony at 29.

1 Q. WHAT IS THE EFFECT OF RELYING ON THE REQUIRED RETURN ON THE
2 MARKET VALUE OF EQUITY FOR ASSESSING THE COST OF EQUITY, BUT
3 THEN THE BOOK VALUE OF DEBT AND EQUITY FOR ASSESSING THE
4 CAPITAL STRUCTURE?

5 A. If the market value of debt and equity are substantially different than the book
6 value of debt and equity, then the resulting cost of equity estimate would not reflect
7 the financial risk of the book value capital structure. This is illustrated in the
8 following set of equations found readily in corporate finance textbooks.⁷³ As
9 shown in Equation [1], the value of a company (or asset) is determined as follows:

$$V = D + E \quad [1]$$

11 Where:

12 V = Market value of a company/asset

13 D = Market value of debt

14 E = Market value of equity

15 For simplicity, if it is assumed that there are no taxes, based on Equation [1], the
16 total return on V can be estimated as follows:

$$r_V = \frac{D}{D+E} \times r_D + \frac{E}{E+D} \times r_E \quad [2]$$

18 Where:

19 r_V = expected return on assets / weighted-average cost of capital

20 r_D = expected return on debt

21 r_E = expected return on equity

22 Then, equation [2] can be rearranged into the following form to solve for the
23 expected return on equity, (r_E):

$$r_E = r_V + (r_V - r_D) \frac{D}{E} \quad [3]$$

⁷³ Richard Brealey, Stewart Myers, and Franklin Allen, *Principles of Corporate Finance*, 13th Ed., 2020, at 452-462.

1 As shown in equation [3], the expected return on the market value of equity is a
2 function of the market debt-to-equity ratio. As the percentage of debt increases,
3 the financial risk of the firm increases, and thus investors require a higher return
4 to compensate for the additional financial risk. Therefore, if the book debt-to-
5 equity ratio for the proxy group is substantially different than market debt-to-
6 equity ratio, the expected return on equity will also be substantially different.

7 Q. IS THE BOOK VALUE DEBT-TO-EQUITY RATIO DIFFERENT FROM THE
8 MARKET VALUE DEBT-TO-EQUITY RATIO FOR DR. GRIFFING'S PROXY
9 GROUP?

10 A. Yes. As shown in Exhibit ____ (AEB-2), Schedule 15, the average market value
11 common equity ratio for Dr. Griffing's proxy group as of December 31, 2023 was
12 53.32 percent. Given that Dr. Griffing estimates the cost of equity in the DCF and
13 CAPM analyses based on the *market value* of his proxy group companies' equity,
14 the cost of equity estimated by Dr. Griffing reflects the financial risk of a *market*
15 *value* common equity ratio of 53.32 percent for his proxy group based on Equation
16 [3] above. This means that the market value common equity ratio is significantly
17 greater than the average book value equity ratio for his proxy group referenced by
18 Dr. Griffing of 40.23 percent.⁷⁴ Likewise, this also means that the Company's
19 proposed equity ratio of 53.50 percent is generally consistent with the average
20 market value common equity ratio for Dr. Griffing's proxy group and is therefore
21 reasonable.

22 Q. WHAT IS YOUR CONCLUSION REGARDING THE COMPANY'S CAPITAL
23 STRUCTURE?

24 A. I continue to conclude that the Company's proposed capital structure is
25 reasonable. The Company's proposed equity ratio of 53.50 percent is well within
26 the range of the actual equity ratios of the utility subsidiaries of my proxy group

⁷⁴ Exhibit MFG-20, Schedule 2.

1 companies (*i.e.*, utilities with risk profiles that are similar to the Company's risk
2 profile). Further, I disagree with the approach supported by Dr. Griffing in
3 comparing the Company's proposed equity ratio to the average equity ratios of the
4 proxy group holding companies. However, if that analysis is done correctly, Dr.
5 Griffing would have concluded that the Company's proposed equity ratio is
6 generally comparable to the average market equity ratio of his proxy group.

7 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY

8 A. Yes, it does.

SUMMARY OF COE ANALYSES RESULTS

Bulkley Proxy Group

<i>Constant Growth DCF</i>			
	Mean Low	Mean	Mean High
30-Day Average	9.20%	10.35%	11.17%
90-Day Average	9.46%	10.61%	11.43%
180-Day Average	9.69%	10.85%	11.67%
Constant Growth Average	9.45%	10.60%	11.42%
	Median Low	Median	Median High
30-Day Average	9.49%	10.23%	10.81%
90-Day Average	9.77%	10.49%	11.04%
180-Day Average	9.99%	10.73%	11.34%
Constant Growth Average	9.75%	10.48%	11.06%
<i>CAPM</i>			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.49%	11.49%	11.51%
Bloomberg Beta	10.25%	10.24%	10.30%
Long-term Avg. Beta	10.12%	10.11%	10.18%
<i>ECAPM</i>			
Value Line Beta	11.63%	11.63%	11.64%
Bloomberg Beta	10.70%	10.69%	10.74%
Long-term Avg. Beta	10.60%	10.60%	10.65%
<i>Risk Premium</i>			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Risk Premium Results	10.37%	10.34%	10.50%

Griffing Proxy Group			
<i>Constant Growth DCF</i>			
	Mean Low	Mean	Mean High
30-Day Average	9.06%	10.36%	11.26%
90-Day Average	9.34%	10.64%	11.53%
180-Day Average	9.58%	10.88%	11.78%
Constant Growth Average	9.33%	10.63%	11.52%
	Median Low	Median	Median High
30-Day Average	9.48%	10.19%	10.81%
90-Day Average	9.75%	10.46%	11.08%
180-Day Average	9.95%	10.70%	11.37%
Constant Growth Average	9.73%	10.45%	11.08%
<i>CAPM</i>			
	Current 30-day Average Treasury Bond Yield	Near-Term Blue Chip Forecast Yield	Long-Term Blue Chip Forecast Yield
Value Line Beta	11.51%	11.51%	11.53%
Bloomberg Beta	10.31%	10.30%	10.36%
Long-term Avg. Beta	10.15%	10.13%	10.20%
<i>ECAPM</i>			
Value Line Beta	11.64%	11.64%	11.66%
Bloomberg Beta	10.74%	10.74%	10.78%
Long-term Avg. Beta	10.62%	10.61%	10.66%

30-DAY CONSTANT GROWTH DCF

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line EPS Growth	Yahoo! Finance EPS Growth	Zacks EPS Growth	Average Growth Rate	Low ROE	Mean ROE	High ROE
Alliant Energy Corporation	LNT	\$1.92	\$59.09	3.25%	3.36%	6.00%	7.70%	6.80%	6.83%	9.35%	10.19%	11.07%
Ameren Corporation	AEE	\$2.68	\$83.63	3.20%	3.31%	6.50%	6.20%	6.60%	6.43%	9.50%	9.74%	9.91%
American Electric Power Company, Inc.	AEP	\$3.52	\$101.29	3.48%	3.59%	6.50%	6.62%	6.20%	6.44%	9.78%	10.03%	10.21%
Avista Corporation	AVA	\$1.90	\$38.51	4.93%	5.07%	5.00%	6.20%	4.80%	5.33%	9.85%	10.40%	11.29%
CMS Energy Corporation	CMS	\$2.06	\$68.84	2.99%	3.10%	6.00%	7.60%	7.60%	7.07%	9.08%	10.16%	10.71%
Duke Energy Corporation	DUK	\$4.18	\$115.15	3.63%	3.74%	5.00%	6.66%	6.10%	5.92%	8.72%	9.66%	10.41%
Edison International	EIX	\$3.12	\$85.63	3.64%	3.78%	6.00%	8.15%	8.70%	7.62%	9.75%	11.40%	12.50%
Entergy Corporation	ETR	\$4.52	\$124.10	3.64%	3.73%	0.50%	7.07%	7.30%	4.96%	4.15%	8.69%	11.08%
Eversource Energy	ES	\$2.86	\$66.65	4.29%	4.40%	6.00%	4.20%	5.70%	5.30%	8.58%	9.70%	10.42%
Evergy, Inc.	EVRG	\$2.57	\$60.25	4.27%	4.41%	7.50%	6.35%	5.80%	6.55%	10.19%	10.96%	11.93%
IDACORP, Inc.	IDA	\$3.32	\$102.86	3.23%	3.32%	5.50%	5.50%	5.50%	5.50%	8.82%	8.82%	8.82%
NextEra Energy, Inc.	NEE	\$2.06	\$81.79	2.52%	2.62%	8.00%	8.20%	8.10%	8.10%	10.62%	10.72%	10.82%
NorthWestern Corporation	NWE	\$2.60	\$54.78	4.75%	4.87%	4.00%	6.10%	6.10%	5.40%	8.84%	10.27%	10.99%
OGE Energy Corporation	OGE	\$1.67	\$40.10	4.17%	4.29%	6.50%	negative	5.20%	5.85%	9.48%	10.14%	10.81%
Pinnacle West Capital Corporation	PNW	\$3.52	\$88.53	3.98%	4.11%	4.50%	7.20%	8.20%	6.63%	8.57%	10.74%	12.34%
Portland General Electric Company	POR	\$2.00	\$47.50	4.21%	4.42%	6.00%	12.60%	11.50%	10.03%	10.34%	14.45%	17.08%
Southern Company	SO	\$2.88	\$88.39	3.26%	3.37%	6.50%	7.30%	7.00%	6.93%	9.86%	10.30%	10.68%
Xcel Energy Inc.	XEL	\$2.19	\$62.50	3.50%	3.62%	7.00%	6.73%	6.40%	6.71%	10.02%	10.33%	10.63%
<u>All Companies</u>												
Mean				3.72%	3.84%	5.72%	7.08%	6.87%	6.53%	9.19%	10.37%	11.20%
Median				3.64%	3.74%	6.00%	6.73%	6.50%	6.50%	9.49%	10.23%	10.81%
<u>Bulkley Proxy Group (Excl. EIX, ES)</u>												
Mean				3.69%	3.81%	5.69%	7.20%	6.83%	6.54%	9.20%	10.35%	11.17%
Median				3.57%	3.68%	6.00%	6.73%	6.50%	6.50%	9.49%	10.23%	10.81%
<u>Griffing Proxy Group (Excl. AVA, NEE, CMS)</u>												
Mean				3.77%	3.89%	5.60%	7.03%	6.87%	6.47%	9.06%	10.36%	11.26%
Median				3.64%	3.74%	6.00%	6.70%	6.40%	6.44%	9.48%	10.19%	10.81%
Difference between Bulkley and Griffing									Mean	0.13%	-0.01%	-0.09%
									Median	0.01%	0.04%	0.01%

Notes:

- [1] Source: Bloomberg Professiona
[2] Source: Bloomberg Professional, equals 30-day average as of September 30, 202
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7]
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

90-DAY CONSTANT GROWTH DCF

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line EPS Growth	Yahoo! Finance EPS Growth	Zacks EPS Growth	Average Growth Rate	Low ROE	Mean ROE	High ROE
Alliant Energy Corporation	LNT	\$1.92	\$54.71	3.51%	3.63%	6.00%	7.70%	6.80%	6.83%	9.61%	10.46%	11.34%
Ameren Corporation	AEE	\$2.68	\$76.96	3.48%	3.59%	6.50%	6.20%	6.60%	6.43%	9.79%	10.03%	10.20%
American Electric Power Company, Inc	AEP	\$3.52	\$94.46	3.73%	3.85%	6.50%	6.62%	6.20%	6.44%	10.04%	10.29%	10.47%
Avista Corporation	AVA	\$1.90	\$36.77	5.17%	5.31%	5.00%	6.20%	4.80%	5.33%	10.09%	10.64%	11.53%
CMS Energy Corporation	CMS	\$2.06	\$63.92	3.22%	3.34%	6.00%	7.60%	7.60%	7.07%	9.32%	10.40%	10.95%
Duke Energy Corporation	DUK	\$4.18	\$107.88	3.87%	3.99%	5.00%	6.66%	6.10%	5.92%	8.97%	9.91%	10.66%
Edison Internationa	EIX	\$3.12	\$78.77	3.96%	4.11%	6.00%	8.15%	8.70%	7.62%	10.08%	11.73%	12.83%
Entergy Corporation	ETR	\$4.52	\$114.44	3.95%	4.05%	0.50%	7.07%	7.30%	4.96%	4.46%	9.00%	11.39%
Eversource Energy	ES	\$2.86	\$62.16	4.60%	4.72%	6.00%	4.20%	5.70%	5.30%	8.90%	10.02%	10.74%
Evergy, Inc.	EVRG	\$2.57	\$56.37	4.56%	4.71%	7.50%	6.35%	5.80%	6.55%	10.49%	11.26%	12.23%
IDACORP, Inc.	IDA	\$3.32	\$97.47	3.41%	3.50%	5.50%	5.50%	5.50%	5.50%	9.00%	9.00%	9.00%
NextEra Energy, Inc	NEE	\$2.06	\$76.70	2.69%	2.79%	8.00%	8.20%	8.10%	8.10%	10.79%	10.89%	11.00%
NorthWestern Corporation	NWE	\$2.60	\$51.92	5.01%	5.14%	4.00%	6.10%	6.10%	5.40%	9.11%	10.54%	11.26%
OGE Energy Corporation	OGE	\$1.67	\$37.74	4.43%	4.56%	6.50%	negative	5.20%	5.85%	9.75%	10.41%	11.08%
Pinnacle West Capital Corporation	PNW	\$3.52	\$82.35	4.27%	4.42%	4.50%	7.20%	8.20%	6.63%	8.87%	11.05%	12.65%
Portland General Electric Company	POR	\$2.00	\$45.19	4.43%	4.65%	6.00%	12.60%	11.50%	10.03%	10.56%	14.68%	17.30%
Southern Company	SO	\$2.88	\$82.98	3.47%	3.59%	6.50%	7.30%	7.00%	6.93%	10.08%	10.52%	10.90%
Xcel Energy Inc.	XEL	\$2.19	\$57.34	3.82%	3.95%	7.00%	6.73%	6.40%	6.71%	10.34%	10.66%	10.95%
<u>All Companies</u>												
Mean				3.98%	4.11%	5.72%	7.08%	6.87%	6.53%	9.46%	10.64%	11.47%
Median				3.91%	4.02%	6.00%	6.73%	6.50%	6.50%	9.77%	10.49%	11.04%
<u>Bulkley Proxy Group (Excl. EIX, ES)</u>												
Mean				3.94%	4.07%	5.69%	7.20%	6.83%	6.54%	9.46%	10.61%	11.43%
Median				3.85%	3.97%	6.00%	6.73%	6.50%	6.50%	9.77%	10.49%	11.04%
<u>Griffing Proxy Group (Excl. AVA, NEE, CMS)</u>												
Mean				4.03%	4.16%	5.60%	7.03%	6.87%	6.47%	9.34%	10.64%	11.53%
Median				3.95%	4.05%	6.00%	6.70%	6.40%	6.44%	9.75%	10.46%	11.08%
Difference between Bulkley and Griffing									Mean	0.12%	-0.03%	-0.10%
									Median	0.02%	0.03%	-0.04%

Notes:

- [1] Source: Bloomberg Professiona
[2] Source: Bloomberg Professional, equals 90-day average as of September 30, 202
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

180-DAY CONSTANT GROWTH DCF

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Company	Ticker	Annualized Dividend	Stock Price	Dividend Yield	Expected Dividend Yield	Value Line EPS Growth	Yahoo! Finance EPS Growth	Zacks EPS Growth	Average Growth Rate	Low ROE	Mean ROE	High ROE
Alliant Energy Corporation	LNT	\$1.92	\$51.55	3.72%	3.85%	6.00%	7.70%	6.80%	6.83%	9.84%	10.69%	11.57%
Ameren Corporation	AEE	\$2.68	\$73.70	3.64%	3.75%	6.50%	6.20%	6.60%	6.43%	9.95%	10.19%	10.36%
American Electric Power Company, Inc	AEP	\$3.52	\$88.10	4.00%	4.12%	6.50%	6.62%	6.20%	6.44%	10.32%	10.56%	10.75%
Avista Corporation	AVA	\$1.90	\$35.24	5.39%	5.54%	5.00%	6.20%	4.80%	5.33%	10.32%	10.87%	11.76%
CMS Energy Corporation	CMS	\$2.06	\$60.89	3.38%	3.50%	6.00%	7.60%	7.60%	7.07%	9.48%	10.57%	11.11%
Duke Energy Corporation	DUK	\$4.18	\$101.01	4.14%	4.26%	5.00%	6.66%	6.10%	5.92%	9.24%	10.18%	10.94%
Edison Internationa	EIX	\$3.12	\$73.48	4.25%	4.41%	6.00%	8.15%	8.70%	7.62%	10.37%	12.02%	13.13%
Entergy Corporation	ETR	\$4.52	\$108.00	4.19%	4.29%	0.50%	7.07%	7.30%	4.96%	4.70%	9.25%	11.64%
Eversource Energy	ES	\$2.86	\$59.43	4.81%	4.94%	6.00%	4.20%	5.70%	5.30%	9.11%	10.24%	10.96%
Evergy, Inc.	EVRG	\$2.57	\$53.33	4.82%	4.98%	7.50%	6.35%	5.80%	6.55%	10.76%	11.53%	12.50%
IDACORP, Inc.	IDA	\$3.32	\$94.07	3.53%	3.63%	5.50%	5.50%	5.50%	5.50%	9.13%	9.13%	9.13%
NextEra Energy, Inc	NEE	\$2.06	\$68.99	2.99%	3.11%	8.00%	8.20%	8.10%	8.10%	11.11%	11.21%	11.31%
NorthWestern Corporation	NWE	\$2.60	\$49.87	5.21%	5.35%	4.00%	6.10%	6.10%	5.40%	9.32%	10.75%	11.47%
OGE Energy Corporation	OGE	\$1.67	\$35.49	4.71%	4.85%	6.50%	negative	5.20%	5.85%	10.04%	10.70%	11.37%
Pinnacle West Capital Corporation	PNW	\$3.52	\$76.38	4.61%	4.76%	4.50%	7.20%	8.20%	6.63%	9.21%	11.39%	13.00%
Portland General Electric Company	POR	\$2.00	\$42.87	4.67%	4.90%	6.00%	12.60%	11.50%	10.03%	10.81%	14.93%	17.56%
Southern Company	SO	\$2.88	\$76.19	3.78%	3.91%	6.50%	7.30%	7.00%	6.93%	10.40%	10.84%	11.22%
Xcel Energy Inc.	XEL	\$2.19	\$55.76	3.93%	4.06%	7.00%	6.73%	6.40%	6.71%	10.45%	10.77%	11.06%
<u>All Companies</u>												
Mean				4.21%	4.34%	5.72%	7.08%	6.87%	6.53%	9.70%	10.88%	11.71%
Median				4.16%	4.27%	6.00%	6.73%	6.50%	6.50%	9.99%	10.73%	11.34%
<u>Bulkley Proxy Group (Excl. EIX, ES)</u>												
Mean				4.17%	4.30%	5.69%	7.20%	6.83%	6.54%	9.69%	10.85%	11.67%
Median				4.07%	4.19%	6.00%	6.73%	6.50%	6.50%	9.99%	10.73%	11.34%
<u>Griffing Proxy Group (Excl. AVA, NEE, CMS)</u>												
Mean				4.27%	4.40%	5.60%	7.03%	6.87%	6.47%	9.58%	10.88%	11.78%
Median				4.19%	4.29%	6.00%	6.70%	6.40%	6.44%	9.95%	10.70%	11.37%
Difference between Bulkley and Griffing									Mean	0.12%	-0.03%	-0.11%
									Median	0.04%	0.03%	-0.03%

Notes:

- [1] Source: Bloomberg Professiona
[2] Source: Bloomberg Professional, equals 180-day average as of September 30, 202
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.50 x [8])
[5] Source: Value Line
[6] Source: Yahoo! Finance
[7] Source: Zacks
[8] Equals Average ([5], [6], [7])
[9] Equals [3] x (1 + 0.50 x Minimum ([5], [6], [7]) + Minimum ([5], [6], [7])
[10] Equals [4] + [8]
[11] Equals [3] x (1 + 0.50 x Maximum ([5], [6], [7]) + Maximum ([5], [6], [7])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VL BETA

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.07%	0.90	12.04%	7.97%	11.25%	11.44%
Ameren Corporation	AEE	4.07%	0.90	12.04%	7.97%	11.25%	11.44%
American Electric Power Company, Inc.	AEP	4.07%	0.85	12.04%	7.97%	10.85%	11.15%
Avista Corporation	AVA	4.07%	0.95	12.04%	7.97%	11.64%	11.74%
CMS Energy Corporation	CMS	4.07%	0.85	12.04%	7.97%	10.85%	11.15%
Duke Energy Corporation	DUK	4.07%	0.90	12.04%	7.97%	11.25%	11.44%
Edison International	EIX	4.07%	1.00	12.04%	7.97%	12.04%	12.04%
Entergy Corporation	ETR	4.07%	1.00	12.04%	7.97%	12.04%	12.04%
Eversource Energy	ES	4.07%	0.95	12.04%	7.97%	11.64%	11.74%
Evergy, Inc.	EVRG	4.07%	0.95	12.04%	7.97%	11.64%	11.74%
IDACORP, Inc.	IDA	4.07%	0.85	12.04%	7.97%	10.85%	11.15%
NextEra Energy, Inc.	NEE	4.07%	1.05	12.04%	7.97%	12.44%	12.34%
NorthWestern Corporation	NWE	4.07%	0.95	12.04%	7.97%	11.64%	11.74%
OGE Energy Corporation	OGE	4.07%	1.05	12.04%	7.97%	12.44%	12.34%
Pinnacle West Capital Corporation	PNW	4.07%	0.95	12.04%	7.97%	11.64%	11.74%
Portland General Electric Company	POR	4.07%	0.95	12.04%	7.97%	11.64%	11.74%
Southern Company	SO	4.07%	0.95	12.04%	7.97%	11.64%	11.74%
Xcel Energy Inc.	XEL	4.07%	0.85	12.04%	7.97%	10.85%	11.15%

All Companies

Mean	11.53%	11.66%
Median	11.64%	11.74%

Bulkley Proxy Group (Excl. EIX, ES)

Mean	11.49%	11.63%
Median	11.64%	11.74%

Griffing Adjusted Proxy Group (Excl. AVA, NEE, CMS)

Mean	11.51%	11.64%
Median	11.64%	11.74%

Difference between Bulkley and Griffing	Mean	-0.02%	-0.01%
	Median	0.00%	0.00%

Notes:

[1] Source: Bloomberg Professional, as of September 30, 2024

[2] Source: Value Line

[3] Source: Market Return

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VL BETA

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (Q1 2025 - Q1 2026)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.02%	0.90	12.04%	8.02%	11.24%	11.44%
Ameren Corporation	AEE	4.02%	0.90	12.04%	8.02%	11.24%	11.44%
American Electric Power Company, Inc.	AEP	4.02%	0.85	12.04%	8.02%	10.84%	11.14%
Avista Corporation	AVA	4.02%	0.95	12.04%	8.02%	11.64%	11.74%
CMS Energy Corporation	CMS	4.02%	0.85	12.04%	8.02%	10.84%	11.14%
Duke Energy Corporation	DUK	4.02%	0.90	12.04%	8.02%	11.24%	11.44%
Edison International	EIX	4.02%	1.00	12.04%	8.02%	12.04%	12.04%
Entergy Corporation	ETR	4.02%	1.00	12.04%	8.02%	12.04%	12.04%
Eversource Energy	ES	4.02%	0.95	12.04%	8.02%	11.64%	11.74%
Evergy, Inc.	EVRG	4.02%	0.95	12.04%	8.02%	11.64%	11.74%
IDACORP, Inc.	IDA	4.02%	0.85	12.04%	8.02%	10.84%	11.14%
NextEra Energy, Inc.	NEE	4.02%	1.05	12.04%	8.02%	12.44%	12.34%
NorthWestern Corporation	NWE	4.02%	0.95	12.04%	8.02%	11.64%	11.74%
OGE Energy Corporation	OGE	4.02%	1.05	12.04%	8.02%	12.44%	12.34%
Pinnacle West Capital Corporation	PNW	4.02%	0.95	12.04%	8.02%	11.64%	11.74%
Portland General Electric Company	POR	4.02%	0.95	12.04%	8.02%	11.64%	11.74%
Southern Company	SO	4.02%	0.95	12.04%	8.02%	11.64%	11.74%
Xcel Energy Inc.	XEL	4.02%	0.85	12.04%	8.02%	10.84%	11.14%

All Companies

Mean	11.53%	11.66%
Median	11.64%	11.74%

Bulkley Proxy Group (Excl. EIX, ES)

Mean	11.49%	11.63%
Median	11.64%	11.74%

Griffing Adjusted Proxy Group (Excl. AVA, NEE, CMS)

Mean	11.51%	11.64%
Median	11.64%	11.74%

Difference between Bulkley and Griffing	Mean	-0.02%	-0.01%
	Median	0.00%	0.00%

Notes:

[1] Blue Chip Financial Forecasts, Vol. 43, No. 10, October 1, 2024, at 2

[2] Source: Value Line

[3] Source: Market Return

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VL BETA

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Projected 30-year U.S. Treasury bond yield (2026 - 2030)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.30%	0.90	12.04%	7.74%	11.27%	11.46%
Ameren Corporation	AEE	4.30%	0.90	12.04%	7.74%	11.27%	11.46%
American Electric Power Company, Inc.	AEP	4.30%	0.85	12.04%	7.74%	10.88%	11.17%
Avista Corporation	AVA	4.30%	0.95	12.04%	7.74%	11.66%	11.75%
CMS Energy Corporation	CMS	4.30%	0.85	12.04%	7.74%	10.88%	11.17%
Duke Energy Corporation	DUK	4.30%	0.90	12.04%	7.74%	11.27%	11.46%
Edison International	EIX	4.30%	1.00	12.04%	7.74%	12.04%	12.04%
Entergy Corporation	ETR	4.30%	1.00	12.04%	7.74%	12.04%	12.04%
Eversource Energy	ES	4.30%	0.95	12.04%	7.74%	11.66%	11.75%
Evergy, Inc.	EVRG	4.30%	0.95	12.04%	7.74%	11.66%	11.75%
IDACORP, Inc.	IDA	4.30%	0.85	12.04%	7.74%	10.88%	11.17%
NextEra Energy, Inc.	NEE	4.30%	1.05	12.04%	7.74%	12.43%	12.33%
NorthWestern Corporation	NWE	4.30%	0.95	12.04%	7.74%	11.66%	11.75%
OGE Energy Corporation	OGE	4.30%	1.05	12.04%	7.74%	12.43%	12.33%
Pinnacle West Capital Corporation	PNW	4.30%	0.95	12.04%	7.74%	11.66%	11.75%
Portland General Electric Company	POR	4.30%	0.95	12.04%	7.74%	11.66%	11.75%
Southern Company	SO	4.30%	0.95	12.04%	7.74%	11.66%	11.75%
Xcel Energy Inc.	XEL	4.30%	0.85	12.04%	7.74%	10.88%	11.17%

All Companies

Mean						11.55%	11.67%
Median						11.66%	11.75%

Bulkley Proxy Group (Excl. EIX, ES)

Mean						11.51%	11.64%
Median						11.66%	11.75%

Griffing Adjusted Proxy Group (Excl. AVA, NEE, CMS)

Mean						11.53%	11.66%
Median						11.66%	11.75%

Difference between Bulkley and Griffing				Mean	-0.02%	-0.01%
				Median	0.00%	0.00%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 42, No. 6, May 31, 2024, at 14

[2] Source: Value Line

[3] Source: Market Return

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & BLOOMBERG BETA

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.07%	0.77	12.04%	7.97%	10.23%	10.69%
Ameren Corporation	AEE	4.07%	0.73	12.04%	7.97%	9.90%	10.43%
American Electric Power Company, Inc.	AEP	4.07%	0.74	12.04%	7.97%	9.98%	10.49%
Avista Corporation	AVA	4.07%	0.75	12.04%	7.97%	10.02%	10.52%
CMS Energy Corporation	CMS	4.07%	0.73	12.04%	7.97%	9.92%	10.45%
Duke Energy Corporation	DUK	4.07%	0.70	12.04%	7.97%	9.68%	10.27%
Edison International	EIX	4.07%	0.83	12.04%	7.97%	10.72%	11.05%
Entergy Corporation	ETR	4.07%	0.84	12.04%	7.97%	10.78%	11.09%
Eversource Energy	ES	4.07%	0.79	12.04%	7.97%	10.38%	10.79%
Evergy, Inc.	EVRG	4.07%	0.76	12.04%	7.97%	10.16%	10.63%
IDACORP, Inc.	IDA	4.07%	0.77	12.04%	7.97%	10.23%	10.68%
NextEra Energy, Inc.	NEE	4.07%	0.80	12.04%	7.97%	10.48%	10.87%
NorthWestern Corporation	NWE	4.07%	0.85	12.04%	7.97%	10.88%	11.17%
OGE Energy Corporation	OGE	4.07%	0.90	12.04%	7.97%	11.21%	11.41%
Pinnacle West Capital Corporation	PNW	4.07%	0.80	12.04%	7.97%	10.45%	10.85%
Portland General Electric Company	POR	4.07%	0.77	12.04%	7.97%	10.20%	10.66%
Southern Company	SO	4.07%	0.76	12.04%	7.97%	10.13%	10.61%
Xcel Energy Inc.	XEL	4.07%	0.71	12.04%	7.97%	9.77%	10.34%

All Companies

Mean						10.28%	10.72%
Median						10.21%	10.67%

Bulkley Proxy Group (Excl. EIX, ES)

Mean						10.25%	10.70%
Median						10.18%	10.64%

Griffing Adjusted Proxy Group (Excl. AVA, NEE, CMS)

Mean						10.31%	10.74%
Median						10.23%	10.68%

Difference between Bulkley and Griffing				Mean	-0.06%	-0.05%
				Median	-0.05%	-0.04%

Notes:

[1] Source: Bloomberg Professional, as of September 30, 2024

[2] Source: Bloomberg Professional, based on 10-year weekly returns

[3] Source: Market Return

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]
		Near-term projected 30-year U.S. Treasury bond yield (Q1 2025 - Q1 2026)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.02%	0.77	12.04%	8.02%	10.22%	10.68%
Ameren Corporation	AEE	4.02%	0.73	12.04%	8.02%	9.89%	10.42%
American Electric Power Company, Inc.	AEP	4.02%	0.74	12.04%	8.02%	9.97%	10.48%
Avista Corporation	AVA	4.02%	0.75	12.04%	8.02%	10.01%	10.52%
CMS Energy Corporation	CMS	4.02%	0.73	12.04%	8.02%	9.90%	10.44%
Duke Energy Corporation	DUK	4.02%	0.70	12.04%	8.02%	9.67%	10.26%
Edison International	EIX	4.02%	0.83	12.04%	8.02%	10.72%	11.05%
Entergy Corporation	ETR	4.02%	0.84	12.04%	8.02%	10.77%	11.09%
Eversource Energy	ES	4.02%	0.79	12.04%	8.02%	10.36%	10.78%
Evergy, Inc.	EVRG	4.02%	0.76	12.04%	8.02%	10.15%	10.62%
IDACORP, Inc.	IDA	4.02%	0.77	12.04%	8.02%	10.21%	10.67%
NextEra Energy, Inc.	NEE	4.02%	0.80	12.04%	8.02%	10.47%	10.86%
NorthWestern Corporation	NWE	4.02%	0.85	12.04%	8.02%	10.87%	11.16%
OGE Energy Corporation	OGE	4.02%	0.90	12.04%	8.02%	11.20%	11.41%
Pinnacle West Capital Corporation	PNW	4.02%	0.80	12.04%	8.02%	10.44%	10.84%
Portland General Electric Company	POR	4.02%	0.77	12.04%	8.02%	10.18%	10.65%
Southern Company	SO	4.02%	0.76	12.04%	8.02%	10.12%	10.60%
Xcel Energy Inc.	XEL	4.02%	0.71	12.04%	8.02%	9.75%	10.33%

All Companies

Mean						10.27%	10.71%
Median						10.20%	10.66%

Bulkley Proxy Group (Excl. EIX, ES)

Mean						10.24%	10.69%
Median						10.17%	10.64%

Griffing Adjusted Proxy Group (Excl. AVA, NEE, CMS)

Mean						10.30%	10.74%
Median						10.21%	10.67%

Difference between Bulkley and Griffing

Mean	-0.06%	-0.05%
Median	-0.05%	-0.04%

Notes:

[1] Blue Chip Financial Forecasts, Vol. 43, No. 10, October 1, 2024, at 2

[2] Source: Bloomberg Professional, based on 10-year weekly returns

[3] Source: Market Return

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]
		Projected 30-year U.S. Treasury bond yield (2026 - 2030)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.30%	0.77	12.04%	7.74%	10.29%	10.73%
Ameren Corporation	AEE	4.30%	0.73	12.04%	7.74%	9.96%	10.48%
American Electric Power Company, Inc.	AEP	4.30%	0.74	12.04%	7.74%	10.04%	10.54%
Avista Corporation	AVA	4.30%	0.75	12.04%	7.74%	10.08%	10.57%
CMS Energy Corporation	CMS	4.30%	0.73	12.04%	7.74%	9.98%	10.49%
Duke Energy Corporation	DUK	4.30%	0.70	12.04%	7.74%	9.75%	10.32%
Edison International	EIX	4.30%	0.83	12.04%	7.74%	10.76%	11.08%
Entergy Corporation	ETR	4.30%	0.84	12.04%	7.74%	10.81%	11.12%
Eversource Energy	ES	4.30%	0.79	12.04%	7.74%	10.42%	10.83%
Evergy, Inc.	EVRG	4.30%	0.76	12.04%	7.74%	10.21%	10.67%
IDACORP, Inc.	IDA	4.30%	0.77	12.04%	7.74%	10.28%	10.72%
NextEra Energy, Inc.	NEE	4.30%	0.80	12.04%	7.74%	10.52%	10.90%
NorthWestern Corporation	NWE	4.30%	0.85	12.04%	7.74%	10.91%	11.19%
OGE Energy Corporation	OGE	4.30%	0.90	12.04%	7.74%	11.23%	11.43%
Pinnacle West Capital Corporation	PNW	4.30%	0.80	12.04%	7.74%	10.49%	10.88%
Portland General Electric Company	POR	4.30%	0.77	12.04%	7.74%	10.25%	10.70%
Southern Company	SO	4.30%	0.76	12.04%	7.74%	10.19%	10.65%
Xcel Energy Inc.	XEL	4.30%	0.71	12.04%	7.74%	9.83%	10.39%

All Companies

Mean						10.33%	10.76%
Median						10.26%	10.71%

Bulkley Proxy Group (Excl. EIX, ES)

Mean						10.30%	10.74%
Median						10.23%	10.68%

Griffing Adjusted Proxy Group (Excl. AVA, NEE, CMS)

Mean						10.36%	10.78%
Median						10.28%	10.72%

Difference between Bulkley and Griffing

Mean	-0.06%	-0.05%
Median	-0.05%	-0.04%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 42, No. 6, May 31, 2024, at 14

[2] Source: Bloomberg Professional, based on 10-year weekly returns

[3] Source: Market Return

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.07%	0.76	12.04%	7.97%	10.16%	10.63%
Ameren Corporation	AEE	4.07%	0.74	12.04%	7.97%	9.98%	10.49%
American Electric Power Company, Inc.	AEP	4.07%	0.69	12.04%	7.97%	9.54%	10.17%
Avista Corporation	AVA	4.07%	0.80	12.04%	7.97%	10.41%	10.82%
CMS Energy Corporation	CMS	4.07%	0.70	12.04%	7.97%	9.69%	10.28%
Duke Energy Corporation	DUK	4.07%	0.69	12.04%	7.97%	9.54%	10.17%
Edison International	EIX	4.07%	0.77	12.04%	7.97%	10.23%	10.68%
Entergy Corporation	ETR	4.07%	0.76	12.04%	7.97%	10.16%	10.63%
Eversource Energy	ES	4.07%	0.76	12.04%	7.97%	10.14%	10.61%
Evergy, Inc.	EVRG	4.07%	0.94	12.04%	7.97%	11.54%	11.67%
IDACORP, Inc.	IDA	4.07%	0.74	12.04%	7.97%	9.98%	10.49%
NextEra Energy, Inc.	NEE	4.07%	0.75	12.04%	7.97%	10.09%	10.57%
NorthWestern Corporation	NWE	4.07%	0.76	12.04%	7.97%	10.16%	10.63%
OGE Energy Corporation	OGE	4.07%	0.94	12.04%	7.97%	11.57%	11.69%
Pinnacle West Capital Corporation	PNW	4.07%	0.75	12.04%	7.97%	10.09%	10.57%
Portland General Electric Company	POR	4.07%	0.76	12.04%	7.97%	10.16%	10.63%
Southern Company	SO	4.07%	0.68	12.04%	7.97%	9.51%	10.14%
Xcel Energy Inc.	XEL	4.07%	0.67	12.04%	7.97%	9.43%	10.09%

All Companies

Mean						10.13%	10.61%
Median						10.11%	10.59%

Bulkley Proxy Group (Excl. EIX, ES)

Mean						10.12%	10.60%
Median						10.09%	10.57%

Griffing Adjusted Proxy Group (Excl. AVA, NEE, CMS)

Mean						10.15%	10.62%
Median						10.14%	10.61%

Difference between Bulkley and Griffing

Mean	-0.02%	-0.02%
Median	-0.05%	-0.04%

Notes:

- [1] Source: Bloomberg Professional, as of September 30, 2024
[2] Source: LT Beta
[3] Source: Market Return
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (Q1 2025 - Q1 2026)	Beta (β)	Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE (K)
Alliant Energy Corporation	LNT	4.02%	0.76	12.04%	8.02%	10.15%	10.62%
Ameren Corporation	AEE	4.02%	0.74	12.04%	8.02%	9.96%	10.48%
American Electric Power Company, Inc.	AEP	4.02%	0.69	12.04%	8.02%	9.53%	10.16%
Avista Corporation	AVA	4.02%	0.80	12.04%	8.02%	10.40%	10.81%
CMS Energy Corporation	CMS	4.02%	0.70	12.04%	8.02%	9.67%	10.26%
Duke Energy Corporation	DUK	4.02%	0.69	12.04%	8.02%	9.53%	10.16%
Edison International	EIX	4.02%	0.77	12.04%	8.02%	10.22%	10.68%
Entergy Corporation	ETR	4.02%	0.76	12.04%	8.02%	10.15%	10.62%
Eversource Energy	ES	4.02%	0.76	12.04%	8.02%	10.13%	10.61%
Evergy, Inc.	EVRG	4.02%	0.94	12.04%	8.02%	11.54%	11.67%
IDACORP, Inc.	IDA	4.02%	0.74	12.04%	8.02%	9.96%	10.48%
NextEra Energy, Inc.	NEE	4.02%	0.75	12.04%	8.02%	10.07%	10.57%
NorthWestern Corporation	NWE	4.02%	0.76	12.04%	8.02%	10.15%	10.62%
OGE Energy Corporation	OGE	4.02%	0.94	12.04%	8.02%	11.57%	11.69%
Pinnacle West Capital Corporation	PNW	4.02%	0.75	12.04%	8.02%	10.07%	10.57%
Portland General Electric Company	POR	4.02%	0.76	12.04%	8.02%	10.15%	10.62%
Southern Company	SO	4.02%	0.68	12.04%	8.02%	9.49%	10.13%
Xcel Energy Inc.	XEL	4.02%	0.67	12.04%	8.02%	9.42%	10.07%

All Companies

Mean						10.12%	10.60%
Median						10.10%	10.59%

Bulkley Proxy Group (Excl. EIX, ES)

Mean						10.11%	10.60%
Median						10.07%	10.57%

Griffing Adjusted Proxy Group (Excl. AVA, NEE, CMS)

Mean						10.13%	10.61%
Median						10.13%	10.61%

Difference between Bulkley and Griffing

Mean	-0.02%	-0.02%
Median	-0.05%	-0.04%

Notes:

- [1] Blue Chip Financial Forecasts, Vol. 43, No. 10, October 1, 2024, at 2
[2] Source: LT Beta
[3] Source: Market Return
[4] Equals [3] - [1]
[5] Equals [1] + [2] x [4]
[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
		Projected 30-year U.S. Treasury bond yield (2026 - 2030)		Market Return (Rm)	Market Risk Premium (Rm - Rf)	ROE (K)	ECAPM ROE (K)
Company	Ticker		Beta (β)				
Alliant Energy Corporation	LNT	4.30%	0.76	12.04%	7.74%	10.21%	10.67%
Ameren Corporation	AEE	4.30%	0.74	12.04%	7.74%	10.04%	10.54%
American Electric Power Company, Inc.	AEP	4.30%	0.69	12.04%	7.74%	9.61%	10.22%
Avista Corporation	AVA	4.30%	0.80	12.04%	7.74%	10.46%	10.85%
CMS Energy Corporation	CMS	4.30%	0.70	12.04%	7.74%	9.76%	10.33%
Duke Energy Corporation	DUK	4.30%	0.69	12.04%	7.74%	9.61%	10.22%
Edison International	EIX	4.30%	0.77	12.04%	7.74%	10.28%	10.72%
Entergy Corporation	ETR	4.30%	0.76	12.04%	7.74%	10.21%	10.67%
Eversource Energy	ES	4.30%	0.76	12.04%	7.74%	10.19%	10.66%
Evergy, Inc.	EVERG	4.30%	0.94	12.04%	7.74%	11.56%	11.68%
IDACORP, Inc.	IDA	4.30%	0.74	12.04%	7.74%	10.04%	10.54%
NextEra Energy, Inc.	NEE	4.30%	0.75	12.04%	7.74%	10.14%	10.62%
NorthWestern Corporation	NWE	4.30%	0.76	12.04%	7.74%	10.21%	10.67%
OGE Energy Corporation	OGE	4.30%	0.94	12.04%	7.74%	11.59%	11.70%
Pinnacle West Capital Corporation	PNW	4.30%	0.75	12.04%	7.74%	10.14%	10.62%
Portland General Electric Company	POR	4.30%	0.76	12.04%	7.74%	10.21%	10.67%
Southern Company	SO	4.30%	0.68	12.04%	7.74%	9.58%	10.19%
Xcel Energy Inc.	XEL	4.30%	0.67	12.04%	7.74%	9.51%	10.14%
<u>All Companies</u>							
Mean						10.19%	10.65%
Median						10.17%	10.64%
<u>Bulkley Proxy Group (Excl. EIX, ES)</u>							
Mean						10.18%	10.65%
Median						10.14%	10.62%
<u>Griffing Adjusted Proxy Group (Excl. AVA, NEE, CMS)</u>							
Mean						10.20%	10.66%
Median						10.19%	10.66%
Difference between Bulkley and Griffing					Mean	-0.02%	-0.01%
					Median	-0.05%	-0.04%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 42, No. 6, May 31, 2024, at 14

[2] Source: LT Beta

[3] Source: Market Return

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

HISTORICAL BETA - 2013 - 202

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
		12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	Average
Alliant Energy Corporation	LNT	0.75	0.80	0.80	0.70	0.70	0.60	0.60	0.85	0.85	0.85	0.90	0.76
Ameren Corporation	AEE	0.80	0.75	0.75	0.65	0.70	0.55	0.55	0.85	0.80	0.85	0.90	0.74
American Electric Power Company, Inc.	AEP	0.70	0.70	0.70	0.65	0.65	0.55	0.55	0.75	0.75	0.75	0.80	0.69
Avista Corporation	AVA	0.75	0.80	0.80	0.70	0.75	0.65	0.60	0.95	0.95	0.90	0.90	0.89
CMS Energy Corporation	CMS	0.70	0.70	0.75	0.65	0.65	0.55	0.50	0.80	0.80	0.80	0.85	0.70
Duke Energy Corporation	DUK	0.65	0.60	0.65	0.60	0.60	0.50	0.50	0.85	0.85	0.85	0.90	0.69
Edison International	EIX	0.80	0.75	0.70	0.65	0.65	0.55	0.55	0.95	0.95	0.95	1.00	0.77
Energy Corporation	ETR	0.70	0.70	0.70	0.65	0.65	0.60	0.60	0.95	0.95	0.95	0.95	0.76
Eversource Energy	ES			0.75	0.70	0.65	0.60	0.55	0.90	0.90	0.90	0.90	0.76
Evergy, Inc.	EVRG						NMF	NMF	1.00	0.95	0.90	0.90	0.94
IDACORP, Inc.	IDA	0.75	0.80	0.80	0.75	0.70	0.55	0.55	0.80	0.80	0.80	0.85	0.74
NextEra Energy, Inc.	NEE	0.70	0.70	0.75	0.65	0.65	0.55	0.55	0.90	0.90	0.95	1.00	0.75
NorthWestern Corporation	NWE	0.70	0.70	0.70	0.70	0.70	0.55	0.60	0.95	0.95	0.90	0.95	0.76
OGE Energy Corporation	OGE	0.85	0.90	0.95	0.90	0.95	0.85	0.75	1.10	1.05	1.00	1.05	0.94
Pinnacle West Capital Corporation	PNW	0.75	0.70	0.75	0.70	0.70	0.55	0.50	0.90	0.90	0.90	0.95	0.75
Portland General Electric Company	POR	0.75	0.80	0.80	0.70	0.70	0.60	0.55	0.85	0.90	0.85	0.90	0.76
Southern Company	SO	0.55	0.55	0.60	0.55	0.55	0.50	0.50	0.90	0.95	0.90	0.95	0.68
Wisconsin Energy Corporation	WEC	0.65	0.65	0.70	0.60	0.60	0.50	0.50	0.80	0.80	0.80	0.85	0.68
Xcel Energy Inc.	XEL	0.65	0.65	0.65	0.60	0.60	0.50	0.50	0.80	0.80	0.80	0.85	0.67
Mean		0.72	0.72	0.74	0.67	0.68	0.57	0.56	0.89	0.88	0.87	0.91	0.76

Notes:

- [1] Value Line, dated December 26, 2013.
- [2] Value Line, dated December 31, 2014.
- [3] Value Line, dated December 30, 2015.
- [4] Value Line, dated December 29, 2016.
- [5] Value Line, dated December 28, 2017.
- [6] Value Line, dated December 27, 2018.
- [7] Value Line, dated December 26, 2019.
- [8] Value Line, dated December 30, 2020.
- [9] Value Line, dated December 29, 2021.
- [10] Value Line, dated December 30, 2022.
- [11] Value Line, dated December 29, 2023.
- [12] Average ([1] - [11])

MARKET RISK PREMIUM DERIVED FROM S&P 500 INDEX

[1] Estimated Weighted Average Dividend Yield	1.52%
[2] Estimated Weighted Average Long-Term Growth Rate	10.45%
[3] S&P 500 Estimated Required Market Return	12.04%

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Out/g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Growth Rate	Cap-Weighted Long-Term Growth Est.
LyondellBasell Industries NV	LYB	325.09	95.90	31,176		5.59%		-8.57%	
American Express Co	AXP	710.91	271.20	192,799	0.52%	1.03%	0.01%	15.62%	0.08%
Verizon Communications Inc	VZ	4,209.52	44.91	189,050	0.51%	6.03%	0.03%	3.00%	0.02%
Broadcom Inc	AVGO	4,670.58	172.50	805,674	2.17%	1.23%	0.03%	16.94%	0.37%
Boeing Co/The	BA	616.17	152.04	93,682				38.60%	
Solventum Corp	SOLV	172.71	69.72	12,041				-2.00%	
Caterpillar Inc	CAT	484.90	391.12	189,653	0.51%	1.44%	0.01%	8.38%	0.04%
JPMorgan Chase & Co	JPM	2,845.17	210.86	599,931	1.62%	2.37%	0.04%	3.55%	0.06%
Chevron Corp	CVX	1,828.92	147.27	269,345	0.73%	4.43%	0.03%	7.00%	0.05%
Coca-Cola Co/The	KO	4,309.87	71.86	309,707	0.83%	2.70%	0.02%	6.36%	0.05%
AbbVie Inc	ABBV	1,766.34	197.48	348,818	0.94%	3.14%	0.03%	8.80%	0.08%
Walt Disney Co/The	DIS	1,813.59	96.19	174,449	0.47%	0.94%	0.00%	15.77%	0.07%
Corpay Inc	CPAY	69.43	312.76	21,716	0.06%			14.87%	0.01%
Extra Space Storage Inc	EXR	211.93	180.19	38,187		3.60%		-0.20%	
Exxon Mobil Corp	XOM	4,442.83	117.22	520,788	1.40%	3.24%	0.05%	5.00%	0.07%
Phillips 66	PSX	418.57	131.45	55,021		3.50%		-9.00%	
General Electric Co	GE	1,084.31	188.58	204,479		0.59%		29.30%	
HP Inc	HPQ	963.72	35.87	34,569	0.09%	3.07%	0.00%	1.05%	0.00%
Home Depot Inc/The	HD	993.29	405.20	402,482	1.08%	2.22%	0.02%	3.87%	0.04%
Monolithic Power Systems Inc	MPWR	48.75	924.50	45,071		0.54%			
International Business Machines Corp	IBM	921.15	221.08	203,647	0.55%	3.02%	0.02%	3.90%	0.02%
Johnson & Johnson	JNJ	2,407.24	162.06	390,118	1.05%	3.06%	0.03%	3.73%	0.04%
Lululemon Athletica Inc	LULU	117.66	271.35	31,927	0.09%			7.00%	0.01%
McDonald's Corp	MCD	717.34	304.51	218,438	0.59%	2.33%	0.01%	5.15%	0.03%
Merek & Co Inc	MRK	2,534.81	113.56	287,853		2.71%		53.04%	
3M Co	MMM	549.35	136.70	75,097		2.05%		-5.37%	
American Water Works Co Inc	AWK	194.86	146.24	28,497	0.08%	2.09%	0.00%	7.89%	0.01%
Bank of America Corp	BAC	7,759.58	39.68	307,900		2.62%			
Pfizer Inc	PFE	5,666.70	28.94	163,994	0.44%	5.81%	0.03%	6.39%	0.03%
Procter & Gamble Co/The	PG	2,349.71	173.20	406,969	1.10%	2.32%	0.03%	7.37%	0.08%
AT&T Inc	T	7,170.24	22.00	157,745	0.42%	5.05%	0.02%	1.84%	0.01%
Travelers Cos Inc/The	TRV	227.93	234.12	53,363	0.14%	1.79%	0.00%	18.11%	0.03%
RTX Corp	RTX	1,330.24	121.16	161,172	0.43%	2.08%	0.01%	10.23%	0.04%
Analog Devices Inc	ADI	496.49	230.17	114,278		1.60%		-5.82%	
Walmart Inc	WMT	8,038.25	80.75	649,089	1.75%	1.03%	0.02%	9.24%	0.16%
Cisco Systems Inc	CSCO	3,990.74	53.22	212,387	0.57%	3.01%	0.02%	3.40%	0.02%
Intel Corp	INTC	4,276.00	23.46	100,315	0.27%			4.26%	0.01%
General Motors Co	GM	1,123.92	44.84	50,397	0.14%	1.07%	0.00%	11.02%	0.01%
Microsoft Corp	MSFT	7,433.04	430.30	3,198,436	8.61%	0.77%	0.07%	16.10%	1.39%
Dollar General Corp	DG	219.92	84.57	18,598		2.79%		-7.74%	
Cigna Group/The	CI	279.55	346.44	96,847	0.26%	1.62%	0.00%	11.65%	0.03%
Kinder Morgan Inc	KMI	2,219.46	22.09	49,028	0.13%	5.21%	0.01%	6.52%	0.01%
Citigroup Inc	C	1,907.80	62.60	119,428		3.58%		27.26%	
American International Group Inc	AIG	643.95	73.23	47,157	0.13%	2.18%	0.00%	12.42%	0.02%
Altria Group Inc	MO	1,706.22	51.04	87,086	0.23%	7.99%	0.02%	4.20%	0.01%
HCA Healthcare Inc	HCA	258.07	406.43	104,889	0.28%	0.65%	0.00%	10.81%	0.03%
International Paper Co	IP	347.38	48.85	16,969		3.79%		-2.00%	
Hewlett Packard Enterprise Co	HPE	1,298.67	20.46	26,571	0.07%	2.54%	0.00%	2.42%	0.00%
Abbott Laboratories	ABT	1,739.90	114.01	198,366	0.53%	1.93%	0.01%	8.12%	0.04%
Aflac Inc	AFL	560.03	111.80	62,611	0.17%	1.79%	0.00%	9.37%	0.02%
Air Products and Chemicals Inc	APD	222.32	295.97	65,799	0.18%	2.39%	0.00%	9.52%	0.02%
Super Micro Computer Inc	SMCI	585.57	41.64	24,383				69.00%	
Royal Caribbean Cruises Ltd	RCL	257.42	177.36	45,656		0.90%		30.00%	
Hess Corp	HES	308.12	135.80	41,842	0.11%	1.47%	0.00%	16.00%	0.02%
Archer-Daniels-Midland Co	ADM	478.14	59.74	28,564		3.35%		-3.62%	
Automatic Data Processing Inc	ADP	407.83	276.73	112,858		2.02%			
Verisk Analytics Inc	VRSK	142.42	267.96	38,164	0.10%	0.58%	0.00%	13.00%	0.01%
AutoZone Inc	AZO	17.08	3,150.04	53,812	0.14%			13.50%	0.02%
Linde PLC	LIN	477.50	476.86	227,702	0.61%	1.17%	0.01%	11.76%	0.07%
Avery Dennison Corp	AVY	80.52	220.76	17,775	0.05%	1.59%	0.00%	12.84%	0.01%
Enphase Energy Inc	ENPH	135.42	113.02	15,305	0.04%			7.45%	0.00%
MSCI Inc	MSCI	78.65	582.93	45,847	0.12%	1.10%	0.00%	12.00%	0.01%
Ball Corp	BALL	303.57	67.91	20,615	0.06%	1.18%	0.00%	13.35%	0.01%
Axon Enterprise Inc	AXON	75.57	399.60	30,199				20.81%	
Dayforce Inc	DAY	158.10	61.25	9,684					
Carrier Global Corp	CARR	902.75	80.49	72,663	0.20%	0.94%	0.00%	6.74%	0.01%
Bank of New York Mellon Corp/The	BK	737.96	71.86	53,030	0.14%	2.62%	0.00%	10.55%	0.02%
Otis Worldwide Corp	OTIS	400.56	103.94	41,634	0.11%	1.50%	0.00%	10.00%	0.01%
Baxter International Inc	BAX	510.18	37.97	19,371	0.05%	3.06%	0.00%	3.50%	0.00%
Becton Dickinson & Co	BDX	289.04	241.10	69,688	0.19%	1.58%	0.00%	8.34%	0.02%
Berkshire Hathaway Inc	BRK/B	1,325.19	460.26	609,933					
Best Buy Co Inc	BBY	214.73	103.30	22,181	0.06%	3.64%	0.00%	4.17%	0.00%
Boston Scientific Corp	BSX	1,472.63	83.80	123,406	0.33%			12.58%	0.04%
Bristol-Myers Squibb Co	BMJ	2,027.40	51.74	104,897		4.64%		-2.61%	
Brown-Forman Corp	BF/B	303.54	49.20	14,934		1.77%		-2.38%	
Coterra Energy Inc	CTRA	739.27	23.95	17,706	0.05%	3.51%	0.00%	10.06%	0.00%
Hilton Worldwide Holdings Inc	HLT	246.43	230.50	56,801	0.15%	0.26%	0.00%	14.97%	0.02%
Carnival Corp	CCL	1,154.17	18.48	21,329					
Qorvo Inc	QRVO	94.86	103.30	9,799	0.03%			17.09%	0.00%
Builders FirstSource Inc	BLDR	116.45	193.86	22,576	0.06%			1.45%	0.00%

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Growth Rate	Cap-Weighted Long-Term Growth Est.
UDR Inc	UDR	329.82	45.34	14,954	0.04%	3.75%	0.00%	1.85%	0.00%
Clorox Co/The	CLX	123.86	162.91	20,178	0.05%	3.00%	0.00%	11.33%	0.01%
Paycom Software Inc	PAYC	57.43	166.57	9,566	0.03%	0.90%	0.00%	9.41%	0.00%
CMS Energy Corp	CMS	298.64	70.63	21,093	0.06%	2.92%	0.00%	7.28%	0.00%
Colgate-Palmolive Co	CL	817.09	103.81	84,822	0.23%	1.93%	0.00%	8.73%	0.02%
EPAM Systems Inc	EPAM	56.94	199.03	11,332	0.03%			5.29%	0.00%
Conagra Brands Inc	CAG	479.05	32.52	15,579	0.04%	4.31%	0.00%	1.81%	0.00%
Airbnb Inc	ABNB	440.00	126.81	55,797	0.15%			19.84%	0.03%
Consolidated Edison Inc	ED	346.15	104.13	36,044	0.10%	3.19%	0.00%	5.58%	0.01%
Corning Inc	GLW	855.70	45.15	38,635	0.10%	2.48%	0.00%	13.57%	0.01%
GoDaddy Inc	GDDY	140.97	156.78	22,102					
Cummins Inc	CMI	137.05	323.79	44,375	0.12%	2.25%	0.00%	8.28%	0.01%
Caesars Entertainment Inc	CZR	216.34	41.74	9,030				-28.25%	
Danaher Corp	DHR	722.21	278.02	200,790	0.54%	0.39%	0.00%	1.89%	0.01%
Target Corp	TGT	460.68	155.86	71,801	0.19%	2.87%	0.01%	14.38%	0.03%
Deere & Co	DE	273.60	417.33	114,181		1.41%		-9.99%	
Dominion Energy Inc	D	838.94	57.79	48,482		4.62%		21.64%	
Dover Corp	DOV	137.46	191.74	26,356	0.07%	1.07%	0.00%	7.72%	0.01%
Alliant Energy Corp	LNT	256.50	60.69	15,567	0.04%	3.16%	0.00%	7.34%	0.00%
Steel Dynamics Inc	STLD	154.30	126.08	19,455		1.46%		-4.43%	
Duke Energy Corp	DUK	771.00	115.30	88,896	0.24%	3.63%	0.01%	6.78%	0.02%
Regency Centers Corp	REG	181.50	72.23	13,110	0.04%	3.71%	0.00%	3.79%	0.00%
Eaton Corp PLC	ETN	398.10	331.44	131,946	0.36%	1.13%	0.00%	14.60%	0.05%
Ecolab Inc	ECL	284.54	255.33	72,651	0.20%	0.89%	0.00%	15.76%	0.03%
Revvity Inc	RVTY	123.34	127.75	15,756	0.04%	0.22%	0.00%	9.44%	0.00%
Dell Technologies Inc	DELL	333.87	118.54	39,577	0.11%	1.50%	0.00%	9.83%	0.01%
Emerson Electric Co	EMR	572.70	109.37	62,636	0.17%	1.92%	0.00%	15.10%	0.03%
EOG Resources Inc	EOG	568.60	122.93	69,898	0.19%	2.96%	0.01%	3.28%	0.01%
Aon PLC	AON	217.24	345.99	75,164	0.20%	0.78%	0.00%	11.10%	0.02%
Entergy Corp	ETR	213.83	131.61	28,142	0.08%	3.43%	0.00%	7.17%	0.01%
Equifax Inc	EFX	123.74	293.86	36,361		0.53%			
EQT Corp	EQT	594.02	36.64	21,765		1.72%			
IQVIA Holdings Inc	IQV	182.30	236.97	43,200	0.12%			10.83%	0.01%
Gartner Inc	IT	77.06	506.76	39,051	0.11%			7.00%	0.01%
FedEx Corp	FDX	244.32	273.68	66,866	0.18%	2.02%	0.00%	12.33%	0.02%
FMC Corp	FMC	124.82	65.94	8,231	0.02%	3.52%	0.00%	15.67%	0.00%
Brown & Brown Inc	BRO	285.26	103.60	29,553	0.08%	0.50%	0.00%	10.85%	0.01%
Ford Motor Co	F	3,904.40	10.56	41,230	0.11%	5.68%	0.01%	1.34%	0.00%
NextEra Energy Inc	NEE	2,055.00	84.53	173,709	0.47%	2.44%	0.01%	8.78%	0.04%
Franklin Resources Inc	BEN	523.00	20.15	10,538	0.03%	6.15%	0.00%	3.00%	0.00%
Garmin Ltd	GRMN	192.21	176.03	33,835	0.09%	1.70%	0.00%	9.55%	0.01%
Freeport-McMoRan Inc	FCX	1,436.86	49.92	71,728	0.19%	1.20%	0.00%	17.59%	0.03%
Dexcom Inc	DXCM	400.73	67.04	26,865				21.07%	
General Dynamics Corp	GD	274.78	302.20	83,038	0.22%	1.88%	0.00%	15.55%	0.03%
General Mills Inc	GIS	555.16	73.85	40,998	0.11%	3.25%	0.00%	2.45%	0.00%
Genuine Parts Co	GPC	139.32	139.68	19,460		2.86%			
Atmos Energy Corp	ATO	155.23	138.71	21,532		2.32%			
WW Grainger Inc	GWG	48.83	1,038.81	50,721		0.79%			
Halliburton Co	HAL	882.83	29.05	25,646	0.07%	2.34%	0.00%	8.17%	0.01%
L3Harris Technologies Inc	LHX	189.71	237.87	45,125	0.12%	1.95%	0.00%	8.77%	0.01%
Healthpeak Properties Inc	DOC	699.29	22.87	15,993	0.04%	5.25%	0.00%	5.33%	0.00%
Insulet Corp	PODD	70.12	232.75	16,319				20.81%	
Catalent Inc	CTLT	181.46	60.57	10,991					
Fortive Corp	FTV	350.34	78.93	27,652	0.07%	0.41%	0.00%	10.49%	0.01%
Hershey Co/The	HSY	147.67	191.78	28,321	0.08%	2.86%	0.00%	2.21%	0.00%
Synchrony Financial	SYF	395.23	49.88	19,714		2.00%		64.00%	
Hormel Foods Corp	HRL	548.36	31.70	17,383	0.05%	3.56%	0.00%	6.23%	0.00%
Arthur J Gallagher & Co	AJG	219.10	281.37	61,648	0.17%	0.85%	0.00%	12.78%	0.02%
Mondelez International Inc	MDLZ	1,335.80	73.67	98,408	0.27%	2.55%	0.01%	6.93%	0.02%
CenterPoint Energy Inc	CNP	651.72	29.42	19,174	0.05%	2.86%	0.00%	7.62%	0.00%
Humana Inc	HUM	120.40	316.74	38,136		1.12%		-1.30%	
Willis Towers Watson PLC	WTW	101.56	294.53	29,911	0.08%	1.20%	0.00%	11.69%	0.01%
Illinois Tool Works Inc	ITW	296.90	262.07	77,809	0.21%	2.29%	0.00%	6.90%	0.01%
CDW Corp/DE	CDW	133.58	226.30	30,228	0.08%	1.10%	0.00%	7.02%	0.01%
Trane Technologies PLC	TT	225.67	388.73	87,725	0.24%	0.86%	0.00%	15.56%	0.04%
Interpublic Group of Cos Inc/The	IPG	375.59	31.63	11,880	0.03%	4.17%	0.00%	2.12%	0.00%
International Flavors & Fragrances Inc	IFF	255.66	104.93	26,826	0.07%	1.52%	0.00%	2.12%	0.00%
Generac Holdings Inc	GNRC	60.15	158.88	9,557	0.03%			7.00%	0.00%
NXP Semiconductors NV	NXPI	254.73	240.01	61,138	0.16%	1.69%	0.00%	5.89%	0.01%
Kellanova	K	344.69	80.71	27,820	0.07%	2.82%	0.00%	9.29%	0.01%
Broadridge Financial Solutions Inc	BR	116.71	215.03	25,096		1.64%			
Kimberly-Clark Corp	KMB	336.80	142.28	47,920	0.13%	3.43%	0.00%	8.36%	0.01%
Kimco Realty Corp	KIM	674.12	23.22	15,653	0.04%	4.13%	0.00%	3.63%	0.00%
Oracle Corp	ORCL	2,771.06	170.40	472,189	1.27%	0.94%	0.01%	11.95%	0.15%
Kroger Co/The	KR	723.49	57.30	41,456	0.11%	2.23%	0.00%	3.11%	0.00%
Lenmar Corp	LEN	241.70	187.48	45,314	0.12%	1.07%	0.00%	9.07%	0.01%
Eli Lilly & Co	LLY	950.43	885.94	842,020		0.59%		33.00%	
Charter Communications Inc	CHTR	142.74	324.08	46,260	0.12%			7.07%	0.01%
Loews Corp	L	219.52	79.05	17,353		0.32%			
Lowe's Cos Inc	LOW	567.29	270.85	153,652		1.70%		-0.19%	
Hubbell Inc	HUBB	53.68	428.35	22,994		1.14%			
IDEX Corp	IEX	75.70	214.50	16,238		1.29%			
Marsh & McLennan Cos Inc	MMC	491.76	223.09	109,706	0.30%	1.46%	0.00%	9.10%	0.03%
Masco Corp	MAS	218.25	83.94	18,320	0.05%	1.38%	0.00%	7.76%	0.00%
S&P Global Inc	SPGI	320.20	516.62	165,422	0.45%	0.70%	0.00%	14.00%	0.06%
Medtronic PLC	MDT	1,282.49	90.03	115,463	0.31%	3.11%	0.01%	5.66%	0.02%
Viatis Inc	VTRS	1,193.52	11.61	13,857		4.13%		-3.41%	
CVS Health Corp	CVS	1,257.98	62.88	79,102	0.21%	4.23%	0.01%	1.82%	0.00%
DuPont de Nemours Inc	DD	417.50	89.11	37,203	0.10%	1.71%	0.00%	2.50%	0.00%
Micron Technology Inc	MU	1,108.84	103.71	114,998		0.44%		53.55%	

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Out/	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Growth Rate	Cap-Weighted Long-Term Growth Est.
Motorola Solutions Inc	MSI	166.84	449.63	75,017	0.20%	0.87%	0.00%	9.36%	0.02%
Cboe Global Markets Inc	CBOE	104.63	204.87	21,436	0.06%	1.23%	0.00%	13.78%	0.01%
Newmont Corp	NEM	1,152.49	53.45	61,600		1.87%		40.36%	
NIKE Inc	NKE	1,201.46	88.40	106,209	0.29%	1.67%	0.00%	4.53%	0.01%
NiSource Inc	NI	448.51	34.65	15,541	0.04%	3.06%	0.00%	7.90%	0.00%
Norfolk Southern Corp	NSC	226.10	248.50	56,185	0.15%	2.17%	0.00%	9.92%	0.02%
Principal Financial Group Inc	PFG	231.58	85.90	19,893	0.05%	3.35%	0.00%	13.00%	0.01%
Eversource Energy	ES	357.39	68.05	24,320	0.07%	4.20%	0.00%	5.46%	0.00%
Northrop Grumman Corp	NOC	146.25	528.07	77,228	0.21%	1.56%	0.00%	8.68%	0.02%
Wells Fargo & Co	WFC	3,403.77	56.49	192,279	0.52%	2.83%	0.01%	7.95%	0.04%
Nucor Corp	NUE	237.34	150.34	35,681		1.44%		-1.63%	
Occidental Petroleum Corp	OXY	916.20	51.54	47,221		1.71%		24.00%	
Omnicom Group Inc	OMC	195.65	103.39	20,228	0.05%	2.71%	0.00%	5.45%	0.00%
ONEOK Inc	OKE	584.07	91.13	53,227	0.14%	4.35%	0.01%	2.95%	0.00%
Raymond James Financial Inc	RJF	205.94	122.01	25,127	0.07%	1.48%	0.00%	13.70%	0.01%
PG&E Corp	PCG	2,137.46	19.77	42,258	0.11%	0.20%	0.00%	9.84%	0.01%
Parker-Hannifin Corp	PH	128.67	631.82	81,296	0.22%	1.03%	0.00%	13.44%	0.03%
Rollins Inc	ROL	484.31	50.58	24,497	0.07%	1.19%	0.00%	14.00%	0.01%
PPL Corp	PPL	737.77	33.08	24,406	0.07%	3.11%	0.00%	7.01%	0.00%
ConocoPhillips	COP	1,161.25	105.28	122,256	0.33%	2.96%	0.01%	13.00%	0.04%
PulteGroup Inc	PHM	207.52	143.53	29,786	0.08%	0.56%	0.00%	8.99%	0.01%
Pinnacle West Capital Corp	PNW	113.61	88.59	10,065	0.03%	3.97%	0.00%	8.22%	0.00%
PNC Financial Services Group Inc/The	PNC	397.50	184.85	73,477	0.20%	3.46%	0.01%	18.04%	0.04%
PPG Industries Inc	PPG	233.30	132.46	30,903	0.08%	2.05%	0.00%	8.33%	0.01%
Progressive Corp/The	PGR	585.67	253.76	148,619		0.16%		39.61%	
Verato Corp	VLTO	247.11	111.86	27,641		0.32%			
Public Service Enterprise Group Inc	PEG	498.16	89.21	44,441	0.12%	2.69%	0.00%	7.47%	0.01%
Cooper Cos Inc/The	COO	199.16	110.34	21,975	0.06%			12.43%	0.01%
Edison International	EIX	383.93	87.09	33,436	0.09%	3.58%	0.00%	7.36%	0.01%
Schlumberger NV	SLB	1,419.84	41.95	59,562	0.16%	2.62%	0.00%	12.22%	0.02%
Charles Schwab Corp/The	SCHW	1,778.45	64.81	115,261	0.31%	1.54%	0.00%	14.04%	0.04%
Sherwin-Williams Co/The	SHW	252.26	381.67	96,279	0.26%	0.75%	0.00%	9.88%	0.03%
West Pharmaceutical Services Inc	WST	72.54	300.16	21,774	0.06%	0.27%	0.00%	2.89%	0.00%
J M Smucker Co/The	SJM	106.41	121.10	12,886	0.03%	3.57%	0.00%	6.07%	0.00%
Snap-on Inc	SNA	52.68	289.71	15,263	0.04%	2.57%	0.00%	3.83%	0.00%
AMETEK Inc	AME	231.54	171.71	39,757	0.11%	0.65%	0.00%	7.02%	0.01%
Uber Technologies Inc	UBER	2,100.94	75.16	157,906				60.59%	
Southern Co/The	SO	1,094.63	90.18	98,714	0.27%	3.19%	0.01%	7.23%	0.02%
Truist Financial Corp	TFC	1,339.14	42.77	57,275	0.15%	4.86%	0.01%	10.91%	0.02%
Southwest Airlines Co	LUV	599.16	29.63	17,753		2.43%			
W R Berkley Corp	WRB	380.55	56.73	21,589	0.06%	0.56%	0.00%	13.27%	0.01%
Stanley Black & Decker Inc	SWK	153.96	110.13	16,956		2.98%			
Public Storage	PSA	175.70	363.87	63,933	0.17%	3.30%	0.01%	2.48%	0.00%
Arista Networks Inc	ANET	314.15	383.82	120,578	0.32%			18.60%	0.06%
Sysco Corp	SY	491.52	78.06	38,368	0.10%	2.61%	0.00%	7.00%	0.01%
Corteva Inc	CTVA	687.80	58.79	40,436	0.11%	1.16%	0.00%	9.85%	0.01%
Texas Instruments Inc	TXN	913.05	206.57	188,608		2.63%		-2.86%	
Textron Inc	TXT	187.36	88.58	16,597	0.04%	0.09%	0.00%	10.05%	0.00%
Thermo Fisher Scientific Inc	TMO	382.00	618.57	236,291	0.64%	0.25%	0.00%	8.74%	0.06%
TJX Cos Inc/The	TJX	1,127.87	117.54	132,570	0.36%	1.28%	0.00%	6.20%	0.03%
Globe Life Inc	GL	89.82	105.91	9,513	0.03%	0.91%	0.00%	6.00%	0.00%
Johnson Controls International plc	JCI	668.01	77.61	51,845	0.14%	1.91%	0.00%	9.26%	0.01%
Ultra Beauty Inc	ULTA	47.12	389.12	18,333	0.05%			1.64%	0.00%
Union Pacific Corp	UNP	609.20	246.48	150,155	0.40%	2.17%	0.01%	10.27%	0.04%
Keysight Technologies Inc	KEYS	173.54	158.93	27,581				-1.19%	
UnitedHealth Group Inc	UNH	923.42	584.68	539,904	1.45%	1.44%	0.02%	10.44%	0.15%
Blackstone Inc	BX	720.08	153.13	110,265		2.14%		22.74%	
Marathon Oil Corp	MRO	559.38	26.63	14,896		1.65%		-5.00%	
Ventas Inc	VTR	413.15	63.68	26,310	0.07%	2.83%	0.00%	8.22%	0.01%
Labcorp Holdings Inc	LH	83.96	223.48	18,764	0.05%	1.29%	0.00%	8.45%	0.00%
Vulcan Materials Co	VMC	132.06	250.43	33,072	0.09%	0.73%	0.00%	19.00%	0.02%
Weyerhaeuser Co	WY	727.32	33.86	24,627		2.36%		-11.50%	
Williams Cos Inc/The	WMB	1,218.93	45.65	55,644	0.15%	4.16%	0.01%	4.28%	0.01%
Constellation Energy Corp	CEG	315.12	260.02	81,938		0.54%		24.22%	
WEC Energy Group Inc	WEC	316.08	96.18	30,400	0.08%	3.47%	0.00%	7.82%	0.01%
Adobe Inc	ADBE	440.20	517.78	227,927	0.61%			16.34%	0.10%
Vistra Corp	VST	343.56	118.54	40,726		0.74%			
AES Corp/The	AES	710.92	20.06	14,261		3.44%			
Expeditors International of Washington Inc	EXPD	141.13	131.40	18,544	0.05%	1.11%	0.00%	4.39%	0.00%
Amgen Inc	AMGN	537.33	322.21	173,133	0.47%	2.79%	0.01%	3.52%	0.02%
Apple Inc	AAPL	15,204.14	233.00	3,542,564	9.54%	0.43%	0.04%	8.04%	0.77%
Autodesk Inc	ADSK	215.00	275.48	59,228	0.16%			10.23%	0.02%
Cintas Corp	CTAS	403.26	205.88	83,023	0.22%	0.76%	0.00%	12.00%	0.03%
Comcast Corp	CMCSA	3,863.06	41.77	161,360	0.43%	2.97%	0.01%	8.16%	0.04%
Molson Coors Beverage Co	TAP	192.59	57.52	11,078	0.03%	3.06%	0.00%	5.29%	0.00%
KLA Corp	KLAC	133.98	774.41	103,752	0.28%	0.75%	0.00%	14.10%	0.04%
Marriott International Inc/MD	MAR	281.52	248.60	69,987	0.19%	1.01%	0.00%	4.25%	0.01%
Fiserv Inc	FI	575.73	179.65	103,429	0.28%			11.52%	0.03%
McCormick & Co Inc/MD	MCK	252.02	82.30	20,741	0.06%	2.04%	0.00%	5.83%	0.00%
PACCAR Inc	PCAR	524.22	98.68	51,730	0.14%	1.22%	0.00%	0.48%	0.00%
Costco Wholesale Corp	COST	443.34	886.52	393,025	1.06%	0.52%	0.01%	9.88%	0.10%
Stryker Corp	SYK	381.08	361.26	137,667	0.37%	0.89%	0.00%	8.60%	0.03%
Tyson Foods Inc	TSN	285.82	59.56	17,023		3.29%			
Lamb Weston Holdings Inc	LW	143.67	64.74	9,301	0.03%	2.22%	0.00%	2.16%	0.00%
Applied Materials Inc	AMAT	824.40	202.05	166,571	0.45%	0.79%	0.00%	9.28%	0.04%
Cardinal Health Inc	CAH	241.96	110.01	26,619	0.07%	1.84%	0.00%	9.84%	0.01%
Cincinnati Financial Corp	CINF	156.24	136.12	21,267	0.06%	2.38%	0.00%	7.83%	0.00%
Paramount Global	PARA	626.01	10.62	6,648		1.88%		49.00%	
DR Horton Inc	DHI	326.04	190.77	62,199	0.17%	0.63%	0.00%	8.27%	0.01%
Electronic Arts Inc	EA	264.20	143.44	37,897	0.10%	0.53%	0.00%	12.97%	0.01%

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outs'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Growth Rate	Cap-Weighted Long-Term Growth Est.
Erie Indemnity Co	ERIE	46.19	539.82	24,934		0.94%			
Fair Isaac Corp	FICO	24.52	1,943.52	47,653				23.00%	
Fastenal Co	FAST	572.65	71.42	40,898		2.18%			
M&T Bank Corp	MTB	167.00	178.12	29,746	0.08%	3.03%	0.00%	3.87%	0.00%
Xcel Energy Inc	XEL	557.50	65.30	36,405	0.10%	3.35%	0.00%	7.10%	0.01%
Fifth Third Bancorp	FITB	676.80	42.84	28,994		3.45%		25.00%	
Gilead Sciences Inc	GILD	1,244.99	83.84	104,380	0.28%	3.67%	0.01%	15.38%	0.04%
Hasbro Inc	HAS	139.41	72.32	10,082		3.87%		34.01%	
Huntington Bancshares Inc/OH	HBAN	1,452.43	14.70	21,351	0.06%	4.22%	0.00%	3.32%	0.00%
Welltower Inc	WELL	609.15	128.03	77,989	0.21%	2.09%	0.00%	15.65%	0.03%
Biogen Inc	BIIB	145.66	193.84	28,235	0.08%			6.10%	0.00%
Northern Trust Corp	NTRS	201.64	90.03	18,153	0.05%	3.33%	0.00%	10.11%	0.00%
Packaging Corp of America	PKG	89.81	215.40	19,346	0.05%	2.32%	0.00%	5.83%	0.00%
Paychex Inc	PAYX	359.74	134.19	48,274	0.13%	2.92%	0.00%	7.54%	0.01%
QUALCOMM Inc	QCOM	1,114.00	170.05	189,436	0.51%	2.00%	0.01%	10.64%	0.05%
Ross Stores Inc	ROST	331.76	150.51	49,934	0.13%	0.98%	0.00%	8.85%	0.01%
IDEXX Laboratories Inc	IDXX	82.31	505.22	41,583	0.11%			11.25%	0.01%
Starbucks Corp	SBUX	1,133.20	97.49	110,476	0.30%	2.34%	0.01%	9.67%	0.03%
KeyCorp	KEY	928.12	16.75	15,546	0.04%	4.90%	0.00%	20.00%	0.01%
Fox Corp	FOXA	224.65	42.33	9,509	0.03%	1.28%	0.00%	8.68%	0.00%
Fox Corp	FOX	235.58	38.80	9,141	0.02%	1.39%	0.00%	8.68%	0.00%
State Street Corp	STT	298.62	87.71	26,192	0.07%	3.47%	0.00%	8.82%	0.01%
Norwegian Cruise Line Holdings Ltd	NCLH	439.69	20.51	9,018				50.58%	
US Bancorp	USB	1,560.51	45.73	71,362	0.19%	4.37%	0.01%	5.00%	0.01%
A O Smith Corp	AOS	119.96	89.83	10,776		1.42%			
Gen Digital Inc	GEN	615.53	27.43	16,884	0.05%	1.82%	0.00%	10.49%	0.00%
T Rowe Price Group Inc	TROW	222.60	108.93	24,248	0.07%	4.55%	0.00%	7.30%	0.00%
Waste Management Inc	WM	401.32	207.60	83,313	0.22%	1.45%	0.00%	13.29%	0.03%
Palantir Technologies Inc	PLTR	2,142.32	37.20	79,694				30.06%	
Constellation Brands Inc	STZ	182.19	257.69	46,949	0.13%	1.57%	0.00%	11.27%	0.01%
Invesco Ltd	IVZ	450.03	17.56	7,903	0.02%	4.67%	0.00%	9.64%	0.00%
Intuit Inc	INTU	280.29	621.00	174,061	0.47%	0.67%	0.00%	18.79%	0.09%
Morgan Stanley	MS	1,620.89	104.24	168,961	0.46%	3.55%	0.02%	9.60%	0.04%
Microchip Technology Inc	MCHP	536.51	80.29	43,076		2.26%		-10.99%	
Crowdstrike Holdings Inc	CRWD	232.72	280.47	65,270				35.70%	
Chubb Ltd	CB	403.93	288.39	116,491	0.31%	1.26%	0.00%	2.20%	0.01%
Hologic Inc	HOLX	232.27	81.46	18,921	0.05%			8.86%	0.00%
Citizens Financial Group Inc	CFG	448.30	41.07	18,412		4.09%			
Jabil Inc	JBL	113.45	119.83	13,594	0.04%	0.27%	0.00%	10.82%	0.00%
O'Reilly Automotive Inc	ORLY	58.01	1,151.60	66,800	0.18%			10.21%	0.02%
Allstate Corp/The	ALL	264.04	189.65	50,075		1.94%		168.00%	
Equity Residential	EQR	379.14	74.46	28,230	0.08%	3.63%	0.00%	2.83%	0.00%
BorgWarner Inc	BWA	227.77	36.29	8,266	0.02%	1.21%	0.00%	4.40%	0.00%
Keurig Dr Pepper Inc	KDP	1,356.09	37.48	50,826	0.14%	2.45%	0.00%	6.90%	0.01%
Host Hotels & Resorts Inc	HST	702.44	17.60	12,363		4.55%		-1.83%	
Incyte Corp	INCY	192.60	66.10	12,731				33.16%	
Simon Property Group Inc	SPG	326.04	169.02	55,106	0.15%	4.85%	0.01%	1.42%	0.00%
Eastman Chemical Co	EMN	116.86	111.95	13,082	0.04%	2.89%	0.00%	6.10%	0.00%
AvalonBay Communities Inc	AVB	142.22	225.25	32,034	0.09%	3.02%	0.00%	4.93%	0.00%
Prudential Financial Inc	PRU	357.00	121.10	43,233	0.12%	4.29%	0.01%	9.48%	0.01%
United Parcel Service Inc	UPS	732.51	136.34	99,870	0.27%	4.78%	0.01%	0.60%	0.00%
Walgreens Boots Alliance Inc	WBA	863.28	8.96	7,735		11.16%		-24.69%	
STERIS PLC	STE	98.62	242.54	23,919		0.94%			
McKesson Corp	MCK	129.68	494.42	64,115	0.17%	0.57%	0.00%	11.18%	0.02%
Lockheed Martin Corp	LMT	238.36	584.56	139,335	0.38%	2.16%	0.01%	2.11%	0.01%
Cencora Inc	COR	196.01	225.08	44,117	0.12%	0.91%	0.00%	9.84%	0.01%
Capital One Financial Corp	COF	381.86	149.73	57,175	0.15%	1.60%	0.00%	12.30%	0.02%
Campbell Soup Co	CPB	298.11	48.92	14,583	0.04%	3.03%	0.00%	5.71%	0.00%
Waters Corp	WAT	59.36	359.89	21,364	0.06%			7.80%	0.00%
Nordson Corp	NDSN	57.18	262.63	15,018		1.19%			
Dollar Tree Inc	DLTR	214.99	70.32	15,118	0.04%			6.86%	0.00%
Darden Restaurants Inc	DRI	117.50	164.13	19,285	0.05%	3.41%	0.00%	9.75%	0.01%
Evergy Inc	EVER	229.75	62.01	14,247	0.04%	4.14%	0.00%	5.35%	0.00%
Match Group Inc	MTCH	257.90	37.84	9,759				36.15%	
Domino's Pizza Inc	DPZ	34.97	430.14	15,043	0.04%	1.40%	0.00%	12.56%	0.01%
NVR Inc	NVR	3.08	9,811.80	30,201	0.08%			7.60%	0.01%
NetApp Inc	NTAP	204.78	123.51	25,293	0.07%	1.68%	0.00%	5.34%	0.00%
Old Dominion Freight Line Inc	ODFL	214.30	198.64	42,568	0.11%	0.52%	0.00%	2.77%	0.00%
DaVita Inc	DVA	83.90	163.93	13,754	0.04%			20.00%	0.01%
Hartford Financial Services Group Inc/The	HIG	293.01	117.61	34,461	0.09%	1.60%	0.00%	12.37%	0.01%
Iron Mountain Inc	IRM	293.34	118.83	34,857		2.41%			
Estee Lauder Cos Inc/The	EL	233.43	99.69	23,271	0.06%	2.65%	0.00%	14.58%	0.01%
Cadence Design Systems Inc	CDNS	273.82	271.03	74,213	0.20%			16.20%	0.03%
Tyler Technologies Inc	TYL	42.67	583.72	24,909					
Universal Health Services Inc	UHS	59.46	229.01	13,617	0.04%	0.35%	0.00%	15.50%	0.01%
Skyworks Solutions Inc	SKKS	159.72	98.77	15,775		2.83%		-2.57%	
Quest Diagnostics Inc	DGX	111.32	155.25	17,282	0.05%	1.93%	0.00%	6.05%	0.00%
Rockwell Automation Inc	ROK	113.47	268.46	30,461	0.08%	1.86%	0.00%	1.73%	0.00%
Kraft Heinz Co/The	KHC	1,209.08	35.11	42,451	0.11%	4.56%	0.01%	2.51%	0.00%
American Tower Corp	AMT	467.08	232.56	108,625	0.29%	2.79%	0.01%	12.31%	0.04%
Regeneron Pharmaceuticals Inc	REGN	108.42	1,051.24	113,972	0.31%			8.67%	0.03%
Amazon.com Inc	AMZN	10,495.57	186.33	1,955,639				34.66%	
Jack Henry & Associates Inc	JKHY	72.92	176.54	12,873	0.03%	1.25%	0.00%	9.73%	0.00%
Ralph Lauren Corp	RL	40.06	193.87	7,766	0.02%	1.70%	0.00%	11.05%	0.00%
BXP Inc	BXP	157.93	80.46	12,707	0.03%	4.87%	0.00%	0.90%	0.00%
Amphenol Corp	APH	1,204.29	65.16	78,471	0.21%	1.01%	0.00%	16.86%	0.04%
Howmet Aerospace Inc	HWM	408.15	100.25	40,917		0.32%		22.11%	
Valero Energy Corp	VLO	320.38	135.03	43,261		3.17%		-24.00%	
Synopsys Inc	SNPS	153.61	506.39	77,789	0.21%			16.33%	0.03%
CH Robinson Worldwide Inc	CHRW	117.28	110.37	12,945	0.03%	2.25%	0.00%	17.48%	0.01%

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Out/ g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Growth Rate	Cap-Weighted Long-Term Growth Est.
Accenture PLC	ACN	626.38	353.48	221,414	0.60%	1.67%	0.01%	8.18%	0.05%
TransDigm Group Inc	TDG	56.11	1,427.13	80,078	0.22%			19.57%	0.04%
Yum! Brands Inc	YUM	281.17	139.71	39,282	0.11%	1.92%	0.00%	11.41%	0.01%
Prologis Inc	PLD	925.91	126.28	116,924	0.31%	3.04%	0.01%	5.36%	0.02%
FirstEnergy Corp	FE	575.92	44.35	25,542	0.07%	3.83%	0.00%	7.02%	0.00%
VeriSign Inc	VRSN	97.60	189.96	18,540					
Quanta Services Inc	PWR	147.33	298.06	43,913		0.12%			
Henry Schein Inc	HSIC	126.71	72.90	9,237	0.02%			9.01%	0.00%
Ameren Corp	AEE	266.51	87.46	23,309	0.06%	3.06%	0.00%	6.08%	0.00%
ANSYS Inc	ANSS	87.39	318.63	27,844					
FactSet Research Systems Inc	FDS	38.04	459.85	17,493	0.05%	0.90%	0.00%	9.17%	0.00%
NVIDIA Corp	NVDA	24,530.00	121.44	2,978,923		0.03%		44.35%	
Cognizant Technology Solutions Corp	CTSH	495.66	77.18	38,255	0.10%	1.55%	0.00%	6.20%	0.01%
Intuitive Surgical Inc	ISRG	355.35	491.27	174,575	0.47%			17.51%	0.08%
Take-Two Interactive Software Inc	TTWO	175.28	153.71	26,943				60.49%	
Republic Services Inc	RSG	314.07	200.84	63,077	0.17%	1.16%	0.00%	10.33%	0.02%
eBay Inc	EBAY	489.00	65.11	31,839	0.09%	1.66%	0.00%	10.12%	0.01%
Goldman Sachs Group Inc/The	GS	315.80	495.11	156,356	0.42%	2.42%	0.01%	14.20%	0.06%
SBA Communications Corp	SBAC	107.47	240.70	25,869	0.07%	1.63%	0.00%	15.96%	0.01%
Sempra	SRE	633.15	83.63	52,950	0.14%	2.97%	0.00%	5.35%	0.01%
Moody's Corp	MCO	182.10	474.59	86,423	0.23%	0.72%	0.00%	13.00%	0.03%
ON Semiconductor Corp	ON	428.36	72.61	31,103	0.08%			1.28%	0.00%
Booking Holdings Inc	BKNG	33.52	4,212.12	141,207	0.38%	0.83%	0.00%	14.59%	0.06%
F5 Inc	FFIV	58.28	220.20	12,834	0.03%			7.83%	0.00%
Akamai Technologies Inc	AKAM	151.53	100.95	15,297	0.04%			6.12%	0.00%
Charles River Laboratories International Inc	CRL	51.63	196.97	10,170	0.03%			5.20%	0.00%
MarketAxess Holdings Inc	MKTX	37.75	256.20	9,672	0.03%	1.16%	0.00%	4.02%	0.00%
Devon Energy Corp	DVN	626.20	39.12	24,497	0.07%	2.25%	0.00%	6.60%	0.00%
Bio-Techne Corp	TECH	158.67	79.93	12,682	0.03%	0.40%	0.00%	5.00%	0.00%
Alphabet Inc	GOOGL	5,859.00	165.85	971,715	2.62%	0.48%	0.01%	15.01%	0.39%
Teleflex Inc	TFX	47.12	247.32	11,653	0.03%	0.55%	0.00%	7.95%	0.00%
Allegion plc	ALLE	87.13	145.74	12,698	0.03%	1.32%	0.00%	7.73%	0.00%
Netflix Inc	NFLX	429.17	709.27	304,394				35.72%	
Agilent Technologies Inc	A	287.33	148.24	42,595	0.11%	0.64%	0.00%	5.74%	0.01%
Warner Bros Discovery Inc	WBD	2,451.91	8.25	20,228				28.63%	
Elevance Health Inc	ELV	231.89	520.00	120,581	0.32%	1.25%	0.00%	11.79%	0.04%
Trimble Inc	TRMB	244.21	62.09	15,163					
CME Group Inc	CME	360.09	220.65	79,455	0.21%	2.08%	0.00%	2.96%	0.01%
Juniper Networks Inc	JNPR	329.16	38.98	12,831	0.03%	2.26%	0.00%	6.00%	0.00%
BlackRock Inc	BLK	148.13	949.51	140,649	0.38%	2.15%	0.01%	9.76%	0.04%
DTE Energy Co	DTE	206.93	128.41	26,571	0.07%	3.18%	0.00%	10.27%	0.01%
Nasdaq Inc	NDAQ	575.94	73.01	42,049	0.11%	1.31%	0.00%	10.76%	0.01%
Celanese Corp	CE	109.26	135.96	14,856	0.04%	2.06%	0.00%	0.56%	0.00%
Philip Morris International Inc	PM	1,554.80	121.40	188,753	0.51%	4.45%	0.02%	9.36%	0.05%
Salesforce Inc	CRM	956.00	273.71	261,667	0.70%	0.58%	0.00%	17.52%	0.12%
Ingersoll Rand Inc	IR	403.48	98.16	39,606		0.08%			
Huntington Ingalls Industries Inc	HI	39.22	264.38	10,368	0.03%	1.97%	0.00%	7.62%	0.00%
Roper Technologies Inc	ROP	107.20	556.44	59,650		0.54%			
MetLife Inc	MET	700.33	82.48	57,763	0.16%	2.64%	0.00%	14.21%	0.02%
Tapestry Inc	TPR	232.60	46.98	10,928	0.03%	2.98%	0.00%	5.52%	0.00%
CSX Corp	CSX	1,938.74	34.53	66,945	0.18%	1.39%	0.00%	8.83%	0.02%
Edwards Lifesciences Corp	EW	602.40	65.99	39,752	0.11%			8.56%	0.01%
Ameriprise Financial Inc	AMP	98.19	469.81	46,130	0.12%	1.26%	0.00%	16.59%	0.02%
Zebra Technologies Corp	ZBRA	51.58	370.32	19,101					
Zimmer Biomet Holdings Inc	ZBH	203.65	107.95	21,984	0.06%	0.89%	0.00%	6.46%	0.00%
CBRE Group Inc	CBRE	306.43	124.48	38,145					
Camden Property Trust	CPT	106.64	123.53	13,173	0.04%	3.34%	0.00%	1.87%	0.00%
Mastercard Inc	MA	916.71	493.80	452,672	1.22%	0.53%	0.01%	15.18%	0.19%
CarMax Inc	KMX	154.92	77.38	11,988	0.03%			17.91%	0.01%
Intercontinental Exchange Inc	ICE	574.14	160.64	92,230	0.25%	1.12%	0.00%	9.95%	0.02%
Smurfit WestRock PLC	SW	519.96	49.42	25,696	0.07%	2.45%	0.00%	1.00%	0.00%
Fidelity National Information Services Inc	FIS	545.57	83.75	45,691		1.72%		22.20%	
Chipotle Mexican Grill Inc	CMG	1,369.48	57.62	78,909				22.64%	
Wynn Resorts Ltd	WYNN	110.99	95.88	10,642		1.04%		-12.14%	
Live Nation Entertainment Inc	LYV	232.11	109.49	25,414				32.54%	
Assurant Inc	AIZ	51.79	198.86	10,300	0.03%	1.45%	0.00%	7.14%	0.00%
NRG Energy Inc	NRG	206.38	91.10	18,801	0.05%	1.79%	0.00%	4.00%	0.00%
Regions Financial Corp	RF	915.13	23.33	21,350	0.06%	4.29%	0.00%	4.68%	0.00%
Monster Beverage Corp	MNST	979.54	52.17	51,103	0.14%			10.18%	0.01%
Mosaic Co/The	MOS	318.64	26.78	8,533		3.14%		-21.74%	
Baker Hughes Co	BKR	993.42	36.15	35,912		2.32%		27.42%	
Expedia Group Inc	EXPE	124.66	148.02	18,452	0.05%			19.59%	0.01%
CF Industries Holdings Inc	CF	180.41	85.80	15,479		2.33%		-9.54%	
Leidos Holdings Inc	LDOS	134.71	163.00	21,958	0.06%	0.93%	0.00%	11.76%	0.01%
APA Corp	APA	369.91	24.46	9,048		4.09%		-7.60%	
Alphabet Inc	GOOG	5,585.00	167.19	933,756	2.52%	0.48%	0.01%	15.01%	0.38%
First Solar Inc	FSLR	107.05	249.44	26,702				41.25%	
Discover Financial Services	DFS	251.07	140.29	35,223	0.09%	2.00%	0.00%	11.62%	0.01%
Visa Inc	V	1,670.45	274.95	459,289	1.24%	0.76%	0.01%	12.33%	0.15%
Mid-America Apartment Communities Inc	MAA	116.88	158.90	18,572	0.05%	3.70%	0.00%	0.65%	0.00%
Xylem Inc/NY	XYL	242.89	135.03	32,798		1.07%			
Marathon Petroleum Corp	MPC	334.68	162.91	54,523		2.03%		-13.00%	
Advanced Micro Devices Inc	AMD	1,618.48	164.08	265,561				25.66%	
Tractor Supply Co	TSCO	107.87	290.93	31,382	0.08%	1.51%	0.00%	5.68%	0.00%
ResMed Inc	RMD	146.93	244.12	35,869	0.10%	0.87%	0.00%	11.49%	0.01%
Mettler-Toledo International Inc	MTD	21.36	1,499.70	32,029	0.09%			9.15%	0.01%
Jacobs Solutions Inc	J	124.25	130.90	16,264	0.04%	0.89%	0.00%	10.87%	0.00%
Copart Inc	CPRT	963.29	52.40	50,476					
VICI Properties Inc	VICI	1,043.14	33.31	34,747	0.09%	5.19%	0.00%	1.83%	0.00%
Fortinet Inc	FTNT	764.91	77.55	59,319	0.16%			8.66%	0.01%

		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Bloomberg Growth Rate	Cap-Weighted Long-Term Growth Est.
Albemarle Corp	ALB	117.53	94.71	11,132		1.71%		35.42%	
Moderna Inc	MRNA	384.40	66.83	25,689	0.07%			16.57%	0.01%
Essex Property Trust Inc	ESS	64.22	295.42	18,971	0.05%	3.32%	0.00%	3.49%	0.00%
CoStar Group Inc	CSGP	409.82	75.44	30,917					
Realty Income Corp	O	870.87	63.16	55,001	0.15%	5.01%	0.01%	3.85%	0.01%
Westinghouse Air Brake Technologies Corp	WAB	175.18	181.77	31,843	0.09%	0.44%	0.00%	16.12%	0.01%
Pool Corp	POOL	38.26	376.80	14,416		1.27%		-0.04%	
Western Digital Corp	WDC	343.45	68.29	23,454				-10.00%	
PepsiCo Inc	PEP	1,373.57	170.05	233,576	0.63%	3.19%	0.02%	6.97%	0.04%
TE Connectivity PLC	TEL	380.37	150.99	57,432	0.15%	1.72%	0.00%	7.43%	0.01%
Diamondback Energy Inc	FANG	295.69	172.40	50,978	0.14%	5.43%	0.01%	8.34%	0.01%
Palo Alto Networks Inc	PANW	325.60	341.80	111,290	0.30%			11.52%	0.03%
ServiceNow Inc	NOW	206.00	894.39	184,244					
Church & Dwight Co Inc	CHD	244.82	104.72	25,637	0.07%	1.08%	0.00%	7.35%	0.01%
Federal Realty Investment Trust	FRT	83.67	113.87	9,528	0.03%	3.86%	0.00%	4.97%	0.00%
Amentum Holdings Inc	AMTM	153.28	32.25	4,943					
MGM Resorts International	MGM	303.77	39.09	11,874				20.60%	
American Electric Power Co Inc	AEP	532.12	102.60	54,596	0.15%	3.43%	0.01%	6.25%	0.01%
Invitation Homes Inc	INVH	612.59	35.26	21,600	0.06%	3.18%	0.00%	4.16%	0.00%
PTC Inc	PTC	120.14	180.66	21,704	0.06%			14.76%	0.01%
JB Hunt Transport Services Inc	JBHT	101.99	172.33	17,575	0.05%	1.00%	0.00%	9.73%	0.00%
Lam Research Corp	LRCX	129.61	816.08	105,773	0.28%	1.13%	0.00%	16.29%	0.05%
Mohawk Industries Inc	MHK	63.12	160.68	10,142	0.03%			4.45%	0.00%
Pentair PLC	PNR	165.50	97.79	16,184	0.04%	0.94%	0.00%	12.50%	0.01%
GE Healthcare Technologies Inc	GEHC	456.66	93.85	42,858	0.12%	0.13%	0.00%	10.92%	0.01%
Vertex Pharmaceuticals Inc	VRTX	258.10	465.08	120,038	0.32%			11.00%	0.04%
Amcpr PLC	AMCR	1,445.34	11.33	16,376	0.04%	4.41%	0.00%	3.71%	0.00%
Meta Platforms Inc	META	2,184.73	572.44	1,250,626	3.37%	0.35%	0.01%	19.80%	0.67%
T-Mobile US Inc	TMUS	1,166.78	206.36	240,778	0.65%	1.71%	0.01%	5.00%	0.03%
United Rentals Inc	URI	66.14	809.73	53,552	0.14%	0.81%	0.00%	7.45%	0.01%
Honeywell International Inc	HON	649.67	206.71	134,293	0.36%	2.19%	0.01%	8.65%	0.03%
Alexandria Real Estate Equities Inc	ARE	174.93	118.75	20,772	0.06%	4.38%	0.00%	3.03%	0.00%
Delta Air Lines Inc	DAL	645.42	50.79	32,781	0.09%	1.18%	0.00%	8.44%	0.01%
Seagate Technology Holdings PLC	STX	210.49	109.53	23,055		2.56%			
United Airlines Holdings Inc	UAL	328.80	57.06	18,761	0.05%			2.27%	0.00%
News Corp	NWS	190.08	27.95	5,313		0.72%			
Centene Corp	CNC	526.03	75.28	39,600	0.11%			4.40%	0.00%
Martin Marietta Materials Inc	MLM	61.12	538.25	32,896	0.09%	0.59%	0.00%	7.47%	0.01%
Teradyne Inc	TER	163.18	133.93	21,854	0.06%	0.36%	0.00%	16.14%	0.01%
PayPal Holdings Inc	PYPL	1,022.33	78.03	79,773	0.21%			12.03%	0.03%
Tesla Inc	TESLA	3,194.64	261.63	835,814				-11.00%	
Arch Capital Group Ltd	ACGL	376.06	111.88	42,073	0.11%			6.13%	0.01%
KKR & Co Inc	KKR	887.44	130.58	115,882		0.54%		29.00%	
Dow Inc	DOW	703.27	54.63	38,420		5.13%		-2.67%	
Everest Group Ltd	EG	43.27	391.83	16,956	0.05%	2.04%	0.00%	2.33%	0.00%
Teledyne Technologies Inc	TDY	46.78	437.66	20,475	0.06%			7.34%	0.00%
GE Vernova Inc	GEV	274.80	254.98	70,069				80.76%	
News Corp	NWSA	379.53	26.63	10,107		0.75%			
Exelon Corp	EXC	999.74	40.55	40,539	0.11%	3.75%	0.00%	5.31%	0.01%
Global Payments Inc	GP	254.44	102.42	26,059	0.07%	0.98%	0.00%	8.80%	0.01%
Crown Castle Inc	CCI	434.57	118.63	51,553	0.14%	5.28%	0.01%	1.13%	0.00%
Aptiv PLC	APT	265.76	72.01	19,137	0.05%			16.91%	0.01%
Align Technology Inc	ALGN	74.70	254.32	18,997	0.05%			9.53%	0.00%
Kenvue Inc	KVUE	1,915.17	23.13	44,298	0.12%	3.55%	0.00%	13.58%	0.02%
Targa Resources Corp	TRGP	219.08	148.01	32,426	0.09%	2.03%	0.00%	16.74%	0.01%
Bunge Global SA	BG	141.65	96.64	13,689		2.81%		-8.59%	
Deckers Outdoor Corp	DECK	152.46	159.45	24,310	0.07%			10.80%	0.01%
LKQ Corp	LKQ	263.26	39.92	10,509		3.01%			
Zoetis Inc	ZTS	453.05	195.38	88,517	0.24%	0.88%	0.00%	10.36%	0.02%
Digital Realty Trust Inc	DLR	327.41	161.83	52,985	0.14%	3.02%	0.00%	3.21%	0.00%
Equinix Inc	EQIX	94.95	887.63	84,276	0.23%	1.92%	0.00%	14.03%	0.03%
Las Vegas Sands Corp	LVS	736.43	50.34	37,072		1.59%			
Molina Healthcare Inc	MOH	58.60	344.56	20,191	0.05%			11.98%	0.01%

Notes:
 [1] Equals sum of Col. [9]
 [2] Equals sum of Col. [11]
 [3] Equals ([1] x (1 + (0.5 x [2]))) + [2]
 [4] Source: Bloomberg Professional as of September 30, 2024
 [5] Source: Bloomberg Professional as of September 30, 2024
 [6] Equals [4] x [5]
 [7] Equals weight in the S&P 500
 [8] Source: Bloomberg Professional as of September 30, 2024
 [9] Equals [7] x [8]
 [10] Source: Bloomberg Professional as of September 30, 2024
 [11] Equals [7] x [10]

BOND YIELD PLUS RISK PREMIUM

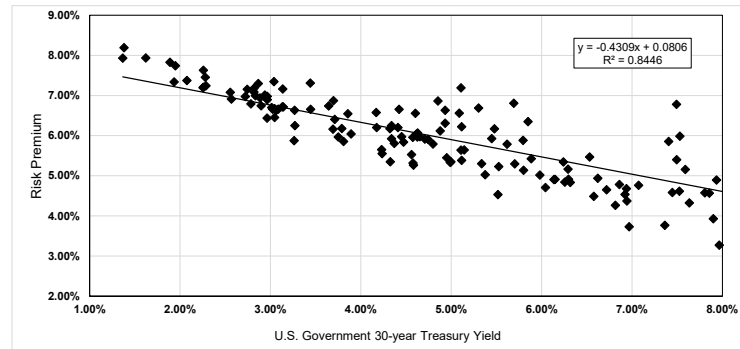
	[1]	[2]	[3]
Quarter	Average Authorized VI Electric ROE	U.S. Govt. 30- year Treasury	Risk Premium
1980.1	13.97%	11.66%	2.31%
1980.2	14.25%	10.52%	3.73%
1980.3	14.30%	10.85%	3.45%
1980.4	14.32%	12.10%	2.23%
1981.1	14.82%	12.53%	2.28%
1981.2	15.05%	13.24%	1.81%
1981.3	15.31%	14.13%	1.17%
1981.4	15.59%	13.85%	1.74%
1982.1	15.71%	13.96%	1.75%
1982.2	15.60%	13.52%	2.08%
1982.3	15.85%	12.79%	3.06%
1982.4	16.03%	10.75%	5.28%
1983.1	15.54%	10.71%	4.83%
1983.2	15.13%	10.65%	4.48%
1983.3	15.39%	11.62%	3.77%
1983.4	15.37%	11.74%	3.63%
1984.1	15.06%	12.04%	3.02%
1984.2	15.18%	13.18%	2.00%
1984.3	15.38%	12.69%	2.69%
1984.4	15.69%	11.70%	3.99%
1985.1	15.48%	11.58%	3.90%
1985.2	15.27%	11.00%	4.27%
1985.3	14.84%	10.55%	4.29%
1985.4	15.11%	10.04%	5.07%
1986.1	14.42%	8.77%	5.65%
1986.2	14.27%	7.49%	6.78%
1986.3	13.26%	7.40%	5.86%
1986.4	13.52%	7.53%	5.99%
1987.1	12.90%	7.49%	5.40%
1987.2	13.17%	8.53%	4.64%
1987.3	13.14%	9.06%	4.08%
1987.4	12.76%	9.23%	3.53%
1988.1	12.74%	8.63%	4.11%
1988.2	12.70%	9.06%	3.63%
1988.3	12.78%	9.18%	3.60%
1988.4	12.97%	8.97%	4.00%
1989.1	13.02%	9.04%	3.99%
1989.2	13.22%	8.70%	4.52%
1989.3	12.38%	8.12%	4.26%
1989.4	12.83%	7.93%	4.90%
1990.1	12.62%	8.44%	4.19%
1990.2	12.85%	8.65%	4.20%
1990.3	12.54%	8.79%	3.75%
1990.4	12.68%	8.56%	4.12%
1991.1	12.66%	8.20%	4.46%
1991.2	12.67%	8.31%	4.36%
1991.3	12.49%	8.19%	4.30%
1991.4	12.42%	7.85%	4.57%
1992.1	12.38%	7.81%	4.58%
1992.2	11.83%	7.90%	3.93%
1992.3	12.03%	7.45%	4.59%
1992.4	12.14%	7.52%	4.62%
1993.1	11.84%	7.07%	4.76%
1993.2	11.64%	6.86%	4.78%
1993.3	11.15%	6.32%	4.84%
1993.4	11.04%	6.14%	4.91%
1994.1	11.07%	6.58%	4.49%
1994.2	11.13%	7.36%	3.77%
1994.3	12.75%	7.59%	5.16%
1994.4	11.24%	7.96%	3.28%
1995.1	11.96%	7.63%	4.33%
1995.2	11.32%	6.94%	4.37%

BOND YIELD PLUS RISK PREMIUM

	[1]	[2]	[3]
Quarter	Average Authorized VI Electric ROE	U.S. Govt. 30- year Treasury	Risk Premium
1995.3	11.37%	6.72%	4.65%
1995.4	11.58%	6.24%	5.35%
1996.1	11.46%	6.29%	5.17%
1996.2	11.46%	6.92%	4.54%
1996.3	10.70%	6.97%	3.73%
1996.4	11.56%	6.62%	4.94%
1997.1	11.08%	6.82%	4.26%
1997.2	11.62%	6.94%	4.68%
1997.3	12.00%	6.53%	5.47%
1997.4	11.06%	6.15%	4.91%
1998.1	11.31%	5.88%	5.43%
1998.2	12.20%	5.85%	6.35%
1998.3	11.65%	5.48%	6.17%
1998.4	12.30%	5.11%	7.19%
1999.1	10.40%	5.37%	5.03%
1999.2	10.94%	5.80%	5.14%
1999.3	10.75%	6.04%	4.71%
1999.4	11.10%	6.26%	4.84%
2000.1	11.21%	6.30%	4.92%
2000.2	11.00%	5.98%	5.02%
2000.3	11.68%	5.79%	5.89%
2000.4	12.50%	5.69%	6.81%
2001.1	11.38%	5.45%	5.93%
2001.2	11.00%	5.70%	5.30%
2001.3	10.76%	5.53%	5.23%
2001.4	11.99%	5.30%	6.69%
2002.1	10.05%	5.52%	4.53%
2002.2	11.41%	5.62%	5.79%
2002.3	11.65%	5.09%	6.56%
2002.4	11.57%	4.93%	6.63%
2003.1	11.72%	4.85%	6.87%
2003.2	11.16%	4.60%	6.56%
2003.3	10.50%	5.11%	5.39%
2003.4	11.34%	5.11%	6.23%
2004.1	11.00%	4.88%	6.12%
2004.2	10.64%	5.34%	5.30%
2004.3	10.75%	5.11%	5.64%
2004.4	11.24%	4.93%	6.31%
2005.1	10.63%	4.71%	5.92%
2005.2	10.31%	4.47%	5.84%
2005.3	11.08%	4.42%	6.66%
2005.4	10.63%	4.65%	5.98%
2006.1	10.70%	4.63%	6.07%
2006.2	10.79%	5.14%	5.64%
2006.3	10.35%	5.00%	5.35%
2006.4	10.65%	4.74%	5.91%
2007.1	10.59%	4.80%	5.79%
2007.2	10.33%	4.99%	5.34%
2007.3	10.40%	4.95%	5.45%
2007.4	10.65%	4.61%	6.04%
2008.1	10.62%	4.41%	6.21%
2008.2	10.54%	4.57%	5.96%
2008.3	10.43%	4.45%	5.98%
2008.4	10.39%	3.64%	6.74%
2009.1	10.75%	3.44%	7.31%
2009.2	10.75%	4.17%	6.58%
2009.3	10.50%	4.32%	6.18%
2009.4	10.59%	4.34%	6.25%
2010.1	10.59%	4.62%	5.97%
2010.2	10.18%	4.37%	5.81%
2010.3	10.40%	3.86%	6.55%
2010.4	10.38%	4.17%	6.20%
2011.1	10.09%	4.56%	5.53%
2011.2	10.26%	4.34%	5.92%
2011.3	10.57%	3.70%	6.88%
2011.4	10.39%	3.04%	7.35%
2012.1	10.30%	3.14%	7.17%

BOND YIELD PLUS RISK PREMIUM

	[1]	[2]	[3]
Quarter	Average Authorized VI Electric ROE	U.S. Govt. 30- year Treasury	Risk Premium
2012.2	9.95%	2.94%	7.01%
2012.3	9.90%	2.74%	7.16%
2012.4	10.16%	2.86%	7.30%
2013.1	9.85%	3.13%	6.72%
2013.2	9.86%	3.14%	6.72%
2013.3	10.12%	3.71%	6.41%
2013.4	9.97%	3.79%	6.18%
2014.1	9.86%	3.69%	6.16%
2014.2	10.10%	3.44%	6.66%
2014.3	9.90%	3.27%	6.63%
2014.4	9.94%	2.96%	6.98%
2015.1	9.64%	2.55%	7.08%
2015.2	9.83%	2.88%	6.94%
2015.3	9.40%	2.96%	6.44%
2015.4	9.86%	2.96%	6.90%
2016.1	9.70%	2.72%	6.98%
2016.2	9.48%	2.57%	6.91%
2016.3	9.74%	2.28%	7.46%
2016.4	9.83%	2.83%	7.00%
2017.1	9.72%	3.05%	6.67%
2017.2	9.64%	2.90%	6.75%
2017.3	10.00%	2.82%	7.18%
2017.4	9.91%	2.82%	7.09%
2018.1	9.69%	3.02%	6.66%
2018.2	9.75%	3.09%	6.66%
2018.3	9.69%	3.06%	6.63%
2018.4	9.52%	3.27%	6.25%
2019.1	9.72%	3.01%	6.70%
2019.2	9.58%	2.78%	6.79%
2019.3	9.53%	2.29%	7.25%
2019.4	9.89%	2.26%	7.63%
2020.1	9.72%	1.89%	7.83%
2020.2	9.58%	1.38%	8.19%
2020.3	9.30%	1.37%	7.93%
2020.4	9.56%	1.62%	7.94%
2021.1	9.45%	2.07%	7.38%
2021.2	9.47%	2.26%	7.21%
2021.3	9.27%	1.93%	7.34%
2021.4	9.69%	1.95%	7.74%
2022.1	9.45%	2.25%	7.20%
2022.2	9.50%	3.05%	6.45%
2022.3	9.14%	3.26%	5.88%
2022.4	9.94%	3.89%	6.04%
2023.1	9.72%	3.75%	5.97%
2023.2	9.67%	3.81%	5.86%
2023.3	9.79%	4.23%	5.55%
2023.4	9.85%	4.58%	5.27%
2024.1	9.67%	4.32%	5.35%
2024.2	9.90%	4.58%	5.32%
2024.3	9.88%	4.23%	5.65%
AVERAGE	11.50%	6.06%	5.45%
MEDIAN	11.00%	5.30%	5.64%



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.9190217
R Square	0.8446009
Adjusted R Square	0.8437229
Standard Error	0.0056593
Observations	179

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.03081	0.03081	962.00269	0.00000
Residual	177	0.00567	0.00003		
Total	178	0.03648			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.0806	0.00	85.55	0.0000	0.0787	0.0824	0.0787	0.0824
U.S. Govt. 30-year Treasury	(0.4309)	0.01	(31.02)	0.0000	(0.4584)	(0.4035)	(0.4584)	(0.4035)

	[7]	[8]	[9]
	U.S. Govt. 30-year Treasury	Risk Premium	ROE
Current 30-day average of 30-year U.S. Treasury bond yield [4]	4.07%	6.30%	10.37%
Blue Chip Near-Term Projected Forecast (Q1 2025 - Q1 2026) [5]	4.02%	6.32%	10.34%
Blue Chip Long-Term Projected Forecast (2026-2030) [6]	4.30%	6.20%	10.50%
AVERAGE			10.41%

Notes:

- [1] Source: Regulatory Research Associates, rate cases through September 30, 2024
[2] Source: S&P Capital IQ Pro, quarterly bond yields are the average of each trading day in the quarter
[3] Equals Column [1] - Column [2]
[4] Source: S&P Capital IQ Pro, 30-day average as of September 30, 2024
[5] Source: Blue Chip Financial Forecasts, Vol. 43, No. 10, October 1, 2024, at 2
[6] Source: Blue Chip Financial Forecasts, Vol. 43, No. 6, May 31, 2024, at 14
[7] See notes [4], [5] & [6]
[8] Equals $0.080564 + (-0.430934 \times \text{Column [7]})$
[9] Equals Column [7] + Column [8]

DR GRIFFING - CONSTANT GROWTH DCF - AS FILED

		A	B	C	D	E	F	G	H	I	J	K
											J>7.26% Mean of VL	
Company	Ticker	Zacks	Yahoo!Finance	ValueLine	Mean EPS Growth Rate	Average Closing Prices	Annualized Dividend	Dividend Yield	Expected Dividend Yield	Required Rate of Return on Equity	and Kroll Low End Tests	Rate of Return on Equity- Adjusted for FERC test
Alliant Energy Corporation	LNT	6.84%	7.70%	6.00%	6.85%	\$ 56.02	\$ 1.92	3.43%	3.66%	10.51%	Yes	10.51%
Ameren Corporation	AEE	6.58%	5.50%	6.50%	6.19%	\$ 79.61	\$ 2.68	3.37%	3.57%	9.77%	Yes	9.77%
American Electric Power Company, Inc	AEP	6.24%	6.62%	6.50%	6.45%	\$ 97.46	\$ 3.52	3.61%	3.84%	10.30%	Yes	10.30%
Duke Energy Corporation	DUK	6.10%	6.66%	5.00%	5.92%	\$ 111.09	\$ 4.18	3.76%	3.99%	9.91%	Yes	9.91%
Edison International	EIX	NA	7.60%	6.00%	6.80%	\$ 80.26	\$ 3.12	3.89%	4.15%	10.95%	Yes	10.95%
Entergy Corporation	ETR	7.33%	6.80%	0.50%	4.88%	\$ 115.87	\$ 4.52	3.90%	4.09%	8.97%	Yes	8.97%
Evergy, Inc.	EVRG	5.00%	6.00%	0.50%	3.83%	\$ 58.03	\$ 2.57	4.43%	4.60%	8.43%	Yes	8.43%
Eversource Energy	ES	5.73%	4.20%	6.00%	5.31%	\$ 64.77	\$ 2.86	4.42%	4.65%	9.96%	Yes	9.96%
IDACORP, Inc.	IDA	NA	4.40%	5.50%	4.95%	\$ 99.86	\$ 3.32	3.32%	3.49%	8.44%	Yes	8.44%
NorthWestern Corporation	NWE	NA	4.50%	4.00%	4.25%	\$ 52.70	\$ 2.60	4.93%	5.14%	9.39%	Yes	9.39%
OGE Energy Corporation	OGE	5.00%	Negative	5.00%	5.00%	\$ 38.77	\$ 1.67	4.31%	4.52%	9.52%	Yes	9.52%
Pinnacle West Capital Corporation	PNW	8.22%	7.20%	4.50%	6.64%	\$ 85.33	\$ 3.52	4.13%	4.40%	11.04%	Yes	11.04%
Portland General Electric Company	POR	NA	12.50%	6.00%	9.25%	\$ 46.92	\$ 2.00	4.26%	4.66%	13.91%	Yes	13.91%
Southern Company	SO	6.95%	7.30%	6.50%	6.92%	\$ 85.27	\$ 2.88	3.38%	3.61%	10.53%	Yes	10.53%
Xcel Energy Inc.	XEL	6.39%	6.73%	7.00%	6.71%	\$ 58.04	\$ 2.19	3.77%	4.03%	10.73%	Yes	10.73%
Notes:											Mean	10.16%
Source: Exhibit MFP-14											Median	9.96%
											quartile 4	13.91%
											quartile 3	10.63%
											quartile 2	9.96%
											quartile 1	9.46%

DR GRIFFING - ADJUSTED CONSTANT GROWTH DCF - CORRECTED VALUE LINE EPS GROWTH RATE FOR EVRG & OGE

Company	Ticker	A	B	C	D	E	F	G	H	I	J	K
		Zacks	Yahoo!Finance	ValueLine	Mean EPS Growth Rate	Average Closing Prices	Annualized Dividend	Dividend Yield	Expected Dividend Yield	Required Rate of Return on Equity	J>7.26% Mean of VL and Kroll Low End Tests	Rate of Return on Equity- Adjusted for FERC test
Alliant Energy Corporation	LNT	6.84%	7.70%	6.00%	6.85%	\$ 56.02	\$ 1.92	3.43%	3.66%	10.51%	Yes	10.51%
Ameren Corporation	AEE	6.58%	5.50%	6.50%	6.19%	\$ 79.61	\$ 2.68	3.37%	3.57%	9.77%	Yes	9.77%
American Electric Power Company, Inc	AEP	6.24%	6.62%	6.50%	6.45%	\$ 97.46	\$ 3.52	3.61%	3.84%	10.30%	Yes	10.30%
Duke Energy Corporation	DUK	6.10%	6.66%	5.00%	5.92%	\$ 111.09	\$ 4.18	3.76%	3.99%	9.91%	Yes	9.91%
Edison International	EIX	NA	7.60%	6.00%	6.80%	\$ 80.26	\$ 3.12	3.89%	4.15%	10.95%	Yes	10.95%
Entergy Corporation	ETR	7.33%	6.80%	0.50%	4.88%	\$ 115.87	\$ 4.52	3.90%	4.09%	8.97%	Yes	8.97%
Evergy, Inc.	EVRG	5.00%	6.00%	7.50%	6.17%	\$ 58.03	\$ 2.57	4.43%	4.70%	10.87%	Yes	10.87%
Eversource Energy	ES	5.73%	4.20%	6.00%	5.31%	\$ 64.77	\$ 2.86	4.42%	4.65%	9.96%	Yes	9.96%
IDACORP, Inc.	IDA	NA	4.40%	5.50%	4.95%	\$ 99.86	\$ 3.32	3.32%	3.49%	8.44%	Yes	8.44%
NorthWestern Corporation	NWE	NA	4.50%	4.00%	4.25%	\$ 52.70	\$ 2.60	4.93%	5.14%	9.39%	Yes	9.39%
OGE Energy Corporation	OGE	5.00%	Negative	6.50%	5.75%	\$ 38.77	\$ 1.67	4.31%	4.56%	10.31%	Yes	10.31%
Pinnacle West Capital Corporation	PNW	8.22%	7.20%	4.50%	6.64%	\$ 85.33	\$ 3.52	4.13%	4.40%	11.04%	Yes	11.04%
Portland General Electric Company	POR	NA	12.50%	6.00%	9.25%	\$ 46.92	\$ 2.00	4.26%	4.66%	13.91%	Yes	13.91%
Southern Company	SO	6.95%	7.30%	6.50%	6.92%	\$ 85.27	\$ 2.88	3.38%	3.61%	10.53%	Yes	10.53%
Xcel Energy Inc.	XEL	6.39%	6.73%	7.00%	6.71%	\$ 58.04	\$ 2.19	3.77%	4.03%	10.73%	Yes	10.73%
<u>Notes:</u>											Mean	10.37%
Source: Exhibit MFP-14 and Value Line reports dated June 7, 2024 for EVRG and OGE.											Median	10.31%
											quartile 4	13.91%
											quartile 3	10.80%
											quartile 2	10.31%
											quartile 1	9.84%

DR. GRIFFING - MULTI-STAGE DCF - AS FILED

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
										SSA Long-Run Projected EPS Growth Rate	SSA Long-run Weighted EPS Growth Rate	SSA Weighted Cost of Equity, Long-run Rate	EIA Long-run projected EPS growth rate=	EIA Long-run Weighted EPS Growth Rate=	EIA Weighted Cost of Equity, Long-run Rate	Multi-Stage Mean Cost of Equity	Mean of VL and Kroll Low End Tests	Rate of Return on Equity- Adjusted for FERC test
Company	Ticker	Zacks	Yahoo! Finance	Value Line	Mean EPS Growth Rate	Average Closing Prices	Annualized Dividend	Dividend Yield	Expected Dividend Yield									
Alliant Energy Corporation	LNT	6.84%	7.70%	6.00%	6.85%	\$ 56.02	\$ 1.92	3.43%	3.66%	4.04%	5.91%	9.57%	4.33%	6.01%	9.67%	9.62%	Yes	9.62%
Ameren Corporation	AEE	6.58%	5.50%	6.50%	6.19%	\$ 79.61	\$ 2.68	3.37%	3.57%	4.04%	5.48%	9.05%	4.33%	4.13%	7.70%	8.38%	Yes	8.38%
American Electric Power Company, Inc.	AEP	6.24%	6.62%	6.50%	6.45%	\$ 97.46	\$ 3.52	3.61%	3.84%	4.04%	5.65%	9.49%	4.33%	4.30%	8.15%	8.82%	Yes	8.82%
Duke Energy Corporation	DUK	6.10%	6.66%	5.00%	5.92%	\$ 111.09	\$ 4.18	3.76%	3.99%	4.04%	5.29%	9.28%	4.33%	3.95%	7.93%	8.61%	Yes	8.61%
Edison International	EIX	NA	7.60%	6.00%	6.80%	\$ 80.26	\$ 3.12	3.89%	4.15%	4.04%	5.88%	10.03%	4.33%	4.53%	8.69%	9.36%	Yes	9.36%
Entergy Corporation	ETR	7.33%	6.80%	0.50%	4.88%	\$ 115.87	\$ 4.52	3.90%	4.09%	4.04%	4.60%	8.69%	4.33%	3.25%	7.34%	8.02%	Yes	8.02%
Evergy, Inc.	EVRG	5.00%	6.00%	0.50%	3.83%	\$ 58.03	\$ 2.57	4.43%	4.60%	4.04%	3.90%	8.50%	4.33%	2.56%	7.15%	7.83%	Yes	7.83%
Eversource Energy	ES	5.73%	4.20%	6.00%	5.31%	\$ 64.77	\$ 2.86	4.42%	4.65%	4.04%	4.89%	9.54%	4.33%	3.54%	8.19%	8.86%	Yes	8.86%
IDACORP, Inc.	IDA	NA	4.40%	5.50%	4.95%	\$ 99.86	\$ 3.32	3.32%	3.49%	4.04%	4.65%	8.14%	4.33%	3.30%	6.79%	7.46%	Yes	7.46%
NorthWestern Corporation	NWE	NA	4.50%	4.00%	4.25%	\$ 52.70	\$ 2.60	4.93%	5.14%	4.04%	4.18%	9.32%	4.33%	2.83%	7.98%	8.65%	Yes	8.65%
OGE Energy Corporation	OGE	5.00%	Negative	5.00%	5.00%	\$ 38.77	\$ 1.67	4.31%	4.52%	4.04%	4.68%	9.20%	4.33%	3.33%	7.86%	8.53%	Yes	8.53%
Pinnacle West Capital Corporation	PNW	8.22%	7.20%	4.50%	6.64%	\$ 85.33	\$ 3.52	4.13%	4.40%	4.04%	5.77%	10.17%	4.33%	4.43%	8.83%	9.50%	Yes	9.50%
Portland General Electric Company	POR	NA	12.50%	6.00%	9.25%	\$ 46.92	\$ 2.00	4.26%	4.66%	4.04%	7.51%	12.17%	4.33%	6.17%	10.82%	11.50%	Yes	11.50%
Southern Company	SO	6.95%	7.30%	6.50%	6.92%	\$ 85.27	\$ 2.88	3.38%	3.61%	4.04%	5.96%	9.57%	4.33%	4.61%	8.22%	8.90%	Yes	8.90%
Xcel Energy Inc.	XEL	6.39%	6.73%	7.00%	6.71%	\$ 58.04	\$ 2.19	3.77%	4.03%	4.04%	5.82%	9.84%	4.33%	4.47%	8.50%	9.17%	Yes	9.17%
																	Mean	8.88%
																	Median	8.82%
																	quartile 4	11.50%
																	quartile 3	9.26%
																	quartile 2	8.82%
																	quartile 1	8.45%

DR. GRIFFING - MULTI-STAGE DCF - CORR. VL EPS GROWTH RATE FOR EVRG & OGE & CORR. WEIGHTED EPS AND EIA GROWTH RATES

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
										SSA Long-Run Projected EPS Growth Rate 4.04%	SSA Long-run Weighted EPS Growth Rate	SSA Weighted Cost of Equity, Long-run Rate	EIA Long-run projected EPS growth rate=	EIA Long-run Weighted EPS Growth Rate=	EIA Weighted Cost of Equity, Long-run Rate	Multi-Stage Mean Cost of Equity	Mean of VL and Kroll Low End Tests	Rate of Return on Equity- Adjusted for FERC test
Company	Ticker	Zacks	Yahoo! Finance	Value Line	Mean EPS Growth Rate	Average Closing Prices	Annualized Dividend	Dividend Yield	Expected Dividend Yield									
Alliant Energy Corporation	LNT	6.84%	7.70%	6.00%	6.85%	\$ 56.02	\$ 1.92	3.43%	3.66%	4.04%	5.91%	9.57%	4.33%	6.01%	9.67%	9.62%	Yes	9.62%
Ameren Corporation	AEE	6.58%	5.50%	6.50%	6.19%	\$ 79.61	\$ 2.68	3.37%	3.57%	4.04%	5.48%	9.05%	4.33%	5.57%	9.15%	9.10%	Yes	9.10%
American Electric Power Company, Inc.	AEP	6.24%	6.62%	6.50%	6.45%	\$ 97.46	\$ 3.52	3.61%	3.84%	4.04%	5.65%	9.49%	4.33%	5.75%	9.59%	9.54%	Yes	9.54%
Duke Energy Corporation	DUK	6.10%	6.66%	5.00%	5.92%	\$ 111.09	\$ 4.18	3.76%	3.99%	4.04%	5.29%	9.28%	4.33%	5.39%	9.38%	9.33%	Yes	9.33%
Edison International	EIX	NA	7.60%	6.00%	6.80%	\$ 80.26	\$ 3.12	3.89%	4.15%	4.04%	5.88%	10.03%	4.33%	5.98%	10.13%	10.08%	Yes	10.08%
Entergy Corporation	ETR	7.33%	6.80%	0.50%	4.88%	\$ 115.87	\$ 4.52	3.90%	4.09%	4.04%	4.60%	8.69%	4.33%	4.69%	8.79%	8.74%	Yes	8.74%
Evergy, Inc.	EVRG	5.00%	6.00%	7.50%	6.17%	\$ 58.03	\$ 2.57	4.43%	4.70%	4.04%	5.46%	10.16%	4.33%	5.55%	10.26%	10.21%	Yes	10.21%
Eversource Energy	ES	5.73%	4.20%	6.00%	5.31%	\$ 64.77	\$ 2.86	4.42%	4.65%	4.04%	4.89%	9.54%	4.33%	4.98%	9.63%	9.59%	Yes	9.59%
IDACORP, Inc.	IDA	NA	4.40%	5.50%	4.95%	\$ 99.86	\$ 3.32	3.32%	3.49%	4.04%	4.65%	8.14%	4.33%	4.74%	8.23%	8.18%	Yes	8.18%
NorthWestern Corporation	NWE	NA	4.50%	4.00%	4.25%	\$ 52.70	\$ 2.60	4.93%	5.14%	4.04%	4.18%	9.32%	4.33%	4.28%	9.42%	9.37%	Yes	9.37%
OGE Energy Corporation	OGE	5.00%	Negative	6.50%	5.75%	\$ 38.77	\$ 1.67	4.31%	4.56%	4.04%	5.18%	9.74%	4.33%	5.28%	9.83%	9.78%	Yes	9.78%
Pinnacle West Capital Corporation	PNW	8.22%	7.20%	4.50%	6.64%	\$ 85.33	\$ 3.52	4.13%	4.40%	4.04%	5.77%	10.17%	4.33%	5.87%	10.27%	10.22%	Yes	10.22%
Portland General Electric Company	POR	NA	12.50%	6.00%	9.25%	\$ 46.92	\$ 2.00	4.26%	4.66%	4.04%	7.51%	12.17%	4.33%	7.61%	12.27%	12.22%	Yes	12.22%
Southern Company	SO	6.95%	7.30%	6.50%	6.92%	\$ 85.27	\$ 2.88	3.38%	3.61%	4.04%	5.96%	9.57%	4.33%	6.05%	9.67%	9.62%	Yes	9.62%
Xcel Energy Inc.	XEL	6.39%	6.73%	7.00%	6.71%	\$ 58.04	\$ 2.19	3.77%	4.03%	4.04%	5.82%	9.84%	4.33%	5.91%	9.94%	9.89%	Yes	9.89%
																	Mean	9.70%
																	Median	9.62%
																	quartile 4	12.22%
																	quartile 3	9.99%
																	quartile 2	9.62%
																	quartile 1	9.35%

DR. GRIFFING - MULTI-STAGE DCF - CORR. VL EPS GROWTH RATE FOR EVRG & ADJUSTED LTG WEIGHTING TO BE CONSISTENT WITH THE FERC

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q

DR. GRIFFING - MULTI-STAGE DCF - CORR. VL EPS GROWTH RATE FOR EVRG, ADJUSTED LTG WEIGHTING TO BE CONSISTENT WITH THE FERC & ADJUSTED LTG

[illegible]

Table VI.G6.—Selected Economic Variables, Calendar Years 2022-2100
[GDP and taxable payroll in billions]

Calendar year	Adjusted CPI ^a	Average wage index	Taxable payroll ^b	Gross domestic product	Compound new-issue interest factor ^c	Compound effective trust-fund interest factor ^d	
Intermediate:							
2022	96.15	\$63,467.98	\$9,069	\$25,422	0.9711	0.9884	
2023	100.00	66,147.17	9,552	26,592	1.0000	1.0117	
2024	102.53	68,627.58	9,986	27,655	1.0357	1.0356	
2025	104.99	71,411.99	10,465	28,902	1.0727	1.0602	
2026	107.51	74,348.48	10,944	30,177	1.1112	1.0862	
2027	110.09	77,393.67	11,443	31,478	1.1530	1.1140	
2028	112.73	80,510.73	11,934	32,778	1.1985	1.1442	
2029	115.44	83,757.03	12,438	34,125	1.2492	1.1768	
2030	118.21	87,106.49	12,954	35,521	1.3051	1.2123	
2031	121.04	90,574.48	13,492	36,976	1.3656	1.2512	
2032	123.95	93,995.33	14,023	38,487	1.4295	1.2946	
2035	133.09	104,726.27	15,730	43,392	1.6429	1.4693	
2040	149.85	125,312.66	18,992	52,850	2.0725	1.8502	
2045	168.71	149,423.47	22,925	64,333	2.6144	2.3337	
2050	189.95	177,750.26	27,736	78,438	3.2980	2.9438	4.04%
2055	213.87	211,432.09	33,623	95,785	4.1603	3.7136	
2060	240.79	251,610.19	40,795	116,988	5.2481	4.6846	
2065	271.11	299,758.28	49,472	142,731	6.6204	5.9095	
2070	305.24	357,187.25	59,924	173,850	8.3514	7.4546	
2075	343.67	425,523.96	72,602	211,710	10.5351	9.4038	
2080	386.94	506,962.67	88,194	258,358	13.2897	11.8627	
2085	435.65	603,863.51	107,502	316,227	16.7646	14.9644	
2090	490.50	719,124.11	131,330	387,813	21.1481	18.8772	
2095	552.26	856,091.73	160,374	475,384	26.6778	23.8131	
2100	621.79	1,019,162.94	195,457	581,611	33.6533	30.0396	
Low-cost:							
2022	96.24	63,432.25	9,065	25,463	0.9711	0.9884	
2023	100.00	66,442.68	9,665	27,042	1.0000	1.0120	
2024	103.02	70,258.88	10,343	28,782	1.0425	1.0369	
2025	106.12	74,575.71	11,089	30,730	1.0886	1.0639	
2026	109.30	78,782.82	11,816	32,533	1.1411	1.0937	
2027	112.58	83,005.63	12,555	34,356	1.2005	1.1276	
2028	115.96	87,405.28	13,307	36,241	1.2672	1.1661	
2029	119.43	92,010.68	14,090	38,217	1.3379	1.2096	
2030	123.02	96,841.91	14,910	40,290	1.4125	1.2586	
2031	126.71	101,915.61	15,771	42,475	1.4915	1.3140	
2032	130.51	107,046.81	16,650	44,755	1.5776	1.3764	
2035	142.61	123,656.58	19,420	52,381	1.8728	1.6083	
2040	165.32	157,054.51	25,023	67,898	2.4925	2.1267	
2045	191.66	198,412.60	32,341	88,210	3.3174	2.8275	
2050	222.18	250,115.49	42,038	115,112	4.4152	3.7630	5.39%
2055	257.57	315,518.44	54,815	150,549	5.8762	5.0083	
2060	298.59	398,402.81	71,511	196,798	7.8208	6.6656	
2065	346.15	503,681.03	93,206	256,786	10.4088	8.8714	
2070	401.29	636,729.90	121,376	334,496	13.8533	11.8071	
2075	465.20	804,422.07	158,315	436,091	18.4376	15.7143	
2080	539.29	1,016,051.44	207,395	570,560	24.5389	20.9144	
2085	625.19	1,283,116.99	272,944	749,476	32.6594	27.8354	
2090	724.77	1,619,988.11	359,689	985,569	43.4670	37.0466	
2095	840.20	2,044,788.30	472,758	1,292,776	57.8510	49.3061	
2100	974.03	2,581,302.68	619,206	1,690,135	76.9950	65.6224	

^a CPI-W indexed to calendar year 2023.

^b Total earnings subject to OASDI contribution rates, adjusted to reflect the lower effective contribution rates (compared to the combined employee-employer rate) that apply to multiple-employer “excess wages.”

^c For each alternative, incorporates the average of the assumed annual yield for special public-debt obligations issuable to the trust funds in the 12 months of the prior year.

^d For each alternative, incorporates the annual effective yield for all outstanding special public-debt obligations held by the trust fund, with a half-year’s interest effect in each row. The effective yield for a period equals total interest earned during the period divided by the total exposure to interest on asset reserves and all income and cost items during the period. The reciprocals of the factors approximate the discounting/accumulation factors that are used to calculate summarized rates and balances in this report.

CALCULATION OF LONG-TERM GDP GROWTH RATE

Real GDP (\$ Billions) [1]

1929	\$	1,191.1
2023	\$	22,671.1
		<hr/>
		3.18%

Compound Annual Growth Rate

Consumer Price Index (YoY % Change) [2]

2031-2035	<hr/>	2.20%
Average		2.20%

Consumer Price Index (All-Urban) [3]

2035	3.96
2050	5.54
<hr/>	
Compound Annual Growth Rate	2.26%

GDP Chain-type Price Index (2012=1.000) [3]

2035	1.73
2050	2.43
<hr/>	
Compound Annual Growth Rate	2.30%

Average Inflation Forecast

2.25%

Long-Term GDP Growth Rate

5.51%

Notes:

[1] Bureau of Economic Analysis, September 26, 2024

[2] Blue Chip Financial Forecasts, Vol. 43, No. 6, May 31, 2024, at 14

[3] Energy Information Administration, Annual Energy Outlook 2023 at Table 20

DR GRIFFING - IBES CAPM

		A	B	C	D	E	F	G
	Ticker	Market Return	Rf	MRP	Beta	RP	CAPM ROE	Filtered Results
Alliant Energy Corporation	LNT	11.76%	4.29%	7.47%	0.90	6.73%	11.02%	11.02%
Ameren Corporation	AEE	11.76%	4.29%	7.47%	0.90	6.73%	11.02%	11.02%
American Electric Power Comp	AEP	11.76%	4.29%	7.47%	0.85	6.35%	10.64%	10.64%
Duke Energy Corporation	DUK	11.76%	4.29%	7.47%	0.90	6.73%	11.02%	11.02%
Edison International	EIX	11.76%	4.29%	7.47%	1.00	7.47%	11.76%	11.76%
Entergy Corporation	ETR	11.76%	4.29%	7.47%	1.00	7.47%	11.76%	11.76%
Evergy, Inc.	EVRG	11.76%	4.29%	7.47%	0.95	7.10%	11.39%	11.39%
Eversource Energy	ES	11.76%	4.29%	7.47%	0.95	7.10%	11.39%	11.39%
IDACORP, Inc.	IDA	11.76%	4.29%	7.47%	0.85	6.35%	10.64%	10.64%
NorthWestern Corporation	NWE	11.76%	4.29%	7.47%	0.95	7.10%	11.39%	11.39%
OGE Energy Corporation	OGE	11.76%	4.29%	7.47%	1.05	7.85%	12.14%	12.14%
Pinnacle West Capital Corporat	PNW	11.76%	4.29%	7.47%	0.95	7.10%	11.39%	11.39%
Portland General Electric Comp	POR	11.76%	4.29%	7.47%	0.95	7.10%	11.39%	11.39%
Southern Company	SO	11.76%	4.29%	7.47%	0.95	7.10%	11.39%	11.39%
Xcel Energy Inc.	XEL	11.76%	4.29%	7.47%	0.85	6.35%	10.64%	10.64%
						Mean	11.26%	11.26%
						Median	11.39%	11.39%
						quartile 4		12.14%
						quartile 3		11.39%
						quartile 2		11.39%
						quartile 1		11.02%
Low-End Test:		Moody's 10-Year Baa Corporate Bond Index						5.73%
		CAPM Risk Premium, Column C						7.47%
		20 percent of CAPM risk premium						1.49%
		Moody's 10-Year Baa Corporate Bond Index +						7.22%
		20 percent of CAPM risk premium						
High-End Test:		Proxy Group median						11.39%
		200 percent of Proxy Group median						22.78%

MARKET RISK PREMIUM DERIVED FROM IBES LONG-TERM GROWTH ESTIMATES

FERC METHOD

[1] Estimated Weighted Average Dividend Yield	1.66%
[2] Estimated Weighted Average Long-Term Growth Rate	9.94%
[3] S&P 500 Estimated Required Market Return	11.76%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	Shares Outst'g	Price	Market Capitalization	FERC METHODOLOGY FOR MARKET RETURN				
					[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] IBES Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
LyondellBasell Industries NV	LYB	325.09	98.70	32,086	0.13%	5.43%	0.01%	7.26%	0.01%
American Express Co	AXP	710.91	258.65	183,877	0.72%	1.08%	0.01%	15.40%	0.11%
Verizon Communications Inc	VZ	4,209.52	41.78	175,874	0.69%	6.37%	0.04%	0.82%	0.01%
Broadcom Inc	AVGO	4,654.88	162.82	757,908	2.97%	1.29%	0.04%	17.80%	0.53%
Boeing Co/The	BA	616.17	173.74	107,053				NULL	
Solventum Corp	SOLV	172.71	64.11	11,073				5.30%	
Caterpillar Inc	CAT	484.90	356.10	172,672	0.68%	1.58%	0.01%	3.18%	0.02%
JPMorgan Chase & Co	JPM	2,845.17	224.80	639,593	2.51%	2.05%	0.05%	3.80%	0.03%
Chevron Corp	CVX	1,828.92	147.95	270,588	1.06%	4.41%	0.05%	6.07%	0.06%
Coca-Cola Co/The	KO	4,309.87	72.47	312,336	1.23%	2.68%	0.03%	6.26%	0.08%
AbbVie Inc	ABBV	1,766.34	196.31	346,751	1.36%	3.16%	0.04%	15.82%	0.22%
Walt Disney Co/The	DIS	1,813.59	90.38	163,912	0.64%	1.00%	0.01%	13.06%	0.08%
Corpay Inc	CPAY	69.43	315.55	21,910				NULL	
Extra Space Storage Inc	EXR	211.93	177.00	37,511	0.15%	3.66%	0.01%	5.20%	0.01%
Exxon Mobil Corp	XOM	4,442.83	117.94	523,987		3.22%		-4.60%	
Phillips 66	PSX	418.57	140.31	58,729		3.28%		29.63%	
General Electric Co	GE	1,084.31	174.62	189,342	0.74%	0.64%	0.00%	4.80%	0.04%
HP Inc	HPQ	963.72	36.18	34,867	0.14%	3.05%	0.00%	3.80%	0.01%
Home Depot Inc/The	HD	993.29	368.50	366,028		2.44%		NULL	
Monolithic Power Systems Inc	MPWR	48.75	934.68	45,568	0.18%	0.53%	0.00%	3.90%	0.01%
International Business Machines Corp	IBM	921.15	202.13	186,192	0.73%	3.30%	0.02%	5.53%	0.04%
Johnson & Johnson	JNJ	2,407.24	165.86	399,265	1.57%	2.99%	0.05%	9.94%	0.16%
Lululemon Athletica Inc	LULU	117.66	259.47	30,529				4.45%	
McDonald's Corp	MCD	717.34	286.99	205,870		2.33%		85.77%	
Merck & Co Inc	MRK	2,534.81	118.45	300,248		2.60%		-3.92%	
3M Co	MMM	549.35	134.69	73,992		2.08%		NULL	
American Water Works Co Inc	AWK	194.86	143.12	27,889	0.11%	2.14%	0.00%	9.60%	0.01%
Bank of America Corp	BAC	7,759.58	40.75	316,203		1.24%	0.03%	18.80%	0.23%
Pfizer Inc	PFE	5,666.70	29.01	164,391	0.64%	5.79%	0.04%	6.76%	0.04%
Procter & Gamble Co/The	PG	2,349.71	171.54	403,069	1.58%	2.35%	0.04%	1.31%	0.02%
AT&T Inc	T	7,170.24	19.90	142,688	0.56%	5.58%	0.03%	16.40%	0.09%
Travelers Cos Inc/The	TRV	227.93	228.07	51,984	0.20%	1.84%	0.00%	11.77%	0.02%
RTX Corp	RTX	1,330.24	123.34	164,072		2.04%		-2.56%	
Analog Devices Inc	ADI	496.49	233.92	116,140	0.46%	1.57%	0.01%	10.17%	0.05%
Walmart Inc	WMT	8,038.25	77.23	620,794	2.43%	1.07%	0.03%	4.03%	0.10%
Cisco Systems Inc	CSCO	4,028.82	50.54	203,616		3.17%		29.46%	
Intel Corp	INTC	4,276.00	22.04	94,243				12.85%	
General Motors Co	GM	1,123.92	49.78	55,949				14.60%	
Microsoft Corp	MSFT	7,433.04	417.14	3,100,617	0.22%	0.96%	0.00%	-3.33%	0.03%
Dollar General Corp	DG	219.92	82.97	18,246	0.07%	2.84%	0.00%	11.91%	0.01%
Cigna Group/The	CI	279.55	361.81	101,144	0.40%	1.55%	0.01%	7.70%	0.03%
Kinder Morgan Inc	KMI	2,219.46	21.57	47,874	0.19%	5.33%	0.01%	10.00%	0.02%
Citigroup Inc	C	1,907.80	62.64	119,504		3.58%		NULL	
American International Group Inc	AIG	643.95	77.05	49,616	0.19%	2.08%	0.00%	3.84%	0.01%
Altria Group Inc	MO	1,706.22	53.77	91,744	0.36%	7.59%	0.03%	11.22%	0.04%
HCA Healthcare Inc	HCA	258.07	395.59	102,091		0.67%		NULL	
International Paper Co	IP	347.37	48.42	16,820	0.07%	3.82%	0.00%	3.70%	0.00%
Hewlett Packard Enterprise Co	HPE	1,299.67	19.77	25,175	0.10%	2.68%	0.00%	8.20%	0.01%
Abbott Laboratories	ABT	1,739.90	113.27	197,078	0.77%	1.94%	0.02%	7.50%	0.06%
Aflac Inc	AFL	560.03	110.36	61,804	0.24%	1.81%	0.00%	5.28%	0.01%
Air Products and Chemicals Inc	APD	222.32	278.85	61,993		2.54%		30.30%	
Super Micro Computer Inc	SMCI	58.56	437.70	25,630				NULL	
Royal Caribbean Cruises Ltd	RCL	257.42	164.62	42,376		0.97%		-4.90%	
Hess Corp	HES	308.12	138.06	42,538	0.17%	1.27%	0.00%	9.13%	0.02%
Archer-Daniels-Midland Co	ADM	478.14	60.99	29,162	0.11%	3.28%	0.00%	12.15%	0.01%
Automatic Data Processing Inc	ADP	407.80	275.91	112,515	0.44%	2.03%	0.01%	11.65%	0.05%
Verisk Analytics Inc	VRSK	142.42	272.82	38,856	0.15%	0.57%	0.00%	9.56%	0.01%
AutoZone Inc	AZO	17.08	3,181.48	54,349				NULL	
Linde PLC	LIN	477.50	478.25	228,366	0.90%	1.16%	0.01%	16.05%	0.14%
Avery Dennison Corp	AVY	80.52	221.85	17,863	0.07%	1.59%	0.00%	12.03%	0.01%
Enphase Energy Inc	ENPH	135.42	121.04	16,391				11.65%	
MSCI Inc	MSCI	78.65	580.59	45,663		1.10%		20.20%	
Ball Corp	BALL	303.57	63.61	19,310		1.26%		22.81%	
Axon Enterprise Inc	AXON	75.57	364.97	27,582				9.22%	
Dayforce Inc	DAY	158.10	57.17	9,039				13.86%	
Carrier Global Corp	CARR	902.75	72.78	65,702	0.26%	1.04%	0.00%	10.25%	0.03%
Bank of New York Mellon Corp/The	BK	737.96	68.22	50,343		2.76%		NULL	
Ots Worldwide Corp	OTIS	400.56	94.69	37,929	0.15%	1.65%	0.00%	8.55%	0.01%
Baxter International Inc	BAX	510.18	37.94	19,356		3.06%		NULL	
Becton Dickinson & Co	BDX	289.04	242.41	70,067		1.57%		NULL	
Berkshire Hathaway Inc	BRK/B	1,325.19	475.92	630,686				12.84%	
Best Buy Co Inc	BBY	215.71	100.40	21,658		3.75%		-4.81%	
Boston Scientific Corp	BSX	1,472.63	81.79	120,446				-1.60%	
Bristol-Myers Squibb Co	BMJ	2,027.40	49.95	101,268	0.40%	4.80%	0.02%	14.95%	0.06%
Brown-Forman Corp	BF/B	303.54	45.37	13,772	0.05%	1.92%	0.00%	5.80%	0.00%
Coterra Energy Inc	CTRA	739.27	24.33	17,987	0.07%	3.45%	0.00%	13.40%	0.01%
Hilton Worldwide Holdings Inc	HLT	246.43	219.64	54,125		0.27%		271.70%	
Carnival Corp	CCL	1,122.46	16.50	18,521				NULL	
Qorvo Inc	QRVO	94.86	115.89	10,993				21.18%	
Builders FirstSource Inc	BLDR	116.45	174.00	20,263				7.67%	
UDR Inc	UDR	329.82	44.51	14,680	0.06%	3.82%	0.00%	7.55%	0.00%
Clorox Co/The	CLX	123.86	158.31	19,609	0.08%	3.08%	0.00%	7.60%	0.01%
Paycom Software Inc	PAYC	57.43	162.78	9,349	0.04%	0.92%	0.00%	8.54%	0.00%
CMS Energy Corp	CMS	298.64	67.86	20,265	0.08%	3.04%	0.00%	6.06%	0.00%
Colgate-Palmolive Co	CL	817.09	106.50	87,020		1.88%		NULL	
EPAM Systems Inc	EPAM	56.94	200.76	11,430				1.86%	
Conagra Brands Inc	CAG	479.05	31.20	14,946	0.06%	4.49%	0.00%	18.60%	0.01%
Airbnb Inc	ABNB	440.00	117.31	51,617				5.70%	
Consolidated Edison Inc	ED	346.15	101.56	35,155	0.14%	3.27%	0.00%	13.87%	0.02%
Corning Inc	GLW	855.70	41.85	35,811	0.14%	2.68%	0.00%	8.05%	0.01%
GoDaddy Inc	GDDY	140.97	167.41	23,600				-12.10%	
Cummins Inc	CMI	137.05	312.85	42,875	0.17%	2.33%	0.00%	6.98%	0.01%
Caesars Entertainment Inc	CZR	216.34	37.64	8,143				8.22%	
Danaher Corp	DHR	722.21	269.31	194,499		0.40%		-11.05%	
Target Corp	TGT	460.68	153.62	70,769	0.28%	2.92%	0.01%	19.50%	0.05%
Deere & Co	DE	273.60	385.74	105,538	0.41%	1.52%	0.01%	8.15%	0.03%
Dominion Energy Inc	D	838.94	55.90	46,897	0.18%	4.78%	0.01%	7.70%	0.01%
Dover Corp	DOV	137.46	186.03	25,571				NULL	
Alliant Energy Corp	LNT	256.50	58.27	14,946	0.06%	3.30%	0.00%	6.66%	0.00%
Steel Dynamics Inc	STLD	154.30	119.51	18,441		1.54%		-5.59%	
Duke Energy Corp	DUK	771.00	113.95	87,855	0.34%	3.67%	0.01%	15.17%	0.05%
Regency Centers Corp	REG	181.50	72.69	13,193	0.05%	3.69%	0.00%	16.48%	0.01%
Eaton Corp PLC	ETN	398.10	306.93	122,189	0.48%	1.23%	0.01%	8.63%	0.04%
Ecolab Inc	ECL	284.54	253.18	72,039	0.28%	0.90%	0.00%	12.67%	0.04%
Revvity Inc	RVTY	123.34	122.54	15,114	0.06%	0.23%	0.00%	7.40%	0.00%
Emerson Electric Co	EMR	572.70	105.39	60,357	0.24%	1.99%	0.00%	10.20%	0.02%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	FERC METHODOLOGY FOR MARKET RETURN				
					[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] IBES Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
EOG Resources Inc	EOG	568.60	128.82	73,247	0.29%	2.83%	0.01%	6.80%	0.02%
Aon PLC	AON	217.24	343.72	74,670		0.79%		20.54%	
Entergy Corp	ETR	213.83	120.69	25,807		3.75%		NULL	
Equifax Inc	EFX	123.74	306.74	37,955	0.15%	0.51%	0.00%	10.23%	0.02%
EQT Corp	EQT	594.02	33.51	19,906	0.08%	1.88%	0.00%	10.51%	0.01%
IQVIA Holdings Inc	IQV	182.30	251.55	45,858				15.63%	
Gartner Inc	IT	77.06	491.96	37,910				NULL	
FedEx Corp	FDX	244.98	298.77	73,188	0.29%	1.85%	0.01%	11.70%	0.03%
FMC Corp	FMC	124.82	64.58	8,061		3.59%		-2.36%	
Brown & Brown Inc	BRO	285.26	105.13	29,989	0.12%	0.49%	0.00%	8.20%	0.01%
Ford Motor Co	F	3,904.40	11.19	43,690	0.17%	5.36%	0.01%	4.58%	0.01%
NextEra Energy Inc	NEE	2,055.00	80.51	165,448	0.65%	2.56%	0.02%	9.60%	0.06%
Franklin Resources Inc	BEN	523.00	20.24	10,585		6.13%		NULL	
Garmin Ltd	GRMN	192.21	183.29	35,231	0.14%	1.64%	0.00%	16.20%	0.02%
Freeport-McMoRan Inc	FCX	1,436.86	44.28	63,624	0.25%	1.36%	0.00%	14.43%	0.04%
Dexcom Inc	DXCM	400.73	69.34	27,786				3.17%	
General Dynamics Corp	GD	274.78	299.36	82,258		1.90%		NULL	
General Mills Inc	GIS	556.62	72.29	40,238	0.16%	3.32%	0.01%	7.40%	0.01%
Genuine Parts Co	GPC	139.32	143.26	19,959		2.79%		NULL	
Atmos Energy Corp	ATO	155.23	130.74	20,295	0.08%	2.46%	0.00%	13.00%	0.01%
WW Grainger Inc	GWV	48.83	984.92	48,090	0.19%	0.83%	0.00%	8.46%	0.02%
Halliburton Co	HAL	882.83	31.09	27,447		2.19%		NULL	
L3Harris Technologies Inc	LHX	189.71	236.67	44,897	0.18%	1.96%	0.00%	14.90%	0.03%
Healthpeak Properties Inc	DOC	699.29	22.28	15,580		5.39%		32.42%	
Insulet Corp	PODD	70.12	202.77	14,217				8.10%	
Catalent Inc	CTLT	180.98	60.96	11,033				1.19%	
Fortive Corp	FTV	350.34	74.40	26,065		0.43%		NULL	
Hershey Co/The	HSY	147.67	193.06	28,510	0.11%	2.84%	0.00%	6.60%	0.01%
Synchrony Financial	SYF	395.23	50.26	19,884	0.08%	1.99%	0.00%	11.70%	0.01%
Hormel Foods Corp	HRL	548.31	32.55	17,847	0.07%	3.47%	0.00%	6.70%	0.00%
Arthur J Gallagher & Co	AJG	219.10	292.57	64,102	0.25%	0.82%	0.00%	7.45%	0.02%
Mondelez International Inc	MDLZ	1,335.80	71.81	95,924	0.38%	2.62%	0.01%	4.90%	0.02%
CenterPoint Energy Inc	CNP	651.72	27.30	17,792	0.07%	2.93%	0.00%	11.70%	0.01%
Humana Inc	HUM	120.40	354.47	42,679	0.17%	1.00%	0.00%	4.52%	0.01%
Willis Towers Watson PLC	WTW	101.56	292.11	29,666		1.21%		NULL	
Illinois Tool Works Inc	ITW	296.90	253.18	75,169	0.29%	2.37%	0.01%	13.84%	0.04%
CDW Corp/DE	CDW	133.58	225.64	30,140	0.12%	1.10%	0.00%	6.10%	0.01%
Trane Technologies PLC	TT	325.67	361.66	81,616	0.32%	0.83%	0.00%	13.11%	0.04%
Interpublic Group of Cos Inc/The	IPG	375.59	32.28	12,124		4.09%		NULL	
International Flavors & Fragrances Inc	IFF	255.66	103.99	26,586	0.10%	1.54%	0.00%	9.57%	0.01%
Generac Holdings Inc	GNRC	60.15	156.53	9,416				8.64%	
NXP Semiconductors NV	NXPI	254.73	256.36	65,303		1.58%		NULL	
Kellanova	K	343.95	80.04	27,530	0.11%	2.85%	0.00%	7.29%	0.01%
Broadridge Financial Solutions Inc	BR	116.71	212.86	24,843		1.65%		-11.06%	
Kimberly-Clark Corp	KMB	336.80	144.66	48,722	0.19%	3.37%	0.01%	10.61%	0.02%
Kimco Realty Corp	KIM	674.12	23.26	15,680		4.13%		NULL	
Oracle Corp	ORCL	2,755.86	141.29	389,375	1.53%	1.13%	0.02%	9.60%	0.15%
Kroger Co/The	KR	53.21	79.56	38,406		2.41%		75.93%	
Lennar Corp	LEN	241.70	182.06	44,004	0.17%	1.10%	0.00%	5.02%	0.01%
Eli Lilly & Co	LLY	950.43	960.02	912,428	3.58%	0.54%	0.02%	5.20%	0.19%
Bath & Body Works Inc	BBWI	219.11	30.76	6,740		2.60%		NULL	
Charter Communications Inc	CHTR	142.74	347.54	49,608				2.60%	
Loews Corp	L	219.52	81.94	17,987	0.07%	0.31%	0.00%	6.70%	0.00%
Lowe's Cos Inc	LOW	567.29	248.50	140,973	0.55%	1.85%	0.01%	12.00%	0.07%
Hubbell Inc	HUBB	53.68	399.92	21,468	0.08%	1.22%	0.00%	8.20%	0.01%
IDEX Corp	IEX	75.70	206.48	15,631	0.06%	1.34%	0.00%	8.60%	0.01%
Marsh & McLennan Cos Inc	MMC	491.76	227.51	111,879	0.44%	1.43%	0.01%	13.99%	0.06%
Masco Corp	MAS	218.25	79.56	17,364	0.07%	1.46%	0.00%	5.51%	0.00%
S&P Global Inc	SPGI	320.20	513.24	164,339		0.71%		-3.20%	
Medtronic PLC	MDT	1,282.49	88.58	113,603		3.16%		-0.84%	
Viatri Inc	VTRS	1,193.52	12.08	14,418	0.06%	3.97%	0.00%	10.85%	0.01%
CVS Health Corp	CVS	1,257.98	57.24	72,007		4.65%		NULL	
DuPont de Nemours Inc	DD	417.50	84.25	35,174	0.14%	1.80%	0.00%	10.10%	0.01%
Micron Technology Inc	MU	1,108.84	96.24	106,715	0.42%	0.48%	0.00%	9.05%	0.04%
Motorola Solutions Inc	MSI	166.84	442.04	73,750	0.29%	0.89%	0.00%	9.23%	0.03%
Cboe Global Markets Inc	CBOE	104.63	205.40	21,492		1.23%		30.30%	
Newmont Corp	NEM	1,152.49	53.39	61,531		1.87%		4.84%	
NIKE Inc	NKE	1,201.46	82.65	99,661	0.39%	1.78%	0.01%	7.50%	0.03%
NISource Inc	NI	448.51	33.06	14,828		3.21%		8.90%	
Norfolk Southern Corp	NSC	226.10	256.16	57,917	0.23%	2.11%	0.00%	13.00%	0.03%
Principal Financial Group Inc	PFJ	231.58	81.42	18,856	0.07%	3.54%	0.00%	4.20%	0.00%
Eversource Energy	ES	357.39	67.53	24,134		4.24%		NULL	
Northrop Grumman Corp	NOC	146.25	521.15	76,216	0.30%	1.58%	0.00%	8.41%	0.03%
Wells Fargo & Co	WFC	3,403.77	58.47	199,018		2.74%		NULL	
Nucor Corp	NUE	237.34	151.91	36,054	0.14%	1.42%	0.00%	4.10%	0.01%
Occidental Petroleum Corp	OXY	916.20	56.98	52,205	0.20%	1.54%	0.00%	8.00%	0.02%
Omnicom Group Inc	OMC	195.65	100.43	19,649	0.08%	2.79%	0.00%	2.20%	0.00%
ONEOK Inc	OKE	584.07	92.36	52,945	0.01%	1.49%	0.01%	15.40%	0.00%
Raymond James Financial Inc	RJF	205.94	119.57	24,625	0.10%	1.51%	0.00%	9.60%	0.01%
PG&E Corp	PCG	2,137.46	19.70	42,108	0.17%	0.20%	0.00%	8.69%	0.01%
Parker-Hannifin Corp	PH	128.60	600.20	77,183	0.30%	1.09%	0.00%	12.70%	0.04%
Rollins Inc	ROL	484.31	50.18	24,303	0.10%	1.20%	0.00%	6.80%	0.01%
PPL Corp	PPL	737.77	31.91	23,542	0.09%	3.23%	0.00%	5.20%	0.00%
ConocoPhillips	COP	1,161.25	113.79	132,139	0.52%	2.74%	0.01%	8.00%	0.04%
PulteGroup Inc	PHM	207.52	131.65	27,321	0.11%	0.61%	0.00%	7.20%	0.01%
Pinnacle West Capital Corp	PNW	113.61	87.52	9,943	0.04%	4.02%	0.00%	6.85%	0.00%
PNC Financial Services Group Inc/The	PNC	397.50	185.09	73,573	0.29%	3.46%	0.01%	9.05%	0.03%
PPG Industries Inc	PPG	233.30	129.73	30,266		2.10%		43.80%	
Progressive Corp/The	PGR	585.67	252.20	147,705	0.58%	0.16%	0.00%	6.97%	0.04%
Veratlo Corp	VLTO	247.11	112.43	27,782	0.11%	0.32%	0.00%	5.90%	0.01%
Public Service Enterprise Group Inc	PEG	498.16	80.75	40,227	0.16%	2.97%	0.00%	5.40%	0.01%
Cooper Cos Inc/The	COO	199.16	105.73	21,057				11.45%	
Edison International	EIX	383.93	87.03	33,413	0.13%	3.58%	0.00%	7.60%	0.01%
Schlumberger NV	SLB	1,419.84	43.99	62,459		2.50%		21.10%	
Charles Schwab Corp/The	SCHW	1,778.45	65.10	115,777	0.45%	1.54%	0.01%	12.99%	0.06%
Sherwin-Williams Co/The	SHW	252.26	369.37	93,177	0.37%	0.77%	0.00%	11.32%	0.04%
West Pharmaceutical Services Inc	WST	72.54	313.63	22,751	0.09%	0.26%	0.00%	1.08%	0.00%
J M Smucker Co/The	SJM	106.41	114.68	12,003	0.00%	3.77%	0.00%	5.04%	0.00%
Snap-on Inc	SNA	52.68	283.74	14,948	0.06%	2.62%	0.00%	3.80%	0.00%
AMETEK Inc	AME	231.54	171.05	39,604	0.16%	0.65%	0.00%	8.50%	0.01%
Uber Technologies Inc	UBER	2,100.94	73.13	153,642				7.31%	
Southern Co/The	SO	1,094.63	86.40	94,576	0.37%	3.33%	0.01%	5.20%	0.02%
Truist Financial Corp	TFC	1,339.14	44.46	59,538	0.23%	4.68%	0.01%	12.80%	0.03%
Southwest Airlines Co	LUV	599.16	28.92	17,328		2.49%		NULL	
W R Berkley Corp	WRB	380.55	59.70	22,719	0.09%	0.54%	0.00%	15.82%	0.01%
Stanley Black & Decker Inc	SWK	153.96	101.54	15,633		3.23%		-20.02%	
Public Storage	PSA	175.83	343.72	60,436		3.49%		NULL	
Arista Networks Inc	ANET	314.15	353.38	111,015				7.15%	
Sysco Corp	SY	491.52	77.97	38,324	0.15%	2.62%	0.00%	12.79%	0.02%
Corteva Inc	CTVA	687.80	57.13	39,294		1.19%		-2.80%	
Texas Instruments Inc	TXN	913.05	214.34	195,702		2.43%		NULL	
Texttron Inc	TXT	187.36	91.20	17,088	0.07%	0.09%	0.00%	7.22%	0.00%
Thermo Fisher Scientific Inc	TMO	382.00	615.07	234,954	0.92%	0.25%	0.00%	9.31%	0.09%
TJX Cos Inc/The	TJX	1,127.87	117.27	132,266		1.28%		NULL	
Globe Life Inc	GL	89.82	105.05	9,436	0.04%	0.91%	0.00%	9.04%	0.00%
Johnson Controls International plc	JCI	668.01	72.85	48,665	0.19%	2.03%	0.00%	1.08%	0.00%
Ulta Beauty Inc	ULTA	47.12	352.84	16,624				12.20%	
Union Pacific Corp	UNP	609.20	256.09	156,010		2.09%		-2.05%	

STANDARD AND POOR'S 500 INDEX

Name	Ticker	Shares Outst'g	Price	Market Capitalization	FERC METHODOLOGY FOR MARKET RETURN				
					[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] IBES Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Keysight Technologies Inc	KEYS	173.54	154.12	26,746				12.38%	
UnitedHealth Group Inc	UNH	923.42	590.20	545,001		1.42%		23.50%	
Blackstone Inc	BX	720.08	142.36	102,510	0.40%	2.30%	0.01%	12.60%	0.05%
Marathon Oil Corp	MRO	559.38	28.65	16,026		1.54%		NULL	
Bio-Rad Laboratories Inc	BIO	22.80	337.32	7,689				NULL	
Ventas Inc	VTR	413.15	62.11	25,661		2.90%		23.75%	
Labcorp Holdings Inc	LH	83.96	229.89	19,302	0.08%	1.25%	0.00%	12.35%	0.01%
Vulcan Materials Co	VMC	132.06	245.21	32,382		0.75%		NULL	
Weyerhaeuser Co	WY	727.32	30.49	22,176		2.62%		NULL	
Williams Cos Inc/The	WMB	1,218.93	45.77	55,790	0.22%	4.15%	0.01%	2.60%	0.01%
Constellation Energy Corp	CEG	315.12	196.70	61,984		0.72%		NULL	
WEC Energy Group Inc	WEC	316.08	93.03	29,405	0.12%	3.59%	0.00%	7.24%	0.01%
Adobe Inc	ADBE	443.40	574.41	254,693				13.79%	
Vistra Corp	VST	343.56	85.43	29,350	0.12%	1.03%	0.00%	6.10%	0.01%
AES Corp/The	AES	710.92	17.13	12,178		4.03%		NULL	
Expeditors International of Washington Inc	EXPD	141.13	123.41	17,417	0.07%	1.18%	0.00%	5.60%	0.00%
Amgen Inc	AMGN	537.33	333.83	179,377	0.70%	2.70%	0.02%	11.10%	0.08%
Apple Inc	APPL	15,204.14	229.00	3,481,747	13.66%	0.44%	0.06%	11.39%	1.58%
Autodesk Inc	ADSK	215.51	258.40	55,688				12.85%	
Cintas Corp	CTAS	100.77	805.12	81,131	0.32%	0.78%	0.00%	7.36%	0.02%
Comcast Corp	CMCSA	3,863.06	39.57	152,861	0.60%	3.13%	0.02%	3.14%	0.02%
Molson Coors Beverage Co	TAP	192.59	53.97	10,394	0.04%	3.26%	0.00%	17.30%	0.01%
KLA Corp	KLAC	134.43	819.43	110,152	0.43%	0.71%	0.00%	5.61%	0.02%
Marriott International Inc/MD	MAR	281.52	234.69	66,071	0.26%	1.07%	0.00%	15.40%	0.04%
Fiserv Inc	FI	575.73	174.60	100,522				7.57%	
McCormick & Co Inc/MD	MKC	252.02	80.03	20,169		2.10%		NULL	
PACCAR Inc	PCAR	524.22	96.18	50,420	0.20%	1.25%	0.00%	9.67%	0.02%
Costco Wholesale Corp	COST	443.34	892.38	395,623	1.55%	0.52%	0.01%	11.30%	0.18%
Stryker Corp	SYK	381.08	360.42	137,347		0.89%		51.20%	
Tyson Foods Inc	TSN	285.82	64.31	18,381	0.07%	3.05%	0.00%	14.60%	0.01%
Lamb Weston Holdings Inc	LW	143.67	61.92	8,896	0.03%	2.33%	0.00%	15.60%	0.01%
Applied Materials Inc	AMAT	824.40	197.26	162,622		0.81%		42.40%	
American Airlines Group Inc	AAL	653.54	10.62	6,941				11.03%	
Cardinal Health Inc	CAH	243.85	112.72	27,486	0.11%	1.79%	0.00%	7.80%	0.01%
Cincinnati Financial Corp	CINF	156.24	137.03	21,410		2.36%		46.35%	
Paramount Global	PARA	626.01	10.47	6,554	0.03%	1.91%	0.00%	7.70%	0.00%
DR Horton Inc	DHI	326.04	188.76	61,543	0.24%	0.64%	0.00%	12.90%	0.03%
Electronic Arts Inc	EA	264.20	151.82	40,111		0.50%		21.53%	
Fair Isaac Corp	FICO	24.52	1,730.27	42,424				NULL	
Fastenal Co	FAST	572.65	68.28	39,100	0.15%	2.28%	0.00%	4.27%	0.01%
M&T Bank Corp	MTB	167.00	170.76	28,517	0.11%	3.16%	0.00%	6.73%	0.01%
Xcel Energy Inc	XEL	557.50	61.23	34,136	0.13%	3.58%	0.00%	1.70%	0.00%
Fifth Third Bancorp	FITB	676.80	42.69	28,892	0.11%	3.28%	0.00%	5.98%	0.01%
Gilead Sciences Inc	GILD	1,244.99	79.00	98,354		3.90%		33.10%	
Hasbro Inc	HAS	139.41	68.16	9,502	0.04%	4.11%	0.00%	4.90%	0.00%
Huntington Bancshares Inc/OH	HBAN	1,452.43	14.97	21,743		4.14%		55.38%	
Welltower Inc	WELL	609.15	120.68	73,512	0.29%	2.22%	0.01%	3.60%	0.01%
Biogen Inc	BIIB	145.66	204.76	29,826				9.91%	
Northern Trust Corp	NTRS	201.64	91.21	18,391		3.29%		NULL	
Packaging Corp of America	PKG	89.81	209.54	18,819	0.07%	2.39%	0.00%	7.19%	0.01%
Paychex Inc	PAYX	359.74	131.20	47,198	0.19%	2.99%	0.01%	10.96%	0.02%
QUALCOMM Inc	QCOM	1,114.00	175.30	195,284	0.77%	1.94%	0.01%	9.93%	0.08%
Ross Stores Inc	ROST	333.58	150.61	50,240	0.20%	0.98%	0.00%	10.50%	0.02%
IDEXX Laboratories Inc	IDXX	82.31	481.33	39,616				7.65%	
Starbucks Corp	SBUX	1,133.20	94.57	107,167		2.41%		NULL	
KeyCorp	KEY	928.12	17.06	15,834		4.81%		NULL	
Fox Corp	FOXA	224.65	41.37	9,294		1.31%		NULL	
Fox Corp	FOX	235.58	38.43	9,053	0.04%	1.41%	0.00%	7.36%	0.00%
State Street Corp	STT	298.62	87.10	26,010		3.49%		51.20%	
Norwegian Cruise Line Holdings Ltd	NCLH	439.69	17.89	7,866				2.00%	
US Bancorp	USB	1,560.51	47.23	73,703	0.29%	4.15%	0.01%	10.00%	0.03%
A O Smith Corp	AOS	119.96	83.72	10,043	0.04%	1.53%	0.00%	11.45%	0.00%
Gen Digital Inc	GEN	615.53	26.46	16,287		1.89%		NULL	
T Rowe Price Group Inc	TROW	222.60	106.04	23,604	0.09%	4.68%	0.00%	12.35%	0.01%
Waste Management Inc	WM	401.32	212.04	85,095	0.33%	1.41%	0.00%	11.30%	0.04%
Constellation Brands Inc	STZ	162.19	240.71	43,855	0.17%	1.68%	0.00%	11.00%	0.02%
Invesco Ltd	IVZ	450.03	17.09	7,691		4.80%		NULL	
Intuit Inc	INTU	279.55	830.26	176,187	0.69%	0.60%	0.00%	13.22%	0.09%
Morgan Stanley	MS	1,620.89	103.61	167,940	0.66%	3.57%	0.02%	10.72%	0.07%
Microchip Technology Inc	MCHP	536.51	82.16	44,079	0.17%	2.21%	0.00%	14.20%	0.02%
CrowdStrike Holdings Inc	CRWD	232.72	277.28	64,528				18.45%	
Chubb Ltd	CB	403.93	284.18	114,790		1.28%		-10.90%	
Hologic Inc	HOLX	232.27	81.24	18,870				2.40%	
Citizens Financial Group Inc	CFG	448.30	43.05	19,299	0.08%	3.90%	0.00%	7.70%	0.01%
Jabil Inc	JBL	113.45	109.28	12,397		0.29%		NULL	
O'Reilly Automotive Inc	ORLY	58.01	1,129.97	65,545				11.10%	
Allstate Corp/The	ALL	264.04	188.94	49,888		1.95%		NULL	
Equity Residential	EQR	379.14	74.88	28,390		1.81%		NULL	
BorgWarner Inc	BWA	227.77	33.96	7,735	0.03%	1.30%	0.00%	15.30%	0.00%
Keurig Dr Pepper Inc	KDP	1,356.09	36.61	49,646	0.19%	2.35%	0.00%	7.04%	0.01%
Host Hotels & Resorts Inc	HST	702.44	17.70	12,433		4.52%		NULL	
Incyte Corp	INCY	192.60	65.66	12,646				31.39%	
Simon Property Group Inc	SPG	326.04	167.35	54,562		4.90%		NULL	
Eastman Chemical Co	EMN	116.86	102.37	11,963	0.05%	3.16%	0.00%	10.08%	0.00%
AvalonBay Communities Inc	AVB	142.22	225.73	32,103		3.01%		NULL	
Prudential Financial Inc	PRU	357.00	121.16	43,254	0.17%	4.29%	0.01%	9.70%	0.02%
United Parcel Service Inc	UPS	732.51	128.55	94,164	0.37%	5.07%	0.02%	2.70%	0.01%
Walgreens Boots Alliance Inc	WBA	863.28	9.25	7,985		10.81%		-16.25%	
STERIS PLC	STE	98.62	241.10	23,777		0.95%		NULL	
McKesson Corp	MCK	129.68	561.08	72,759	0.29%	0.51%	0.00%	13.98%	0.04%
Lockheed Martin Corp	LMT	238.36	564.95	134,660	0.53%	2.23%	0.01%	5.10%	0.03%
Cencora Inc	COR	196.01	239.57	46,958	0.18%	0.85%	0.00%	10.67%	0.02%
Campbell Soup Co	CPB	298.55	49.72	14,844		2.98%		-0.97%	
Capital One Financial Corp	COF	381.86	146.93	56,106	0.22%	1.63%	0.00%	5.62%	0.01%
Waters Corp	WAT	59.36	346.35	20,560				13.00%	
Nordson Corp	NDSN	57.18	256.56	14,671	0.06%	1.22%	0.00%	14.96%	0.01%
Dollar Tree Inc	DLTR	214.94	84.49	18,161				8.91%	
Darden Restaurants Inc	DRI	118.46	158.15	18,735	0.07%	3.54%	0.00%	6.00%	0.00%
Evergy Inc	EVERG	229.75	59.14	13,587		4.35%		NULL	
Match Group Inc	MTCH	257.90	37.21	9,596				11.41%	
Domino's Pizza Inc	DPZ	34.97	414.21	14,486	0.06%	1.46%	0.00%	7.60%	0.00%
NVR Inc	NVR	3.08	9,172.46	28,233				7.40%	
NetApp Inc	NTAP	204.78	120.72	24,721	0.10%	1.72%	0.00%	10.80%	0.01%
Old Dominion Freight Line Inc	ODFL	214.30	192.80	41,316	0.16%	0.54%	0.00%	16.40%	0.03%
DaVita Inc	DVA	83.90	150.92	12,662				NULL	
Hartford Financial Services Group Inc/The	HIG	293.01	115.63	33,881		1.63%		NULL	
Iron Mountain Inc	IRM	293.34	113.26	33,223		2.53%		23.44%	
Estee Lauder Cos Inc/The	EL	233.18	91.66	21,373	0.08%	2.88%	0.00%	17.56%	0.01%
Cadence Design Systems Inc	CDNS	273.82	268.93	73,638				15.10%	
Tyler Technologies Inc	TYL	42.67	587.87	25,086				24.54%	
Universal Health Services Inc	UHS	59.46	237.77	14,138		0.34%		NULL	
Skyworks Solutions Inc	SKWS	159.72	109.59	17,503	0.07%	2.55%	0.00%	6.55%	0.00%
Quest Diagnostics Inc	DGX	111.32	156.97	17,473	0.07%	1.91%	0.00%	0.31%	0.00%
Rockwell Automation Inc	ROK	113.47	272.03	30,866	0.12%	1.84%	0.00%	3.50%	0.00%
Kraft Heinz Co/The	KHC	1,209.08	35.43	42,838		4.52%		32.28%	
American Tower Corp	AMT	467.08	224.06	104,654	0.41%	2.89%	0.01%	10.50%	0.04%
Regeneron Pharmaceuticals Inc	REGN	108.42	1,184.69	128,441				30.50%	
Amazon.com Inc	AMZN	10,495.57	178.50	1,873,459				9.70%	

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	FERC METHODOLOGY FOR MARKET RETURN				
					[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] IBES Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Jack Henry & Associates Inc	JKHY	72.91	173.03	12,615	0.05%	1.27%	0.00%	10.45%	0.01%
Ralph Lauren Corp	RL	40.06	171.26	6,860		1.93%		NULL	
BXP Inc	BXP	157.93	75.22	11,880	0.05%	5.21%	0.00%	16.90%	0.01%
Amphenol Corp	APH	1,204.29	67.45	81,229		0.98%		26.30%	
Howmet Aerospace Inc	HWM	408.15	96.66	39,451		0.33%		NULL	
Valero Energy Corp	VLO	320.38	146.73	47,009		2.92%		-13.50%	
Synopsys Inc	SNPS	153.61	519.58	79,815				16.44%	
Etsy Inc	ETSY	114.75	55.09	6,322				15.20%	
CH Robinson Worldwide Inc	CHRW	117.28	103.51	12,140	0.05%	2.40%	0.00%	12.50%	0.01%
Accenture PLC	ACN	626.38	341.95	214,192	0.84%	1.51%	0.01%	7.17%	0.06%
TransDigm Group Inc	TDG	56.11	1,373.21	77,052				20.71%	
Yum! Brands Inc	YUM	281.17	134.92	37,935	0.15%	1.99%	0.00%	11.57%	0.02%
Prologis Inc	PLD	925.91	127.82	118,350		3.00%		NULL	
FirstEnergy Corp	FE	575.92	43.92	25,294		3.87%		NULL	
VeriSign Inc	VRSN	97.60	183.90	17,949				NULL	
Quanta Services Inc	PWR	147.33	275.13	40,535		0.13%		NULL	
Henry Schein Inc	HSIC	126.71	70.55	8,939				5.00%	
Ameren Corp	AEE	266.51	82.51	21,990	0.09%	3.25%	0.00%	6.20%	0.01%
ANSYS Inc	ANSS	87.39	321.42	28,088				6.40%	
FactSet Research Systems Inc	FDS	38.04	422.84	16,085	0.06%	0.98%	0.00%	8.25%	0.01%
NVIDIA Corp	NVDA	24,530.00	119.37	2,928,146		0.03%		52.53%	
Cognizant Technology Solutions Corp	CTSH	495.66	77.77	38,547		1.54%		NULL	
Intuitive Surgical Inc	ISRG	355.35	492.63	175,058				6.12%	
Take-Two Interactive Software Inc	TTWO	175.28	161.71	28,345				14.09%	
Republic Services Inc	RSRG	314.07	208.21	65,392		1.11%		NULL	
eBay Inc	EBAY	489.00	59.10	28,900	0.11%	1.83%	0.00%	9.93%	0.01%
Goldman Sachs Group Inc/The	GS	315.80	510.25	161,137	0.63%	2.35%	0.01%	8.39%	0.05%
SBA Communications Corp	SBAC	107.47	226.66	24,360		1.73%		26.40%	
Sempra	SRE	633.15	82.18	52,032		3.02%		25.68%	
Moody's Corp	MCO	182.10	487.74	88,817	0.35%	0.70%	0.00%	5.90%	0.02%
ON Semiconductor Corp	ON	428.36	77.87	33,356				15.50%	
Booking Holdings Inc	BKNG	33.52	3,909.23	131,053	0.51%	0.90%	0.00%	8.02%	0.04%
F5 Inc	FFIV	58.28	203.15	11,840				22.07%	
Akamai Technologies Inc	AKAM	151.53	101.84	15,431				9.90%	
Charles River Laboratories International Inc	CRL	51.63	197.75	10,210				NULL	
MarketAxess Holdings Inc	MKTX	37.75	242.39	9,151	0.04%	1.22%	0.00%	5.43%	0.00%
Devon Energy Corp	DVN	626.20	44.78	28,041	0.11%	3.93%	0.00%	7.52%	0.01%
Bio-Techne Corp	TECH	158.60	73.99	11,735	0.05%	0.43%	0.00%	6.10%	0.00%
Alphabet Inc	GOOGL	5,859.00	163.38	957,243	3.75%	0.49%	0.02%	11.25%	0.42%
Teleflex Inc	TFX	47.12	245.17	11,552		0.55%		20.50%	
Allegion plc	ALLE	87.13	138.84	12,097	0.05%	1.38%	0.00%	7.90%	0.00%
Netflix Inc	NFLX	429.17	701.35	300,995				25.80%	
Warner Bros Discovery Inc	WBD	2,451.91	7.84	19,223				5.80%	
Agilent Technologies Inc	A	287.33	142.92	41,065	0.16%	0.66%	0.00%	5.00%	0.01%
Trimble Inc	TRMB	244.21	56.69	13,844				-68.41%	
Elevance Health Inc	ELV	231.89	556.89	129,135	0.51%	1.17%	0.01%	12.05%	0.06%
CME Group Inc	CME	360.09	215.74	77,687		2.13%		NULL	
Juniper Networks Inc	JNPR	329.16	38.88	12,798	0.05%	2.26%	0.00%	2.93%	0.00%
BlackRock Inc	BLK	148.13	901.81	133,583		2.26%		NULL	
DTE Energy Co	DTE	206.93	125.02	25,870	0.10%	3.26%	0.00%	11.63%	0.01%
Celanese Corp	CE	109.26	130.60	14,270		2.14%		NULL	
Nasdaq Inc	NDAQ	575.94	72.08	41,514	0.16%	1.33%	0.00%	7.85%	0.01%
Philip Morris International Inc	PM	1,554.80	123.29	191,692	0.75%	4.22%	0.03%	18.89%	0.14%
Ingersoll Rand Inc	IR	403.48	91.45	36,899	0.14%	0.09%	0.00%	9.37%	0.01%
Salesforce Inc	CRM	956.00	252.90	241,772	0.95%	0.63%	0.01%	16.23%	0.15%
Roper Technologies Inc	ROP	107.20	554.41	59,432	0.23%	0.54%	0.00%	9.42%	0.02%
Huntington Ingalls Industries Inc	HII	39.22	282.77	11,089	0.04%	1.84%	0.00%	6.28%	0.00%
MetLife Inc	MET	700.33	77.48	54,261	0.21%	2.81%	0.01%	8.00%	0.02%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	Shares Outst'g	Price	Market Capitalization	FERC METHODOLOGY FOR MARKET RETURN				
					[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] IBES Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Tapestry Inc	TPR	230.22	40.97	9,432		3.42%		NULL	
CSX Corp	CSX	1,938.74	34.27	66,441		1.40%		NULL	
Edwards Lifesciences Corp	EW	602.40	69.96	42,144				10.15%	
Ameriprise Financial Inc	AMP	98.19	449.44	44,130	0.17%	1.32%	0.00%	9.34%	0.02%
Zebra Technologies Corp	ZBRA	51.58	345.38	17,815				NULL	
Zimmer Biomet Holdings Inc	ZBH	203.65	115.46	23,514		0.83%		21.10%	
Camden Property Trust	CPT	106.64	125.20	13,351	0.05%	3.29%	0.00%	7.01%	0.00%
CBRE Group Inc	CBRE	306.43	115.14	35,282				NULL	
Mastercard Inc	MA	916.71	483.34	443,083		0.55%		NULL	
CarMax Inc	KMX	156.08	84.55	13,196				19.18%	
Intercontinental Exchange Inc	ICE	574.14	161.55	92,753		1.11%		NULL	
Fidelity National Information Services Inc	FIS	545.57	82.45	44,982	0.18%	1.75%	0.00%	9.54%	0.02%
Smurfit WestRock PLC	SW	519.36	47.42	24,628		2.55%		NULL	
Chipotle Mexican Grill Inc	CMG	1,369.48	56.08	76,800				21.18%	
Wynn Resorts Ltd	WYNN	110.99	76.88	8,533	0.03%	1.30%	0.00%	7.97%	0.00%
Live Nation Entertainment Inc	LYV	232.11	97.67	22,671				37.73%	
Assurant Inc	AIZ	51.79	195.63	10,132	0.04%	1.47%	0.00%	7.10%	0.00%
NRG Energy Inc	NRG	206.38	85.01	17,544		1.92%		NULL	
Monster Beverage Corp	MNST	979.54	47.13	46,166				NULL	
Regions Financial Corp	RF	915.13	23.17	21,203	0.08%	4.32%	0.00%	13.00%	0.01%
Baker Hughes Co	BKR	993.42	35.17	34,939		2.39%		-20.40%	
Mosaic Co/The	MOS	318.64	28.57	9,103		2.94%		36.55%	
Expedia Group Inc	EXPE	124.66	139.09	17,338				20.20%	
CF Industries Holdings Inc	CF	180.41	83.09	14,990		2.41%		NULL	
APA Corp	APA	369.91	28.49	10,539	0.04%	3.51%	0.00%	12.70%	0.01%
Leidos Holdings Inc	LDOS	134.71	158.51	21,354	0.08%	0.96%	0.00%	0.93%	0.00%
Alphabet Inc	GOOG	5,585.00	165.11	922,139		0.48%		20.50%	
First Solar Inc	FSLR	107.05	227.37	24,339				58.90%	
TE Connectivity Ltd	TEL	303.92	153.60	46,682	0.18%	1.69%	0.00%	8.80%	0.02%
Discover Financial Services	DFS	251.07	138.71	34,826		2.02%		NULL	
Visa Inc	V	1,670.45	276.37	461,661	1.81%	0.75%	0.01%	12.59%	0.23%
Mid-America Apartment Communities Inc	MAA	116.88	162.37	18,977	0.07%	3.62%	0.00%	3.12%	0.00%
Xylem Inc/NY	XYL	242.89	137.53	33,405	0.13%	1.05%	0.00%	14.69%	0.02%
Marathon Petroleum Corp	MPC	334.68	177.12	59,279		1.86%		-3.70%	
Tractor Supply Co	TSCO	107.87	267.55	28,860		1.64%		32.90%	
Advanced Micro Devices Inc	AMD	1,618.48	148.56	240,442				7.67%	
ResMed Inc	RMD	146.93	245.02	36,001	0.14%	0.87%	0.00%	15.50%	0.02%
Mettler-Toledo International Inc	MTD	21.36	1,439.08	30,734				9.30%	
VICI Properties Inc	VICI	1,043.14	33.48	34,924	0.14%	4.96%	0.01%	13.60%	0.02%
Copart Inc	CPRT	962.30	52.96	50,963				NULL	
Jacobs Solutions Inc	J	124.25	150.88	18,747		0.77%		NULL	
Albemarle Corp	ALB	117.53	90.25	10,607	0.04%	1.80%	0.00%	15.37%	0.01%
Fortinet Inc	FTNT	764.91	76.71	58,676				-6.22%	
Moderna Inc	MRNA	384.40	77.40	29,752				NULL	
Essex Property Trust Inc	ESS	64.22	301.79	19,380		3.25%		NULL	
CoStar Group Inc	CSGP	409.82	77.30	31,679				13.80%	
Realty Income Corp	O	870.87	61.85	53,861		5.10%		NULL	
Westinghouse Air Brake Technologies Corp	WAB	175.18	169.57	29,706		0.47%		NULL	
Pool Corp	POOL	38.26	351.62	13,452	0.05%	1.37%	0.00%	13.75%	0.01%
Western Digital Corp	WDC	343.45	65.59	22,527				NULL	
PepsiCo Inc	PEP	1,373.57	172.88	237,463		3.14%		NULL	
Diamondback Energy Inc	FANG	178.39	195.11	34,806	0.14%	4.80%	0.01%	7.04%	0.01%
Palo Alto Networks Inc	PANW	323.80	362.72	117,449				7.25%	
ServiceNow Inc	NOW	206.00	855.00	176,130				15.20%	
Church & Dwight Co Inc	CHD	244.82	101.88	24,942		1.11%		21.90%	
Federal Realty Investment Trust	FRT	83.67	115.00	9,622	0.04%	3.83%	0.00%	8.88%	0.00%
MGM Resorts International	MGM	303.77	37.59	11,419				10.59%	
American Electric Power Co Inc	AEP	532.12	100.28	53,361		3.51%		-2.63%	
Invitation Homes Inc	INVH	162.59	36.84	22,568	0.09%	3.04%	0.00%	6.62%	0.01%
PTC Inc	PTC	120.14	179.09	21,515				-12.78%	
JB Hunt Transport Services Inc	JBHT	101.99	173.20	17,664	0.07%	0.99%	0.00%	3.57%	0.00%
Lam Research Corp	LRCX	129.88	821.01	106,629	0.42%	1.12%	0.00%	14.92%	0.06%
Mohawk Industries Inc	MHK	63.12	155.14	9,792				7.60%	
GE Healthcare Technologies Inc	GEHC	456.66	84.82	38,734		0.14%		NULL	
Pentair PLC	PNR	165.50	88.69	14,678	0.06%	1.04%	0.00%	12.50%	0.01%
Vertex Pharmaceuticals Inc	VRTX	258.10	495.89	127,990				13.70%	
Amcor PLC	AMCR	1,445.34	11.44	16,535	0.06%	4.37%	0.00%	10.80%	0.01%
Meta Platforms Inc	META	2,184.73	521.31	1,138,921	4.47%	0.38%	0.02%	12.33%	0.55%
T-Mobile US Inc	TMUS	1,166.78	198.72	231,863		1.31%		NULL	
United Rentals Inc	URI	66.14	741.26	49,024	0.19%	0.88%	0.00%	13.60%	0.03%
Alexandria Real Estate Equities Inc	ARE	174.93	119.57	20,916		4.35%		26.15%	
Honeywell International Inc	HON	649.67	207.91	135,073	0.53%	2.08%	0.01%	8.45%	0.04%
Delta Air Lines Inc	DAL	645.42	42.49	27,424	0.11%	1.41%	0.00%	8.48%	0.01%
United Airlines Holdings Inc	UAL	328.80	44.04	14,480				NULL	
Seagate Technology Holdings PLC	STX	210.20	99.55	20,925	0.08%	2.81%	0.00%	8.69%	0.01%
News Corp	NWS	190.68	29.43	5,612		0.68%		NULL	
Centene Corp	CNC	526.03	78.83	41,467				26.52%	
Martin Marietta Materials Inc	MLM	61.12	533.37	32,598		0.59%		NULL	
Teradyne Inc	TER	163.18	136.73	22,311	0.09%	0.35%	0.00%	12.51%	0.01%
PayPal Holdings Inc	PYPL	1,022.33	72.43	74,048				8.70%	
Tesla Inc	TSLA	3,194.64	214.11	684,004				NULL	
KKR & Co Inc	KKR	887.44	123.77	109,838	0.43%	0.57%	0.00%	19.45%	0.08%
Arch Capital Group Ltd	ACGL	376.06	113.09	42,528				3.00%	
Dow Inc	DOW	703.27	53.58	37,681	0.15%	5.23%	0.01%	19.70%	0.03%
Everest Group Ltd	EG	43.27	392.24	16,974		2.04%		23.53%	
Teledyne Technologies Inc	TDY	46.78	432.80	20,248				2.50%	
GE Vernova Inc	GEV	274.80	201.00	55,235				NULL	
News Corp	NWSA	378.33	28.33	10,718		0.71%		NULL	
Exelon Corp	EXC	999.74	38.09	38,080	0.15%	3.99%	0.01%	10.10%	0.02%
Global Payments Inc	GPV	254.44	111.01	28,245	0.11%	0.90%	0.00%	13.69%	0.02%
Crown Castle Inc	CCI	434.57	112.02	48,680		5.59%		-7.10%	
Aptiv PLC	APTIV	265.76	71.53	19,010				27.59%	
Align Technology Inc	ALGN	74.70	237.22	17,720				9.50%	
Kenvue Inc	KVUE	1,915.17	21.95	42,038		3.74%		79.90%	
Targa Resources Corp	TRGP	219.08	146.90	32,183	0.13%	2.04%	0.00%	1.47%	0.00%
Bunge Global SA	BG	141.65	101.38	14,361		2.68%		31.10%	
LKQ Corp	LKQ	263.26	41.59	10,949		2.89%		-7.20%	
Deckers Outdoor Corp	DECK	25.41	959.29	24,377				NULL	
Zoetis Inc	ZTS	453.05	183.49	83,130	0.33%	0.94%	0.00%	9.57%	0.03%
Equinix Inc	EQIX	94.95	834.36	79,218		2.04%		-8.97%	
Digital Realty Trust Inc	DLR	327.41	151.61	49,639	0.19%	3.22%	0.01%	10.05%	0.02%
Molina Healthcare Inc	MOH	58.60	349.79	20,498				13.27%	
Las Vegas Sands Corp	LVS	736.43	38.99	28,713	0.11%	2.05%	0.00%	12.46%	0.01%

Notes:

- [1] Equals sum of Col. [9]
[2] Equals sum of Col. [11]
[3] Equals ([1] x (1 + ([2])) + [2]
[4] Source: Bloomberg Professional as of August 31, 2024
[5] Source: Bloomberg Professional as of August 31, 2024
[6] Equals [4] x [5]
[7] Equals weight in S&P 500 based on market capitalization [6] If Growth Rate >0% and ≤20% and Pays Dividends
[8] Source: Bloomberg Professional as of August 31, 2024
[9] Equals [7] x [8]
[10] Source: Eikon as of August 31, 2024
[11] Equals [7] x [10]

DR GRIFFING - VALUE LINE CAPM - AS FILED

		A	B	C	D	E	F	G
	Ticker	Market Return	Rf	MRP	Beta	RP	CAPM ROE	Filtered Results
Alliant Energy Corporation	LNT	14.57%	4.29%	10.28%	0.90	9.25%	13.54%	13.54%
Ameren Corporation	AEE	14.57%	4.29%	10.28%	0.90	9.25%	13.54%	13.54%
American Electric Power Company, Inc.	AEP	14.57%	4.29%	10.28%	0.85	8.74%	13.03%	13.03%
Duke Energy Corporation	DUK	14.57%	4.29%	10.28%	0.90	9.25%	13.54%	13.54%
Edison International	EIX	14.57%	4.29%	10.28%	1.00	10.28%	14.57%	14.57%
Entergy Corporation	ETR	14.57%	4.29%	10.28%	1.00	10.28%	14.57%	14.57%
Evergy, Inc.	EVRG	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
Eversource Energy	ES	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
IDACORP, Inc.	IDA	14.57%	4.29%	10.28%	0.85	8.74%	13.03%	13.03%
NorthWestern Corporation	NWE	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
OGE Energy Corporation	OGE	14.57%	4.29%	10.28%	1.05	10.79%	15.08%	15.08%
Pinnacle West Capital Corporation	PNW	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
Portland General Electric Company	POR	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
Southern Company	SO	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
Xcel Energy Inc.	XEL	14.57%	4.29%	10.28%	0.85	8.74%	13.03%	13.03%

Mean 13.88% 13.88%
Median 14.06% 14.06%

quartile 4 **15.08%**
quartile 3 **14.06%**
quartile 2 **14.06%**
quartile 1 **13.54%**

Low-End Test: Moody's 10-Year Baa Corporate Bond Index 5.73%
CAPM Risk Premium, Column C 10.28%
20 percent of CAPM risk premium 2.06%
Moody's 10-Year Baa Corporate Bond Index +
20 percent of CAPM risk premium 7.79%
High-End Test: Proxy Group median 14.06%
200 percent of Proxy Group median 28.11%

DR GRIFFING - VALUE LINE CAPM - CORRECTED (VALUE LINE PROJECTED EPS)

		A	B	C	D	E	F	G
	Ticker	Market Return	Rf	MRP	Beta	RP	CAPM ROE	Filtered Results
Alliant Energy Corporation	LNT	11.14%	4.29%	6.85%	0.90	6.16%	10.45%	10.45%
Ameren Corporation	AEE	11.14%	4.29%	6.85%	0.90	6.16%	10.45%	10.45%
American Electric Power Company, Inc.	AEP	11.14%	4.29%	6.85%	0.85	5.82%	10.11%	10.11%
Duke Energy Corporation	DUK	11.14%	4.29%	6.85%	0.90	6.16%	10.45%	10.45%
Edison International	EIX	11.14%	4.29%	6.85%	1.00	6.85%	11.14%	11.14%
Entergy Corporation	ETR	11.14%	4.29%	6.85%	1.00	6.85%	11.14%	11.14%
Evergy, Inc.	EVRG	11.14%	4.29%	6.85%	0.95	6.50%	10.79%	10.79%
Eversource Energy	ES	11.14%	4.29%	6.85%	0.95	6.50%	10.79%	10.79%
IDACORP, Inc.	IDA	11.14%	4.29%	6.85%	0.85	5.82%	10.11%	10.11%
NorthWestern Corporation	NWE	11.14%	4.29%	6.85%	0.95	6.50%	10.79%	10.79%
OGE Energy Corporation	OGE	11.14%	4.29%	6.85%	1.05	7.19%	11.48%	11.48%
Pinnacle West Capital Corporation	PNW	11.14%	4.29%	6.85%	0.95	6.50%	10.79%	10.79%
Portland General Electric Company	POR	11.14%	4.29%	6.85%	0.95	6.50%	10.79%	10.79%
Southern Company	SO	11.14%	4.29%	6.85%	0.95	6.50%	10.79%	10.79%
Xcel Energy Inc.	XEL	11.14%	4.29%	6.85%	0.85	5.82%	10.11%	10.11%

Mean	10.68%	10.68%
Median	10.79%	10.79%
quartile 4		11.48%
quartile 3		10.79%
quartile 2		10.79%
quartile 1		10.45%

Low-End Test:	Moody's 10-Year Baa Corporate Bond Index	5.73%
	CAPM Risk Premium, Column C	6.85%
	20 percent of CAPM risk premium	1.37%
	Moody's 10-Year Baa Corporate Bond Index +	7.10%
	20 percent of CAPM risk premium	
High-End Test:	Proxy Group median	10.79%
	200 percent of Proxy Group median	21.59%

MARKET RISK PREMIUM DERIVED FROM VALUE LINE LONG-TERM GROWTH ESTIMATES

FERC METHOD	
[1] Estimated Weighted Average Dividend Yield	1.71%
[2] Estimated Weighted Average Long-Term Growth Rate	9.27%
[3] S&P 500 Estimated Required Market Return	11.14%

STANDARD AND POOR'S 500 INDEX

					FERC METHODOLOGY FOR MARKET RETURN				
		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Name	Ticker	Shares Outst'g	Price	Market Capitalization	Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Value Line Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
LyondellBasell Industries NV	LYB	325.09	98.70	32,086		5.43%		-1.00%	
American Express Co	AXP	710.91	258.65	183,877	0.56%	1.08%	0.01%	9.00%	0.05%
Verizon Communications Inc	VZ	4,209.52	41.78	175,874	0.53%	6.37%	0.03%	0.50%	0.00%
Broadcom Inc	AVGO	4,654.88	162.82	757,908		1.29%		30.00%	
Boeing Co/The	BA	616.17	173.74	107,053					
Solventum Corp	SOLV	172.71	64.11	11,073					
Caterpillar Inc	CAT	484.90	356.10	172,672	0.52%	1.58%	0.01%	11.50%	0.06%
JPMorgan Chase & Co	JPM	2,845.17	224.80	639,593	1.93%	2.05%	0.04%	7.00%	0.14%
Chevron Corp	CVX	1,828.92	147.95	270,588	0.82%	4.41%	0.04%	5.00%	0.04%
Coca-Cola Co/The	KO	4,309.87	72.47	312,336	0.94%	2.68%	0.03%	7.00%	0.07%
AbbVie Inc	ABBV	1,766.34	196.31	346,751	1.05%	3.16%	0.03%	4.00%	0.04%
Walt Disney Co/The	DIS	1,813.59	90.38	163,912		1.00%		21.50%	
Corpay Inc	CPAY	69.43	315.55	21,910				13.50%	
Extra Space Storage Inc	EXR	211.93	177.00	37,511	0.11%	3.66%	0.00%	5.00%	0.01%
Exxon Mobil Corp	XOM	4,442.83	117.94	523,987		3.22%		-3.00%	
Phillips 66	PSX	418.57	140.31	58,729	0.18%	3.28%	0.01%	0.50%	0.00%
General Electric Co	GE	1,084.31	174.62	189,342		0.64%		21.00%	
HP Inc	HPQ	963.72	36.18	34,867	0.11%	3.05%	0.00%	12.50%	0.01%
Home Depot Inc/The	HD	993.29	368.50	366,028	1.10%	2.44%	0.03%	6.50%	0.07%
Monolithic Power Systems Inc	MPWR	48.75	934.68	45,568	0.14%	0.53%	0.00%	10.50%	0.01%
International Business Machines Corp	IBM	921.15	202.13	186,192	0.56%	3.30%	0.02%	3.00%	0.02%
Johnson & Johnson	JNJ	2,407.24	165.86	399,265	1.21%	2.99%	0.04%	3.00%	0.04%
Lululemon Athletica Inc	LULU	117.66	259.47	30,529				16.00%	
McDonald's Corp	MCD	717.34	286.99	205,870	0.62%	2.33%	0.01%	8.00%	0.05%
Merck & Co Inc	MRK	2,534.81	118.45	300,248	0.91%	2.60%	0.02%	15.50%	0.14%
3M Co	MMM	549.35	134.69	73,992		2.08%		30.50%	
American Water Works Co Inc	AWK	194.86	143.12	27,889	0.08%	2.14%	0.00%	4.50%	0.00%
Bank of America Corp	BAC	7,759.58	40.75	316,203	0.95%	3.05%	0.00%	6.50%	0.05%
Pfizer Inc	PFE	5,666.70	29.01	164,391	0.50%	5.79%	0.03%	2.50%	0.01%
Procter & Gamble Co/The	PG	2,349.71	171.54	403,069	1.22%	2.35%	0.03%	5.00%	0.06%
AT&T Inc	T	7,170.24	19.90	142,688	0.43%	5.58%	0.02%	4.00%	0.02%
Travelers Cos Inc/The	TRV	227.93	228.07	51,984	0.16%	1.84%	0.00%	12.00%	0.02%
RTX Corp	RTX	1,330.24	123.34	164,072	0.50%	2.04%	0.01%	12.00%	0.06%
Analog Devices Inc	ADI	496.49	233.92	116,140	0.35%	1.57%	0.01%	7.50%	0.03%
Walmart Inc	WMT	8,038.25	77.23	620,794	1.87%	1.07%	0.02%	8.00%	0.15%
Cisco Systems Inc	CSCO	4,028.82	50.54	203,616	0.61%	3.17%	0.02%	3.50%	0.02%
Intel Corp	INTC	4,276.00	22.04	94,243				4.00%	
General Motors Co	GM	1,123.92	49.78	65,949	0.17%	0.96%	0.00%	6.50%	0.01%
Microsoft Corp	MSFT	7,433.04	417.14	3,100,617	9.36%	0.72%	0.07%	14.00%	1.31%
Dollar General Corp	DG	219.92	82.97	18,246	0.06%	2.84%	0.00%	3.50%	0.00%
Cigna Group/The	CI	279.55	361.81	101,144	0.31%	1.55%	0.00%	12.00%	0.04%
Kinder Morgan Inc	KMI	2,219.46	21.57	47,874	0.14%	5.33%	0.01%	10.00%	0.01%
Citigroup Inc	C	1,907.80	62.64	119,504	0.36%	3.58%	0.01%	3.00%	0.01%
American International Group Inc	AIG	643.95	77.05	49,616	0.15%	2.08%	0.00%	13.00%	0.02%
Altria Group Inc	MO	1,706.22	53.77	91,744	0.28%	7.59%	0.02%	6.00%	0.02%
HCA Healthcare Inc	HCA	258.07	395.59	102,091	0.31%	0.67%	0.00%	10.50%	0.03%
International Paper Co	IP	347.37	48.42	16,820	0.05%	3.82%	0.00%	5.50%	0.00%
Hewlett Packard Enterprise Co	HPE	1,299.67	19.37	25,175	0.08%	2.68%	0.00%	7.50%	0.01%
Abbott Laboratories	ABT	1,739.90	113.27	197,078	0.59%	1.94%	0.01%	4.00%	0.02%
Aflac Inc	AFL	560.03	110.36	61,804	0.19%	1.81%	0.00%	7.50%	0.01%
Air Products and Chemicals Inc	APD	222.32	278.85	61,993	0.19%	2.54%	0.00%	10.50%	0.02%
Super Micro Computer Inc	SMCI	58.56	437.70	25,630				36.00%	
Royal Caribbean Cruises Ltd	RCL	257.42	164.62	42,376		0.97%			
Hess Corp	HES	308.12	138.06	42,538	0.13%	1.27%	0.00%	8.00%	0.01%
Archer-Daniels-Midland Co	ADM	478.14	60.99	29,162	0.09%	3.28%	0.00%	3.00%	0.00%
Automatic Data Processing Inc	ADP	407.80	275.91	112,515	0.34%	2.03%	0.01%	11.00%	0.04%
Verisk Analytics Inc	VRSK	142.42	272.62	38,856	0.12%	0.57%	0.00%	8.50%	0.01%
AutoZone Inc	AZO	17.08	3,181.48	64,949				12.50%	
Linde PLC	LIN	477.50	478.25	228,368	0.69%	1.16%	0.01%	7.00%	0.05%
Avery Dennison Corp	AVY	80.52	221.85	17,863	0.05%	1.59%	0.00%	2.00%	0.00%
Enphase Energy Inc	ENPH	135.42	121.04	16,391				14.00%	
MSCI Inc	MSCI	78.65	580.59	45,663	0.14%	1.10%	0.00%	9.50%	0.01%
Ball Corp	BALL	303.57	63.61	19,310	0.06%	1.26%	0.00%	10.50%	0.01%
Axon Enterprise Inc	AXON	75.57	364.97	27,582				25.00%	
Dayforce Inc	DAY	158.10	57.17	9,039					
Carrier Global Corp	CARR	902.75	72.78	65,702	0.20%	1.04%	0.00%	12.00%	0.02%
Bank of New York Mellon Corp/The	BK	737.96	68.22	50,343	0.15%	2.76%	0.00%	12.00%	0.02%
Otis Worldwide Corp	OTIS	400.56	94.69	37,929	0.11%	1.65%	0.00%	11.00%	0.01%
Baxter International Inc	BAX	510.18	37.94	19,356	0.06%	3.06%	0.00%	3.00%	0.00%
Becton Dickinson & Co	BDX	289.04	242.41	70,067	0.21%	1.57%	0.00%	6.00%	0.01%
Berkshire Hathaway Inc	BRK/B	1,325.19	475.92	630,686					
Best Buy Co Inc	BBY	215.71	100.40	21,658	0.07%	3.75%	0.00%	1.00%	0.00%
Boston Scientific Corp	BSX	1,472.63	81.79	120,446				13.00%	
Bristol-Myers Squibb Co	BMJ	2,027.40	49.95	101,268	0.31%	4.80%	0.01%	1.00%	0.00%
Brown-Forman Corp	BF/B	303.54	45.37	13,772		1.92%			
Coterra Energy Inc	CTRA	739.27	24.33	17,987	0.05%	3.45%	0.00%	4.50%	0.00%
Hilton Worldwide Holdings Inc	HLT	246.43	219.64	54,125		0.27%			
Carnival Corp	CCL	1,122.46	18.50	18,521					
Qorvo Inc	QRVO	94.86	115.89	10,993				9.50%	
Builders FirstSource Inc	BLDR	116.45	174.00	20,263				8.50%	
UDR Inc	UDR	329.82	44.51	14,680	0.04%	3.82%	0.00%	2.50%	0.00%
Clorox Co/The	CLX	123.86	158.31	19,609	0.06%	3.08%	0.00%	7.00%	0.00%
Paycom Software Inc	PAYC	57.43	162.78	9,349		0.92%		21.00%	
CMS Energy Corp	CMS	298.64	67.86	20,265	0.06%	3.04%	0.00%	5.00%	0.00%
Colgate-Palmolive Co	CL	817.09	106.50	87,020	0.26%	1.88%	0.00%	11.50%	0.03%
EPAM Systems Inc	EPAM	56.94	200.76	11,430				20.50%	
Conagra Brands Inc	CAG	479.05	31.20	14,946	0.05%	4.49%	0.00%	3.50%	0.00%
Airbnb Inc	ABNB	440.00	117.31	51,617				23.00%	
Consolidated Edison Inc	ED	346.15	101.56	35,155	0.11%	3.27%	0.00%	6.00%	0.01%
Corning Inc	GLW	855.70	41.85	35,811	0.11%	2.68%	0.00%	17.50%	0.02%
GoDaddy Inc	GDDY	140.97	167.41	23,600				27.00%	
Cummins Inc	CMI	137.05	312.85	42,875	0.13%	2.33%	0.00%	6.00%	0.01%
Caesars Entertainment Inc	CZR	216.34	37.64	8,143					
DanaHER Corp	DHR	722.21	269.31	194,499	0.59%	0.40%	0.00%	5.50%	0.03%
Target Corp	TGT	460.68	153.62	70,769	0.21%	2.92%	0.01%	10.00%	0.02%
Deere & Co	DE	273.60	385.74	105,538	0.32%	1.52%	0.00%	4.00%	0.01%
Dominion Energy Inc	D	838.94	55.90	46,897	0.14%	4.78%	0.01%	3.00%	0.00%
Dover Corp	DOV	137.46	186.03	25,571	0.08%	1.11%	0.00%	6.00%	0.00%
Alliant Energy Corp	LNT	256.50	58.27	14,946	0.05%	3.30%	0.00%	6.00%	0.00%
Steel Dynamics Inc	STLD	154.30	119.51	18,441	0.06%	1.54%	0.00%	2.00%	0.00%
Duke Energy Corp	DUK	771.00	113.95	87,855	0.27%	3.67%	0.01%	5.00%	0.01%
Regency Centers Corp	REG	181.50	72.69	13,193	0.04%	3.69%	0.00%	11.50%	0.00%
Eaton Corp PLC	ETN	398.10	306.93	122,189	0.37%	1.23%	0.00%	11.00%	0.04%
Ecolab Inc	ECL	284.54	253.18	72,039	0.22%	0.90%	0.00%	11.00%	0.02%
Revvity Inc	RVTY	123.34	122.54	15,114		0.23%		-2.50%	
Emerson Electric Co	EMR	572.70	105.39	60,357	0.18%	1.99%	0.00%	7.00%	0.01%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	FERC METHODOLOGY FOR MARKET RETURN				
					[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Value Line Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
EOG Resources Inc	EOG	568.60	128.82	73,247	0.22%	2.83%	0.01%	8.00%	0.02%
Aon PLC	AON	217.24	343.72	74,670	0.23%	0.79%	0.00%	12.00%	0.03%
Entergy Corp	ETR	213.83	120.69	25,807	0.08%	3.75%	0.00%	0.50%	0.00%
Equifax Inc	EFX	123.74	306.74	37,955	0.11%	0.51%	0.00%	7.00%	0.01%
EQT Corp	EQT	594.02	33.51	19,906		1.88%			
IQVIA Holdings Inc	IQV	182.30	251.55	45,858				11.00%	
Garther Inc	IT	77.06	481.96	37,910				8.00%	
FedEx Corp	FDX	244.96	298.77	73,188	0.22%	1.85%	0.00%	3.50%	0.01%
FMC Corp	FMC	124.82	64.58	8,061	0.02%	3.59%	0.00%	3.50%	0.00%
Brown & Brown Inc	BRO	285.26	105.13	29,989	0.09%	0.49%	0.00%	12.50%	0.01%
Ford Motor Co	F	3,904.40	11.19	43,690		5.36%		35.00%	
NextEra Energy Inc	NEE	2,055.00	80.51	165,448	0.50%	2.56%	0.01%	8.00%	0.04%
Franklin Resources Inc	BEN	523.00	20.24	10,585	0.03%	6.13%	0.00%	4.00%	0.00%
Garmin Ltd	GRMN	192.21	183.29	35,231	0.11%	1.64%	0.00%	5.00%	0.01%
Freeport-McMoRan Inc	FCX	1,436.86	44.28	63,624	0.19%	1.36%	0.00%	12.50%	0.02%
Dexcom Inc	DXCM	400.73	69.34	27,786					
General Dynamics Corp	GD	274.78	299.36	82,258	0.25%	1.90%	0.00%	10.00%	0.02%
General Mills Inc	GIS	556.62	72.29	40,238	0.12%	3.32%	0.00%	5.00%	0.01%
Genuine Parts Co	GPC	139.32	143.26	19,959	0.06%	2.79%	0.00%	8.50%	0.01%
Atmos Energy Corp	ATO	155.23	130.74	20,295	0.06%	2.46%	0.00%	7.00%	0.00%
WW Grainger Inc	GWG	48.83	984.92	48,090	0.15%	0.83%	0.00%	7.00%	0.01%
Halliburton Co	HAL	882.83	31.09	27,447	0.08%	2.19%	0.00%	20.00%	0.02%
L3Harris Technologies Inc	LHX	189.71	236.67	44,897	0.14%	1.96%	0.00%	11.50%	0.02%
Healthpeak Properties Inc	DOC	699.29	22.28	15,580	0.05%	5.39%	0.00%	7.00%	0.00%
Insulet Corp	PODD	70.12	202.77	14,217					
Catalent Inc	CTLT	180.98	60.96	11,033				21.00%	
Fortive Corp	FTV	350.34	74.40	26,065	0.08%	0.43%	0.00%	15.00%	0.01%
Hershey Co/The	HSY	147.67	193.06	28,510	0.09%	2.84%	0.00%	7.00%	0.01%
Synchrony Financial	SYF	395.23	50.26	19,864		1.99%		47.00%	
Hormel Foods Corp	HRL	548.31	32.55	17,847	0.05%	3.47%	0.00%	7.50%	0.00%
Arthur J Gallagher & Co	AJG	219.10	292.57	64,102	0.19%	0.82%	0.00%	15.50%	0.03%
Mondelez International Inc	MDLZ	1,335.80	71.81	95,924	0.29%	2.62%	0.01%	10.00%	0.03%
CenterPoint Energy Inc	CNP	651.72	27.30	17,792	0.05%	2.93%	0.00%	6.50%	0.00%
Humana Inc	HUM	120.40	354.47	42,679	0.13%	1.00%	0.00%	4.50%	0.01%
Willis Towers Watson PLC	WTW	101.56	292.11	29,666	0.09%	1.21%	0.00%	10.50%	0.01%
Illinois Tool Works Inc	ITW	296.90	253.18	75,169	0.23%	2.37%	0.01%	9.00%	0.02%
CDW Corp/DE	CDW	133.58	225.64	30,140	0.09%	1.10%	0.00%	7.00%	0.01%
Trane Technologies PLC	TT	225.67	361.66	81,616	0.25%	0.93%	0.00%	12.50%	0.03%
Interpublic Group of Cos Inc/The	IPG	375.59	32.28	12,124	0.04%	4.09%	0.00%	8.50%	0.00%
International Flavors & Fragrances Inc	IFF	255.66	103.99	26,586	0.08%	1.54%	0.00%	0.50%	0.00%
Generac Holdings Inc	GNRC	60.15	156.53	9,416				12.50%	
NXP Semiconductors NV	NXPI	254.73	256.36	65,303	0.20%	1.58%	0.00%	10.00%	0.02%
Kellanova	K	343.95	80.04	27,530		2.85%			
Broadridge Financial Solutions Inc	BR	116.71	212.86	24,843	0.07%	1.65%	0.00%	9.50%	0.01%
Kimberly-Clark Corp	KMB	336.80	144.66	48,722	0.15%	3.37%	0.00%	7.50%	0.01%
Kimco Realty Corp	KIM	674.12	23.26	15,680	0.05%	4.13%	0.00%	18.00%	0.01%
Oracle Corp	ORCL	2,755.86	141.29	389,375	1.18%	1.13%	0.01%	10.00%	0.12%
Kroger Co/The	KR	721.79	53.21	38,406	0.12%	2.41%	0.00%	5.00%	0.01%
Lennar Corp	LEN	241.70	182.06	44,004	0.13%	1.10%	0.00%	5.00%	0.01%
Eli Lilly & Co	LLY	950.43	960.02	912,428		0.54%		27.50%	
Bath & Body Works Inc	BBWI	219.11	30.76	6,740		2.60%		26.50%	
Charter Communications Inc	CHTR	142.74	347.54	49,608				6.50%	
Loews Corp	L	219.52	81.94	17,987	0.05%	0.31%	0.00%	15.50%	0.01%
Lowe's Cos Inc	LOW	567.29	248.50	140,973	0.43%	1.85%	0.01%	5.50%	0.02%
Hubbell Inc	HUBB	53.68	399.92	21,468	0.06%	1.22%	0.00%	9.00%	0.01%
IDEX Corp	IEX	75.70	206.48	15,631	0.05%	1.34%	0.00%	8.00%	0.00%
Marsh & McLennan Cos Inc	MMC	491.76	227.51	111,879	0.34%	1.43%	0.00%	12.00%	0.04%
Masco Corp	MAS	218.25	79.56	17,364	0.06%	1.46%	0.00%	8.00%	0.00%
S&P Global Inc	SPGI	320.20	513.24	164,339	0.50%	0.71%	0.00%	8.00%	0.04%
Medtronic PLC	MDT	1,282.49	88.58	113,603	0.34%	3.16%	0.01%	6.50%	0.02%
Viatis Inc	VTRS	1,193.52	12.08	14,418		3.97%		-1.50%	
CVS Health Corp	CVS	1,257.98	57.24	72,007	0.22%	4.65%	0.01%	2.50%	0.01%
DuPont de Nemours Inc	DD	417.50	84.25	35,174	0.11%	1.80%	0.00%	9.00%	0.01%
Micron Technology Inc	MU	1,108.84	96.24	106,715		0.48%		24.00%	
Motorola Solutions Inc	MSI	166.84	442.04	73,750	0.22%	0.89%	0.00%	10.00%	0.02%
Cboe Global Markets Inc	CBOE	104.63	205.40	21,492	0.06%	1.23%	0.00%	14.00%	0.01%
Newmont Corp	NEM	1,152.49	53.39	61,531	0.19%	1.87%	0.00%	13.00%	0.02%
NKE Inc	NKE	1,201.46	82.95	99,681	0.30%	1.78%	0.01%	12.00%	0.04%
NISource Inc	NI	448.51	33.06	14,828	0.04%	3.21%	0.00%	9.50%	0.00%
Norfolk Southern Corp	NSC	226.10	256.16	57,917	0.17%	2.11%	0.00%	9.50%	0.02%
Principal Financial Group Inc	PFG	231.58	81.42	18,856	0.06%	3.54%	0.00%	4.00%	0.00%
Eversource Energy	ES	357.39	67.53	24,134	0.07%	4.24%	0.00%	6.00%	0.00%
Northrop Grumman Corp	NOC	146.25	521.15	76,216	0.23%	1.58%	0.00%	8.00%	0.02%
Wells Fargo & Co	WFC	3,403.77	58.47	199,018	0.60%	2.74%	0.02%	9.50%	0.06%
Nucor Corp	NUE	237.34	151.91	36,054		1.42%			
Occidental Petroleum Corp	OXY	916.20	56.98	52,205	0.16%	1.54%	0.00%	6.00%	0.01%
Omnicon Group Inc	OMC	195.65	100.43	19,649	0.06%	2.79%	0.00%	7.00%	0.00%
ONEOK Inc	OKE	584.07	82.36	53,945	0.01%	4.25%	0.00%	12.00%	0.00%
Raymond James Financial Inc	RJF	205.94	119.57	24,625	0.07%	1.51%	0.00%	10.00%	0.01%
PG&E Corp	PCG	2,137.46	19.70	42,108	0.13%	0.20%	0.00%	9.00%	0.01%
Parker-Hannifin Corp	PH	128.60	600.20	77,183	0.23%	1.09%	0.00%	12.00%	0.03%
Rollins Inc	ROL	484.31	50.18	24,303	0.07%	1.20%	0.00%	9.00%	0.01%
PPL Corp	PPL	737.77	31.91	23,542	0.07%	3.23%	0.00%	7.50%	0.01%
ConocoPhillips	COP	1,161.25	113.79	132,139	0.40%	2.74%	0.01%	4.00%	0.02%
PulteGroup Inc	PHM	207.52	131.65	27,321	0.08%	0.61%	0.00%	7.50%	0.01%
Pinnacle West Capital Corp	PNW	113.61	87.52	9,943	0.03%	4.02%	0.00%	4.50%	0.00%
PNC Financial Services Group Inc/The	PNC	397.50	185.09	73,573	0.22%	3.46%	0.01%	10.00%	0.02%
PPG Industries Inc	PPG	233.30	129.73	30,266	0.09%	2.10%	0.00%	7.00%	0.01%
Progressive Corp/The	PGR	585.67	252.20	147,705		0.16%		22.50%	
Veralto Corp	VLTO	247.11	112.43	27,782		0.32%			
Public Service Enterprise Group Inc	PEG	498.16	80.75	40,227	0.12%	2.97%	0.00%	5.00%	0.01%
Cooper Cos Inc/The	COO	199.16	105.73	21,057				7.50%	
Edison International	EIX	383.93	87.03	33,413	0.10%	3.58%	0.00%	6.00%	0.01%
Schlumberger NV	SLB	1,419.84	43.99	62,459		2.50%		21.50%	
Charles Schwab Corp/The	SCHW	1,778.45	65.10	115,777	0.35%	1.54%	0.01%	10.50%	0.04%
Sherwin-Williams Co/The	SHW	252.26	369.37	93,177	0.28%	0.77%	0.00%	11.00%	0.03%
West Pharmaceutical Services Inc	WST	72.54	313.63	22,751	0.07%	0.26%	0.00%	7.50%	0.01%
J.M. Smucker Co/The	SJM	106.41	114.68	12,203	0.00%	3.77%	0.00%	7.00%	0.00%
Snap-on Inc	SNA	52.68	283.74	14,948	0.05%	2.62%	0.00%	6.00%	0.00%
AMETEK Inc	AME	231.54	171.05	39,604	0.12%	0.65%	0.00%	10.00%	0.01%
Uber Technologies Inc	UBER	2,100.94	73.13	153,642					
Southern Co/The	SO	1,094.63	86.40	94,576	0.29%	3.33%	0.01%	6.50%	0.02%
Truist Financial Corp	TFC	1,339.14	44.46	59,538	0.18%	4.68%	0.01%	1.50%	0.00%
Southwest Airlines Co	LUV	599.16	28.92	17,328		2.49%			
W R Berkley Corp	WRB	380.55	59.70	22,719	0.07%	0.54%	0.00%	13.00%	0.01%
Stanley Black & Decker Inc	SWK	153.96	101.54	15,633	0.05%	3.23%	0.00%	1.00%	0.00%
Public Storage	PSA	175.83	343.72	60,436	0.18%	3.49%	0.01%	7.00%	0.01%
Arista Networks Inc	ANET	314.15	353.38	111,015				19.50%	
Sysco Corp	SY	491.52	77.97	38,324	0.12%	2.62%	0.00%	13.50%	0.02%
Corteva Inc	CTVA	687.80	57.13	39,294	0.12%	1.19%	0.00%	9.00%	0.01%
Texas Instruments Inc	TXN	913.05	214.34	195,702	0.59%	2.43%	0.01%	3.00%	0.02%
Textron Inc	TXT	187.36	91.20	17,088	0.05%	0.09%	0.00%	13.00%	0.01%
Thermo Fisher Scientific Inc	TMO	382.00	615.07	234,954	0.71%	0.25%	0.00%	6.00%	0.04%
TJX Cos Inc/The	TJX	1,127.87	117.27	132,266	0.40%	1.28%	0.01%	17.00%	0.07%
Globe Life Inc	GL	89.82	105.05	9,436	0.03%	0.91%	0.00%	8.50%	0.00%
Johnson Controls International plc	JCI	668.01	72.85	48,665	0.15%	2.03%	0.00%	9.50%	0.01%
Ulta Beauty Inc	ULTA	47.12	352.84	16,624				8.00%	
Union Pacific Corp	UNP	609.20	256.09	156,010	0.47%	2.09%	0.01%	8.00%	0.04%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	FERC METHODOLOGY FOR MARKET RETURN				
					[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Value Line Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Keysight Technologies Inc	KEYS	173.54	154.12	26,746				8.00%	
UnitedHealth Group Inc	UNH	923.42	590.20	545,001	1.65%	1.42%	0.02%	12.00%	0.20%
Blackstone Inc	BX	720.08	142.36	102,510	0.31%	2.30%	0.01%	16.00%	0.05%
Marathon Oil Corp	MRO	559.38	28.65	16,026	0.05%	1.54%	0.00%	12.50%	0.01%
Bio-Rad Laboratories Inc	BIO	22.80	337.32	7,689				11.50%	
Ventas Inc	VTR	413.15	62.11	25,661		2.90%		23.00%	
Labcorp Holdings Inc	LH	83.96	229.89	19,302	0.06%	1.25%	0.00%	1.00%	0.00%
Vulcan Materials Co	VMC	132.06	245.21	32,382	0.10%	0.75%	0.00%	8.00%	0.01%
Weyerhaeuser Co	WY	727.32	30.49	22,176		2.62%		-0.50%	
Williams Cos Inc/The	WMB	1,218.93	45.77	55,790	0.17%	4.15%	0.01%	11.00%	0.02%
Constellation Energy Corp	CEG	315.12	196.70	61,984		0.72%			
WEC Energy Group Inc	WEC	316.08	93.03	29,405	0.09%	3.59%	0.00%	6.00%	0.01%
Adobe Inc	ADBE	443.40	574.41	254,693				13.50%	
Vistra Corp	VST	343.56	85.43	29,350		1.03%			
AES Corp/The	AES	710.92	17.13	12,178	0.04%	4.03%	0.00%	14.00%	0.01%
Expeditors International of Washington Inc	EXPD	141.13	123.41	17,417		1.18%		-1.00%	
Amgen Inc	AMGN	537.33	333.63	179,377	0.54%	2.70%	0.01%	4.50%	0.02%
Apple Inc	AAPL	15,204.14	229.00	3,481,747	10.51%	0.44%	0.05%	8.00%	0.84%
Autodesk Inc	ADSK	215.51	258.40	55,888				14.00%	
Cintas Corp	CTAS	100.77	805.12	81,131	0.24%	0.78%	0.00%	14.00%	0.03%
Comcast Corp	CMCSA	3,863.06	39.57	152,861	0.46%	3.13%	0.01%	8.00%	0.04%
Molson Coors Beverage Co	TAP	192.59	53.97	10,394	0.03%	3.26%	0.00%	11.50%	0.00%
KLA Corp	KLAC	134.43	819.43	110,152	0.33%	0.71%	0.00%	13.00%	0.04%
Marriott International Inc/MD	MAR	281.52	234.69	66,071	0.20%	1.07%	0.00%	11.00%	0.02%
Fiserv Inc	FI	575.73	174.60	100,522				9.50%	
McCormick & Co Inc/MD	MKC	252.02	80.03	20,169	0.06%	2.10%	0.00%	4.50%	0.00%
PCACAR Inc	PCAR	524.22	96.18	50,420	0.15%	1.25%	0.00%	14.50%	0.02%
Costco Wholesale Corp	COST	443.34	892.38	395,623	0.19%	0.52%	0.01%	10.00%	0.12%
Stryker Corp	SYK	381.08	360.42	137,347	0.41%	0.89%	0.00%	9.50%	0.04%
Tyson Foods Inc	TSN	285.82	64.31	18,381	0.06%	3.05%	0.00%	6.00%	0.00%
Lamb Weston Holdings Inc	LW	143.67	61.92	8,896	0.03%	2.33%	0.00%	14.50%	0.00%
Applied Materials Inc	AMAT	824.40	197.26	162,622	0.49%	0.81%	0.00%	9.50%	0.05%
American Airlines Group Inc	AAL	653.54	10.62	6,941					
Cardinal Health Inc	CAH	243.85	112.72	27,486	0.08%	1.79%	0.00%	6.50%	0.01%
Cincinnati Financial Corp	CINF	156.24	137.03	21,410	0.06%	2.36%	0.00%	10.50%	0.01%
Paramount Global	PARA	626.01	10.47	6,554		1.91%		-2.50%	
DR Horton Inc	DHI	326.04	188.76	61,543	0.19%	0.64%	0.00%	4.50%	0.01%
Electronic Arts Inc	EA	264.20	151.82	40,111	0.12%	0.50%	0.00%	14.50%	0.02%
Fair Isaac Corp	FICO	24.52	1,730.27	42,424				16.50%	
Fastenal Co	FAST	572.65	68.28	39,100	0.12%	2.28%	0.00%	9.00%	0.01%
M&T Bank Corp	MTB	167.00	170.76	28,517	0.09%	3.16%	0.00%	4.50%	0.00%
Xcel Energy Inc	XEL	557.50	61.23	34,136	0.10%	3.58%	0.00%	7.00%	0.01%
Fifth Third Bancorp	FITB	676.80	42.69	28,892	0.09%	3.28%	0.00%	4.50%	0.00%
Gilead Sciences Inc	GILD	1,244.99	79.00	98,354	0.30%	3.90%	0.01%	2.50%	0.01%
Hasbro Inc	HAS	139.41	68.16	9,502	0.03%	4.11%	0.00%	8.50%	0.00%
Huntington Bancshares Inc/OH	HBAN	1,452.43	14.97	21,743	0.07%	4.14%	0.00%	7.50%	0.00%
Welltower Inc	WELL	609.15	120.68	73,512		2.22%		26.50%	
Biogen Inc	BIIB	145.66	204.76	29,826				9.50%	
Northern Trust Corp	NTRS	201.64	91.21	18,391	0.06%	3.29%	0.00%	4.00%	0.00%
Packaging Corp of America	PKG	89.81	209.54	18,819	0.06%	2.39%	0.00%	9.00%	0.01%
Paychex Inc	PAYX	359.74	131.20	47,198	0.14%	2.99%	0.00%	8.00%	0.01%
QUALCOMM Inc	QCOM	1,114.00	175.30	195,284	0.59%	1.94%	0.01%	7.50%	0.04%
Ross Stores Inc	ROST	333.58	150.61	50,240	0.15%	0.98%	0.00%	14.00%	0.02%
IDEXX Laboratories Inc	IDXX	82.31	481.33	39,616				10.50%	
Starbucks Corp	SBUX	1,133.20	94.57	107,167	0.32%	2.41%	0.01%	9.00%	0.03%
KeyCorp	KEY	928.12	17.06	15,834		4.81%			
Fox Corp	FOXA	224.65	41.37	9,294	0.03%	1.31%	0.00%	13.50%	0.00%
Fox Corp	FOX	235.59	38.43	9,063		1.41%			
State Street Corp	STT	298.62	87.10	26,010		3.49%			
Norwegian Cruise Line Holdings Ltd	NCLH	439.69	17.89	7,866					
US Bancorp	USB	1,560.51	47.23	73,703	0.22%	4.15%	0.01%	4.00%	0.01%
A O Smith Corp	AOS	119.96	83.72	10,043	0.03%	1.53%	0.00%	9.00%	0.00%
Gen Digital Inc	GEN	615.53	26.46	16,287	0.05%	1.89%	0.00%	10.50%	0.01%
T Rowe Price Group Inc	TROW	222.60	106.04	23,604	0.07%	4.68%	0.00%	4.50%	0.00%
Waste Management Inc	WM	401.32	212.04	85,095	0.26%	1.41%	0.00%	6.00%	0.02%
Constellation Brands Inc	STZ	182.19	240.71	43,855	0.13%	1.68%	0.00%	6.00%	0.01%
Invesco Ltd	IVZ	450.03	17.09	7,691	0.02%	4.80%	0.00%	10.00%	0.00%
Intuit Inc	INTU	279.55	630.26	176,187	0.00%	0.65%	0.00%	13.50%	0.07%
Morgan Stanley	MS	1,620.89	103.61	167,940	0.51%	3.57%	0.02%	9.50%	0.05%
Microchip Technology Inc	MCHP	536.51	82.16	44,079	0.13%	2.21%	0.00%	6.00%	0.01%
CrowdStrike Holdings Inc	CRWD	232.72	277.28	64,528					
Chubb Ltd	CB	403.93	284.18	114,790	0.35%	1.28%	0.00%	13.00%	0.05%
Hologic Inc	HOLX	232.27	81.24	18,870				-2.00%	
Citizens Financial Group Inc	CFG	448.30	43.05	19,299	0.06%	3.90%	0.00%	7.50%	0.00%
Jabil Inc	JBL	113.45	109.28	12,397	0.04%	0.29%	0.00%	14.50%	0.01%
O'Reilly Automotive Inc	ORLY	58.01	1,129.97	65,545				10.50%	
Allstate Corp/The	ALL	264.04	188.94	49,888		1.95%		30.00%	
Equity Residential	EQOR	379.14	74.98	28,990		3.61%		-4.00%	
BorgWarner Inc	BWA	227.77	33.96	7,735	0.02%	1.30%	0.00%	5.50%	0.00%
Keurig Dr Pepper Inc	KDP	1,356.09	36.61	49,646	0.15%	2.35%	0.00%	10.00%	0.01%
Host Hotels & Resorts Inc	HST	702.44	17.70	12,433		4.52%		51.00%	
Incyte Corp	INCY	192.60	65.66	12,646				18.50%	
Simon Property Group Inc	SPG	326.04	167.35	54,562	0.16%	4.90%	0.01%	3.50%	0.01%
Eastman Chemical Co	EMN	116.86	102.37	11,963	0.04%	3.16%	0.00%	3.50%	0.00%
AvalonBay Communities Inc	AVB	142.22	225.73	32,103	0.10%	3.01%	0.00%	5.50%	0.01%
Prudential Financial Inc	PRU	357.00	121.16	43,254	0.13%	4.29%	0.01%	4.00%	0.01%
United Parcel Service Inc	UPS	732.51	128.55	94,164	0.28%	5.07%	0.01%	3.50%	0.01%
Walgreens Boots Alliance Inc	WBA	863.28	9.25	7,985		10.81%		-7.00%	
STERIS PLC	STE	98.62	241.10	23,777	0.07%	0.95%	0.00%	8.00%	0.01%
McKesson Corp	MCK	129.68	561.08	72,759	0.22%	0.51%	0.00%	10.00%	0.02%
Lockheed Martin Corp	LMT	238.36	564.95	134,660	0.41%	2.23%	0.01%	9.50%	0.04%
Cencora Inc	COR	196.01	239.57	46,958	0.14%	0.85%	0.00%	6.50%	0.01%
Campbell Soup Co	CPB	298.55	49.72	14,844	0.04%	2.98%	0.00%	5.00%	0.00%
Capital One Financial Corp	COF	381.86	146.93	56,106	0.17%	1.63%	0.00%	2.50%	0.00%
Waters Corp	WAT	59.36	346.35	20,560				6.50%	
Nordson Corp	NDSN	57.18	256.56	14,671	0.04%	1.22%	0.00%	9.00%	0.00%
Dollar Tree Inc	DLTR	214.94	84.49	18,161				24.00%	
Darden Restaurants Inc	DRI	118.46	158.15	18,735	0.06%	3.54%	0.00%	10.00%	0.01%
Evergy Inc	EVRG	229.75	59.14	13,587	0.04%	4.35%	0.00%	7.50%	0.00%
Match Group Inc	MTCH	257.90	37.21	9,596				12.50%	
Dominos Pizza Inc	DPZ	34.97	414.21	14,486	0.04%	1.46%	0.00%	12.50%	0.01%
NVR Inc	NVR	3.08	9,172.46	28,233				1.50%	
NetApp Inc	NTAP	204.78	120.72	24,721	0.07%	1.72%	0.00%	8.50%	0.01%
Old Dominion Freight Line Inc	ODFL	214.30	192.80	41,316	0.12%	0.54%	0.00%	7.50%	0.01%
DaVita Inc	DVA	83.90	150.92	12,662				9.50%	
Hartford Financial Services Group Inc/The	HIG	293.01	115.63	33,881	0.10%	1.63%	0.00%	7.00%	0.01%
Iron Mountain Inc	IRM	293.34	113.26	33,223	0.10%	2.53%	0.00%	5.50%	0.01%
Estee Lauder Cos Inc/The	EL	233.18	61.66	21,373	0.06%	2.88%	0.00%	3.50%	0.00%
Cadence Design Systems Inc	CDNS	273.82	268.93	73,638				12.00%	
Tyler Technologies Inc	TYL	42.67	587.87	25,086				8.00%	
Universal Health Services Inc	UHS	59.46	237.77	14,138	0.04%	0.34%	0.00%	9.00%	0.00%
Skyworks Solutions Inc	SKWS	159.72	109.59	17,503		2.55%			
Quest Diagnostics Inc	DGX	111.32	156.97	17,473	0.05%	1.91%	0.00%	3.00%	0.00%
Rockwell Automation Inc	ROK	113.47	272.03	30,866	0.09%	1.84%	0.00%	9.50%	0.01%
Kraft Heinz Co/The	KHC	1,209.08	35.43	42,838	0.13%	4.52%	0.01%	4.50%	0.01%
American Tower Corp	AMT	467.08	224.06	104,654	0.32%	2.89%	0.01%	11.00%	0.03%
Regeneron Pharmaceuticals Inc	REGN	108.42	1,184.69	128,441				1.50%	
Amazon.com Inc	AMZN	10,495.57	178.50	1,873,459				24.50%	

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4]	[5]	[6]	FERC METHODOLOGY FOR MARKET RETURN				
		Shares Outst'g	Price	Market Capitalization	[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Value Line Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Jack Henry & Associates Inc	JKHY	72.91	173.03	12,615	0.04%	1.27%	0.00%	6.50%	0.00%
Ralph Lauren Corp	RL	40.06	171.26	6,860	0.02%	1.93%	0.00%	11.00%	0.00%
BXP Inc	BXP	157.93	75.22	11,880	0.04%	5.21%	0.00%	0.50%	0.00%
Amphenol Corp	APH	1,204.29	67.45	81,229	0.25%	0.98%	0.00%	13.50%	0.03%
Howmet Aerospace Inc	HWM	408.15	96.66	39,451	0.12%	0.33%	0.00%	12.00%	0.01%
Valero Energy Corp	VLO	320.38	146.73	47,009	0.14%	2.92%	0.00%	9.50%	0.01%
Synopsys Inc	SNPS	153.61	519.58	79,815				12.50%	
Etsy Inc	ETSY	114.75	55.09	6,322				3.00%	
CH Robinson Worldwide Inc	CHRW	117.28	103.51	12,140	0.04%	2.40%	0.00%	5.50%	0.00%
Accenture PLC	ACN	626.38	341.95	214,192	0.65%	1.51%	0.01%	12.50%	0.08%
TransDigm Group Inc	TDG	56.11	1,373.21	77,052				22.00%	
Yum! Brands Inc	YUM	281.17	134.92	37,935	0.11%	1.99%	0.00%	10.00%	0.01%
Prologis Inc	PLD	925.91	127.82	118,350	0.36%	3.00%	0.01%	0.50%	0.00%
FirstEnergy Corp	FE	575.92	43.92	25,294	0.08%	3.87%	0.00%	5.50%	0.00%
VeriSign Inc	VRSN	97.60	183.90	17,949				12.50%	
Quanta Services Inc	PWR	147.33	275.13	40,535	0.12%	0.13%	0.00%	15.00%	0.02%
Henry Schein Inc	HSIC	126.71	70.55	8,939				8.50%	
Ameren Corp	AEE	266.51	82.51	21,990	0.07%	3.25%	0.00%	6.50%	0.00%
ANSSYS Inc	ANSS	87.39	321.42	28,088				9.50%	
FactSet Research Systems Inc	FDS	38.04	422.84	16,085	0.05%	0.98%	0.00%	11.00%	0.01%
NVIDIA Corp	NVDA	24,530.00	119.37	2,928,146		0.03%		39.50%	
Cognizant Technology Solutions Corp	CTSH	495.66	77.77	38,547	0.12%	1.54%	0.00%	8.50%	0.01%
Intuitive Surgical Inc	ISRG	355.35	492.63	175,058				13.50%	
Take-Two Interactive Software Inc	TTWO	175.28	161.71	28,345					
Republic Services Inc	RSG	314.07	208.21	65,392	0.20%	1.11%	0.00%	11.00%	0.02%
eBay Inc	EBAY	489.00	59.10	28,900	0.09%	1.83%	0.00%	6.00%	0.01%
Goldman Sachs Group Inc/The	GS	315.80	510.25	161,137	0.49%	2.35%	0.01%	7.50%	0.04%
SBA Communications Corp	SBAC	107.47	226.66	24,360	0.07%	1.73%	0.00%	16.50%	0.01%
Sempra	SRE	633.15	82.18	52,032	0.16%	3.02%	0.00%	7.00%	0.01%
Moody's Corp	MCO	182.10	487.74	88,817	0.27%	0.70%	0.00%	9.00%	0.02%
ON Semiconductor Corp	ON	428.36	77.87	33,356				8.50%	
Booking Holdings Inc	BKNG	33.52	3,909.23	131,053		0.90%		22.00%	
F5 Inc	FFIV	58.28	203.15	11,840				10.00%	
Akamai Technologies Inc	AKAM	151.53	101.84	15,431				5.50%	
Charles River Laboratories International Inc	CRL	51.63	197.75	10,210				7.00%	
MarketAxess Holdings Inc	MKTX	37.75	242.39	9,151	0.03%	1.22%	0.00%	10.00%	0.00%
Devon Energy Corp	DVN	626.20	44.78	28,041	0.08%	3.93%	0.00%	3.00%	0.00%
Bio-Techne Corp	TECH	158.60	73.99	11,735	0.04%	0.43%	0.00%	10.00%	0.00%
Alphabet Inc	GOOGL	5,859.00	163.38	957,243		0.49%			
Teleflex Inc	TFX	47.12	245.17	11,552	0.03%	0.55%	0.00%	8.50%	0.00%
Allegion plc	ALLE	87.13	138.84	12,097	0.04%	1.38%	0.00%	8.50%	0.00%
Netflix Inc	NFLX	429.17	701.35	300,995				16.50%	
Warner Bros Discovery Inc	WBD	2,451.91	7.84	19,223					
Agilent Technologies Inc	A	287.33	142.92	41,065	0.12%	0.66%	0.00%	8.00%	0.01%
Trimble Inc	TRMB	244.21	56.69	13,844				5.50%	
Elevance Health Inc	ELV	231.89	556.89	129,135	0.39%	1.17%	0.00%	11.00%	0.04%
CME Group Inc	CME	360.09	215.74	77,687	0.23%	2.13%	0.01%	5.50%	0.01%
Juniper Networks Inc	JNPR	329.16	38.88	12,798	0.04%	2.26%	0.00%	7.50%	0.00%
BlackRock Inc	BLK	148.13	901.81	133,583	0.40%	2.26%	0.01%	8.00%	0.03%
DTE Energy Co	DTE	206.93	125.02	25,870	0.08%	3.26%	0.00%	4.50%	0.00%
Celanese Corp	CE	109.26	130.60	14,270	0.04%	2.14%	0.00%	4.50%	0.00%
Nasdaq Inc	NDAQ	575.94	72.08	41,514	0.13%	1.33%	0.00%	3.50%	0.00%
Philip Morris International Inc	PM	1,554.80	123.29	191,692	0.58%	4.22%	0.02%	5.00%	0.03%
Ingersoll Rand Inc	IR	403.48	91.45	36,899	0.11%	0.09%	0.00%	10.00%	0.01%
Salesforce Inc	CRM	956.00	252.90	241,772		0.63%		23.50%	
Roper Technologies Inc	ROP	107.20	554.41	59,432	0.18%	0.54%	0.00%	9.00%	0.02%
Huntington Ingalls Industries Inc	HII	39.22	282.77	11,089	0.03%	1.84%	0.00%	10.00%	0.00%
MetLife Inc	MET	700.33	77.48	54,261	0.16%	2.81%	0.00%	7.00%	0.01%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[4] Shares Outst'g	[5] Price	[6] Market Capitalization	FERC METHODOLOGY FOR MARKET RETURN				
					[7] Weight in Index	[8] Estimated Dividend Yield	[9] Cap-Weighted Dividend Yield	[10] Value Line Long-Term Growth Est.	[11] Cap-Weighted Long-Term Growth Est.
Tapestry Inc	TPR	230.22	40.97	9,432	0.03%	3.42%	0.00%	9.00%	0.00%
CSX Corp	CSX	1,938.74	34.27	66,441	0.20%	1.40%	0.00%	9.00%	0.02%
Edwards Lifesciences Corp	EW	602.40	69.96	42,144				10.00%	
Ameriprise Financial Inc	AMP	98.19	449.44	44,130	0.13%	1.32%	0.00%	10.00%	0.01%
Zebra Technologies Corp	ZBRA	51.58	345.38	17,815				1.00%	
Zimmer Biomet Holdings Inc	ZBH	203.65	115.46	23,514	0.07%	0.83%	0.00%	6.50%	0.00%
Camden Property Trust	CPT	106.64	125.20	13,351		3.29%		-6.50%	
CBRE Group Inc	CBRE	306.43	115.14	35,282				5.00%	
Mastercard Inc	MA	916.71	483.34	443,083	1.34%	0.55%	0.01%	14.50%	0.19%
CarMax Inc	KMX	156.08	84.55	13,196				3.50%	
Intercontinental Exchange Inc	ICE	574.14	161.55	92,753	0.28%	1.11%	0.00%	7.50%	0.02%
Fidelity National Information Services Inc	FIS	545.57	82.45	44,982	0.14%	1.75%	0.00%	4.00%	0.01%
Smurfit WestRock PLC	SW	519.36	47.42	24,628		2.55%			
Chipotle Mexican Grill Inc	CMG	1,369.48	56.08	76,800				20.00%	
Wynn Resorts Ltd	WYNN	110.99	76.88	8,533		1.30%		27.00%	
Live Nation Entertainment Inc	LYV	232.11	97.67	22,671					
Assurant Inc	AIZ	51.79	195.63	10,132	0.03%	1.47%	0.00%	9.50%	0.00%
NRG Energy Inc	NRG	208.38	85.01	17,544	0.05%	1.92%	0.00%	11.00%	0.01%
Monster Beverage Corp	MNST	979.54	47.13	46,166				12.00%	
Regions Financial Corp	RF	915.13	23.17	21,203	0.06%	4.32%	0.00%	4.50%	0.00%
Baker Hughes Co	BKR	993.42	35.17	34,939		2.39%		28.00%	
Mosaic Co/The	MOS	318.64	28.57	9,103		2.94%		-8.50%	
Expedia Group Inc	EXPE	124.66	139.09	17,338				39.00%	
CF Industries Holdings Inc	CF	180.41	83.09	14,990		2.41%		-0.50%	
APA Corp	APA	369.91	28.49	10,539	0.03%	3.51%	0.00%	6.00%	0.00%
Leidos Holdings Inc	LDOS	134.71	158.51	21,354	0.06%	0.96%	0.00%	9.50%	0.01%
Alphabet Inc	GOOG	5,585.00	165.11	922,139	2.78%	0.48%	0.01%	13.00%	0.36%
First Solar Inc	FSR	107.05	227.37	24,339				34.00%	
TE Connectivity Ltd	TEL	303.92	153.60	46,682	0.14%	1.69%	0.00%	10.50%	0.01%
Discover Financial Services	DFS	251.07	138.71	34,826	0.11%	2.02%	0.00%	4.00%	0.00%
Visa Inc	V	1,670.45	276.37	461,661	1.39%	0.75%	0.01%	13.50%	0.19%
Mid-America Apartment Communities Inc	MAA	116.88	162.37	18,977		3.62%		-15.00%	
Xylem Inc/NY	XYL	242.89	137.53	33,405	0.10%	1.05%	0.00%	6.00%	0.01%
Marathon Petroleum Corp	MP	334.68	177.12	59,279		1.86%		-6.50%	
Tractor Supply Co	TSCO	107.87	267.55	28,860	0.09%	1.64%	0.00%	11.50%	0.01%
Advanced Micro Devices Inc	AMD	1,618.48	148.56	240,442				17.00%	
ResMed Inc	RMD	146.93	245.02	36,001	0.11%	0.87%	0.00%	10.00%	0.01%
Mettler-Toledo International Inc	MTD	21.36	1,439.08	30,734				8.50%	
VICI Properties Inc	VICI	1,043.14	33.48	34,924	0.11%	4.96%	0.01%	10.50%	0.01%
Copart Inc	CPRT	962.30	52.96	50,963				9.00%	
Jacobs Solutions Inc	J	124.25	150.88	18,747	0.06%	0.77%	0.00%	11.00%	0.01%
Albemarle Corp	ALB	117.53	90.25	10,607		1.80%		-3.50%	
Fortinet Inc	FTNT	764.91	76.71	58,676				24.00%	
Moderna Inc	MRNA	384.40	77.40	29,752				-18.50%	
Essex Property Trust Inc	ESS	64.22	301.79	19,380	0.06%	3.25%	0.00%	1.50%	0.00%
CoStar Group Inc	CSGP	409.82	77.30	31,679				16.50%	
Realty Income Corp	O	870.87	61.85	53,861	0.16%	5.10%	0.01%	5.00%	0.01%
Westinghouse Air Brake Technologies Corp	WAB	175.18	169.57	29,705	0.09%	0.47%	0.00%	16.00%	0.01%
Pool Corp	POOL	38.26	351.62	13,452	0.04%	1.37%	0.00%	14.00%	0.01%
Western Digital Corp	WDC	343.45	65.59	22,527				23.50%	
PepsiCo Inc	PEP	1,373.57	172.88	237,463	0.72%	3.14%	0.02%	7.50%	0.05%
Diamondback Energy Inc	FANG	178.39	195.11	34,806	0.11%	4.80%	0.01%	2.50%	0.00%
Palo Alto Networks Inc	PANW	323.80	362.72	117,449					
ServiceNow Inc	NOW	206.00	855.00	176,130				32.50%	
Church & Dwight Co Inc	CHD	244.82	101.88	24,942	0.08%	1.11%	0.00%	6.50%	0.00%
Federal Realty Investment Trust	FRT	83.67	115.00	9,622	0.03%	3.83%	0.00%	2.50%	0.00%
MGM Resorts International	MGM	303.77	37.59	11,419				25.00%	
American Electric Power Co Inc	AEP	532.12	100.28	53,361	0.16%	3.51%	0.01%	6.50%	0.01%
Invitation Homes Inc	INVH	612.59	36.84	22,568	0.07%	3.04%	0.00%	13.50%	0.01%
PTC Inc	PTC	120.14	179.09	21,515				29.00%	
JB Hunt Transport Services Inc	JBHT	101.99	173.20	17,664	0.05%	0.99%	0.00%	7.50%	0.00%
Lam Research Corp	LRCX	129.88	821.01	106,629	0.32%	1.12%	0.00%	9.50%	0.03%
Mohawk Industries Inc	MHK	63.12	155.14	9,792				1.00%	
GE Healthcare Technologies Inc	GEHC	456.66	84.82	38,734		0.14%			
Pentair PLC	PNR	165.50	88.69	14,678	0.04%	1.04%	0.00%	11.00%	0.00%
Vertex Pharmaceuticals Inc	VRTX	258.10	495.89	127,990				11.00%	
Amcor PLC	AMCR	1,445.34	11.44	16,535	0.05%	4.37%	0.00%	11.50%	0.01%
Meta Platforms Inc	META	2,184.73	521.31	1,138,921	3.44%	0.36%	0.01%	17.00%	0.58%
T-Mobile US Inc	TMUS	1,166.78	198.72	231,863	0.70%	1.31%	0.01%	19.50%	0.14%
United Rentals Inc	URI	66.14	741.26	49,024	0.15%	0.88%	0.00%	19.00%	0.03%
Alexandria Real Estate Equities Inc	ARE	174.93	119.57	20,916	0.06%	4.35%	0.00%	9.50%	0.01%
Honeywell International Inc	HON	649.67	207.91	135,073	0.41%	2.08%	0.01%	10.00%	0.04%
Delta Air Lines Inc	DAL	645.42	42.49	27,424		1.41%			
United Airlines Holdings Inc	UAL	328.80	44.04	14,480					
Seagate Technology Holdings PLC	STX	210.20	99.55	20,925	0.06%	2.81%	0.00%	19.00%	0.01%
News Corp	NWS	190.68	29.43	5,612		0.68%			
Centene Corp	CNC	526.03	78.83	41,467				10.00%	
Martin Marietta Materials Inc	MLM	61.12	533.37	32,598	0.10%	0.59%	0.00%	11.50%	0.01%
Teradyne Inc	TER	163.18	136.73	22,311	0.07%	0.35%	0.00%	13.50%	0.01%
PayPal Holdings Inc	PYPL	1,022.33	72.43	74,048				11.50%	
Tesla Inc	TSLA	3,194.64	214.11	684,004				19.00%	
KKR & Co Inc	KKR	887.44	123.77	109,838	0.33%	0.57%	0.00%	5.00%	0.02%
Arch Capital Group Ltd	ACGL	376.06	113.09	42,528				17.00%	
Dow Inc	DOW	703.27	53.58	37,681	0.11%	5.23%	0.01%	1.00%	0.00%
Everest Group Ltd	EG	43.27	392.24	16,974	0.05%	2.04%	0.00%	10.50%	0.01%
Teledyne Technologies Inc	TDY	46.78	432.80	20,248				7.00%	
GE Vernova Inc	GEV	274.80	201.00	55,235					
News Corp	NWSA	378.33	28.33	10,718	0.03%	0.71%	0.00%	13.50%	0.00%
Exelon Corp	EXC	999.74	38.09	38,080		3.99%			
Global Payments Inc	GP	254.44	111.01	28,245	0.09%	0.90%	0.00%	12.00%	0.01%
Crown Castle Inc	CCI	434.57	112.02	48,680		5.59%		-0.50%	
Aptiv PLC	APT	265.76	71.53	19,010				28.50%	
Align Technology Inc	ALGN	74.70	237.22	17,720				17.00%	
Kenvue Inc	KVUE	1,915.17	21.95	42,038		3.74%			
Targa Resources Corp	TRGP	219.08	146.90	32,183	0.10%	2.04%	0.00%	20.00%	0.02%
Bunge Global SA	BG	141.65	101.38	14,361		2.68%		0.00%	
LKQ Corp	LKQ	263.26	41.59	10,949	0.03%	2.89%	0.00%	7.00%	0.00%
Deckers Outdoor Corp	DECK	25.41	959.29	24,377				17.00%	
Zoetis Inc	ZTS	453.05	183.49	83,130	0.25%	0.94%	0.00%	7.50%	0.02%
Equinix Inc	EQIX	94.95	834.36	79,218	0.24%	2.04%	0.00%	15.00%	0.04%
Digital Realty Trust Inc	DLR	327.41	151.61	49,639		3.22%		-5.00%	
Molina Healthcare Inc	MOH	58.60	349.79	20,498				11.50%	
Las Vegas Sands Corp	LVS	736.43	38.99	28,713		2.05%			

Notes:

- [1] Equals sum of Col. [9]
[2] Equals sum of Col. [11]
[3] Equals (([1] x (1 + ([2])))) + [2]
[4] Source: Bloomberg Professional as of August 31, 2024
[5] Source: Bloomberg Professional as of August 31, 2024
[6] Equals [4] x [5]
[7] Equals weight in S&P 500 based on market capitalization [6] if Growth Rate >0% and ≤20% and Pays Dividends
[8] Source: Bloomberg Professional as of August 31, 2024
[9] Equals [7] x [8]
[10] Source: Value Line as of August 31, 2024
[11] Equals [7] x [10]

DR GRIFFING - KROLL CAPM AS FILED

		A	B	C	D	E	F
	Ticker	Rf	MRP	Beta	RP	CAPM ROE	Filtered Results
Alliant Energy Corporation	LNT	4.29%	5.00%	0.90	4.50%	8.79%	8.79%
Ameren Corporation	AEE	4.29%	5.00%	0.90	4.50%	8.79%	8.79%
American Electric Power Compai	AEP	4.29%	5.00%	0.85	4.25%	8.54%	8.54%
Duke Energy Corporation	DUK	4.29%	5.00%	0.90	4.50%	8.79%	8.79%
Edison International	EIX	4.29%	5.00%	1.00	5.00%	9.29%	9.29%
Entergy Corporation	ETR	4.29%	5.00%	1.00	5.00%	9.29%	9.29%
Evergy, Inc.	EVRG	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
Eversource Energy	ES	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
IDACORP, Inc.	IDA	4.29%	5.00%	0.85	4.25%	8.54%	8.54%
NorthWestern Corporation	NWE	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
OGE Energy Corporation	OGE	4.29%	5.00%	1.05	5.25%	9.54%	9.54%
Pinnacle West Capital Corporatio	PNW	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
Portland General Electric Compai	POR	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
Southern Company	SO	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
Xcel Energy Inc.	XEL	4.29%	5.00%	0.85	4.25%	8.54%	8.54%

Mean 8.96% 8.96%
Median 9.04% 9.04%

quartile 4 **9.54%**
quartile 3 **9.04%**
quartile 2 **9.04%**
quartile 1 **8.79%**

Low-End Test: Moody's 10-Year Baa Corporate Bond Index 5.73%
CAPM Risk Premium, Column C 5.00%
20 percent of CAPM risk premium 1.00%
Moody's 10-Year Baa Corporate Bond Index + 6.73%
20 percent of CAPM risk premium
High-End Test: Proxy Group median 9.04%
200 percent of Proxy Group median 18.08%

Summary of Griffing Cost of Equity Model Results

	As-Filed	Corrected & Adjusted
Constant Growth DCF		
Quartile 4	13.91%	13.91%
Quartile 3	10.63%	10.80%
Quartile 2	9.96%	10.31%
Quartile 1	9.46%	9.84%
Multi-Stage DCF		
Quartile 4	Excluded	13.01%
Quartile 3	Excluded	10.45%
Quartile 2	Excluded	10.09%
Quartile 1	Excluded	9.59%
CAPM VL		
Quartile 4	Excluded	11.48%
Quartile 3	Excluded	10.79%
Quartile 2	Excluded	10.79%
Quartile 1	Excluded	10.45%
CAPM Kroll		
Quartile 4	9.54%	Excluded
Quartile 3	9.04%	Excluded
Quartile 2	9.04%	Excluded
Quartile 1	8.79%	Excluded
CAPM IBES		
Quartile 4	N/A	12.14%
Quartile 3	N/A	11.39%
Quartile 2	N/A	11.39%
Quartile 1	N/A	11.02%
Average All models		
Quartile 4	11.72%	12.63%
Quartile 3	9.84%	10.86%
Quartile 2	9.50%	10.65%
Quartile 1	9.12%	10.22%
Midpoint Quartiles 2-4	10.61%	11.64%

Market Value of the Capital Structure of the Proxy Group

Case No. PU-23-342
Exhibit (AEB-2), Schedule 15
Page 1 of 2

Expressed in (\$000s)

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Debt													
Company	Ticker	Current Assets	Current Liabilities	Current Long-Term Debt and Leases	Net Working Capital	Short-Term Debt		Long-Term Debt	Book Value of Debt	Unadjusted Market Value of Debt	Carrying Amount	Adjustment to Book Value of Long-Term Debt	Market Value of Debt
Alliant Energy Corporation	LNT	\$1,272,000	\$2,304,000	\$811,000	(\$221,000)	\$475,000	\$221,000	\$ 8,418,000	\$9,450,000	\$8,677,000	\$9,034,000	-\$357,000	\$9,093,000
Ameren Corporation	AEE	\$2,181,000	\$3,345,000	\$849,000	(\$315,000)	\$536,000	\$315,000	\$ 15,121,000	\$16,285,000	\$14,833,000	\$15,970,000	-\$1,137,000	\$15,148,000
American Electric Power Company, Inc.	AEP	\$6,082,100	\$11,583,600	\$2,722,400	(\$2,779,100)	\$2,830,200	\$2,779,100	\$ 38,368,900	\$43,870,400	\$37,325,700	\$40,143,200	-\$2,817,500	\$41,052,900
Avista Corporation	AVA	\$661,842	\$775,205	\$22,890	(\$90,473)	\$349,000	\$90,473	\$ 2,693,311	\$2,806,674	\$2,221,103	\$2,644,042	-\$422,939	\$2,383,735
CMS Energy Corporation	CMS	\$2,839,000	\$2,895,000	\$984,000	\$928,000	\$93,000	\$0	\$ 14,592,000	\$15,576,000	\$14,316,000	\$15,494,000	-\$1,178,000	\$14,398,000
Duke Energy Corporation	DUK	\$12,769,000	\$17,283,000	\$2,988,000	(\$1,526,000)	\$4,288,000	\$1,526,000	\$ 73,369,000	\$77,883,000	\$69,790,000	\$75,252,000	-\$5,462,000	\$72,421,000
Edison International	EIX	\$6,811,000	\$8,598,000	\$2,817,000	\$1,030,000	\$1,077,000	\$0	\$ 31,417,000	\$34,234,000	\$31,315,000	\$33,013,000	-\$1,698,000	\$32,536,000
Entergy Corporation	ETR	\$3,660,869	\$6,396,492	\$2,176,517	(\$559,106)	\$1,138,171	\$559,106	\$ 23,227,681	\$25,963,304	\$22,489,174	\$25,107,896	-\$2,618,722	\$23,344,582
Evergy, Inc.	EVERG	\$1,789,100	\$3,512,600	\$825,300	(\$898,200)	\$1,293,800	\$898,200	\$ 11,154,100	\$12,877,600	\$11,044,900	\$11,853,300	-\$808,400	\$12,069,200
Eversource Energy	ES	\$4,247,994	\$6,341,397	\$882,957	(\$1,210,446)	\$1,930,422	\$1,210,446	\$ 24,067,198	\$26,160,601	\$22,855,200	\$24,413,500	-\$1,558,300	\$24,602,301
IDACORP, Inc.	IDA	\$1,004,054	\$634,076	\$49,800	\$419,778	\$0	\$0	\$ 2,775,790	\$2,825,590	\$2,684,278	\$2,825,590	-\$141,312	\$2,684,278
NextEra Energy, Inc.	NEE	\$15,361,000	\$27,963,000	\$6,901,000	(\$5,701,000)	\$4,905,000	\$4,905,000	\$ 62,261,000	\$74,067,000	\$64,103,000	\$68,306,000	-\$4,203,000	\$69,864,000
NorthWestern Corporation	NWE	\$407,006	\$534,898	\$103,288	(\$24,604)	\$0	\$0	\$ 2,690,096	\$2,793,384	\$2,521,030	\$2,784,585	-\$263,555	\$2,529,829
OGE Energy Corporation	OGE	\$771,500	\$1,179,200	\$3,700	(\$404,000)	\$499,200	\$404,000	\$ 4,367,300	\$4,775,000	\$4,114,800	\$4,340,500	-\$225,700	\$4,549,300
Pinnacle West Capital Corporation	PNW	\$1,926,967	\$2,889,347	\$942,883	(\$19,497)	\$609,500	\$19,497	\$ 8,750,811	\$9,713,191	\$6,767,000	\$7,680,000	-\$913,000	\$8,800,191
Portland General Electric Company	POR	\$935,000	\$1,112,000	\$103,000	(\$74,000)	\$146,000	\$74,000	\$ 4,237,000	\$4,414,000	\$3,705,000	\$3,999,000	-\$294,000	\$4,120,000
Southern Company	SO	\$10,432,000	\$13,467,000	\$2,659,000	(\$376,000)	\$2,314,000	\$376,000	\$ 58,707,000	\$61,742,000	\$55,000,000	\$59,400,000	-\$4,400,000	\$57,342,000
Xcel Energy Inc.	XEL	\$4,069,000	\$5,652,000	\$797,000	(\$786,000)	\$785,000	\$785,000	\$ 26,013,000	\$27,595,000	\$22,927,000	\$25,465,000	-\$2,538,000	\$25,057,000

Notes:

- [1] S&P Capital IQ Pro.
- [2] S&P Capital IQ Pro.
- [3] S&P Capital IQ Pro.
- [4] Equals [1] - ([2] - [3])
- [5] S&P Capital IQ Pro.
- [6] Equals:
 - [A] 0 if [4] > 0
 - [B] ABS of [4] if [4] < 0 and ABS of [4] < [5]
 - [C] [5] if [4] < 0 and ABS of [4] > [5]
- [7] S&P Capital IQ Pro.
- [8] Equals [3] + [6] + [7]
- [9] Company 10-Ks
- [10] Company 10-Ks
- [11] Equals [9] - [10]
- [12] Equals [8] + [11]
- [13] S&P Capital IQ Pro.
- [14] Equals [13]
- [15] S&P Capital IQ Pro.
- [16] S&P Capital IQ Pro.
- [17] Equals [12] + [14] + [16]
- [18] Equals [12] / [17]
- [19] Equals [14] / [17]
- [20] Equals [16] / [17]

Market Value of the Capital Structure of the Proxy Group

Case No. PU-23-342

Exhibit___(AEB-2), Schedule 15

Page 2 of 2

Expressed in (\$000s)

		[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]
		Preferred Equity		Common Equity		Market Value			
Company	Ticker	Book Value of Preferred Equity	Market Value of Preferred Equity	Book Value of Common Equity	Market Value of Common Equity	Market Value Of the Firm	Debt Ratio	Preferred Equity Ratio	Common Equity Ratio
Alliant Energy Corporation	LNT	\$0	\$0	\$ 6,777,000	\$ 13,090,687	\$22,183,687	40.99%	0.00%	59.01%
Ameren Corporation	AEE	\$0	\$0	\$ 11,349,000	\$ 19,021,445	\$34,169,445	44.33%	0.00%	55.67%
American Electric Power Company, Inc.	AEP	\$0	\$0	\$ 25,246,700	\$ 42,711,619	\$83,764,519	49.01%	0.00%	50.99%
Avista Corporation	AVA	\$0	\$0	\$ 2,485,323	\$ 2,765,118	\$5,148,853	46.30%	0.00%	53.70%
CMS Energy Corporation	CMS	\$224,000	\$224,000	\$ 7,320,000	\$ 16,942,710	\$31,564,710	45.61%	0.71%	53.68%
Duke Energy Corporation	DUK	\$1,962,000	\$1,962,000	\$ 47,150,000	\$ 74,789,866	\$149,172,866	48.55%	1.32%	50.14%
Edison International	EIX	\$1,673,000	\$1,673,000	\$ 13,828,000	\$ 27,421,327	\$61,630,327	52.79%	2.71%	44.49%
Entergy Corporation	ETR	\$0	\$0	\$ 14,622,647	\$ 21,398,960	\$44,743,542	52.17%	0.00%	47.83%
Evergy, Inc.	EVRG	\$0	\$0	\$ 9,663,100	\$ 11,991,424	\$24,060,624	50.16%	0.00%	49.84%
Eversource Energy	ES	\$0	\$0	\$ 14,173,892	\$ 21,560,414	\$46,162,715	53.29%	0.00%	46.71%
IDACORP, Inc.	IDA	\$0	\$0	\$ 2,907,569	\$ 4,976,490	\$7,660,768	35.04%	0.00%	64.96%
NextEra Energy, Inc.	NEE	\$0	\$0	\$ 47,468,000	\$ 124,620,728	\$194,484,728	35.92%	0.00%	64.08%
NorthWestern Corporation	NWE	\$0	\$0	\$ 2,785,314	\$ 3,116,617	\$5,646,446	44.80%	0.00%	55.20%
OGE Energy Corporation	OGE	\$0	\$0	\$ 4,511,600	\$ 6,996,038	\$11,545,338	39.40%	0.00%	60.60%
Pinnacle West Capital Corporation	PNW	\$0	\$0	\$ 6,177,664	\$ 8,146,537	\$16,946,728	51.93%	0.00%	48.07%
Portland General Electric Company	POR	\$0	\$0	\$ 3,319,000	\$ 4,382,710	\$8,502,710	48.46%	0.00%	51.54%
Southern Company	SO	\$0	\$0	\$ 31,444,000	\$ 76,474,229	\$133,816,229	42.85%	0.00%	57.15%
Xcel Energy Inc.	XEL	\$0	\$0	\$ 17,616,000	\$ 34,162,948	\$59,219,948	42.31%	0.00%	57.69%
All Companies						Mean	45.77%	0.26%	53.96%
Bulkley Proxy Group (Excl. EIX, ES)						Mean	44.87%	0.13%	55.01%
Griffing Adjusted Proxy Group (Excl. AVA, NEE, CMS)						Mean	46.41%	0.27%	53.32%

Notes:

- [1] S&P Capital IQ Pro.
- [2] S&P Capital IQ Pro.
- [3] S&P Capital IQ Pro.
- [4] Equals [1] - ([2] - [3])
- [5] S&P Capital IQ Pro.
- [6] Equals:
 - [A] 0 if [4] > 0
 - [B] ABS of [4] if [4] < 0 and ABS of [4] < [5]
 - [C] [5] if [4] < 0 and ABS of [4] > [5]
- [7] S&P Capital IQ Pro.
- [8] Equals [3] + [6] + [7]
- [9] Company 10-Ks
- [10] Company 10-Ks
- [11] Equals [9] - [10]
- [12] Equals [8] + [11]
- [13] S&P Capital IQ Pro.
- [14] Equals [13]
- [15] S&P Capital IQ Pro.
- [16] S&P Capital IQ Pro.
- [17] Equals [12] + [14] + [16]
- [18] Equals [12] / [17]
- [19] Equals [14] / [17]
- [20] Equals [16] / [17]

OTTER TAIL POWER COMPANY

Case No: PU-23-342

ATTN: Jessica Fyhrie
Manager, Regulatory Proceedings
215 South Cascade Street
PO Box 496
Fergus Falls MN 56538-0496
jfyhrie@otpc.com

Requested From: North Dakota Public Service Commission
Requested By: Jessica Fyhrie, Manager Regulatory Proceedings - 218-739-8395
Date of Request: 10/09/2024
Response Due Date: 10/23/2024

If you feel your responses are trade secret or privileged, please indicate this on your response.

OTP Information Request No.: ND-OTP-403

Reference: Griffing Direct, p. 36, Exhibit MFG-17, Schedule 1.

- a) Please provide documentation supporting the Value Line EPS Growth Rate of 0.50% for Evergy, Inc. and 5.00% for OGE Energy Corp.
- b) If the October 4, 2024 Exhibit MFG-17, Schedule 1 growth rates for Evergy, Inc. and OGE Energy Corp. were in error, please provide a revised version of Exhibit MFG-17, Schedule 1 correcting the error. Please provide the revised schedule in live, Microsoft Excel format, with all formulas and links intact.

RESPONSE:

Reference: Griffing Direct, p. 36, Exhibit MFG-17, Schedule 1.

- a) Please provide documentation supporting the Value Line EPS Growth Rate of 0.50% for Evergy, Inc. and 5.00% for OGE Energy Corp.

The cited EPS growth rates for Evergy, Inc. and OGE Energy Corp. are incorrect. The correct values are 7.50 percent and 6.50 percent.

- b) If the October 4, 2024 Exhibit MFG-17, Schedule 1 growth rates for Evergy, Inc. and OGE Energy Corp. were in error, please provide a revised version of Exhibit MFG-17, Schedule 1

Response by Marlon Griffing, Ph.D._____
Title Senior Consultant, PCMG and Associates_____
Department_____
Telephone 651-236-7970_____
Date of Response October 30, 2024_____

correcting the error. Please provide the revised schedule in live, Microsoft Excel format, with all formulas and links intact.

See Exhibit MFG-17, Schedule 1 Corrected. The corrected mean and median ROE values in this exhibit, as have the corrected mean and median ROE values from Exhibit MFG-17, Schedule 6 Corrected, have been carried through to Exhibit MFG-20, Schedule 1 Corrected. The result is a new recommended ROE for Otter Tail Power of 9.68 percent. This result has been carried through to Exhibit MFG-20, Schedule 3 Corrected, which changes the recommended Otter Tail Power rate of return (Overall ROR) to 7.28 percent.

SUPPLEMENTAL RESPONSE:

- b) If the October 4, 2024 Exhibit MFG-17, Schedule 1 growth rates for Evergy, Inc. and OGE Energy Corp. were in error, please provide a revised version of Exhibit MFG-17, Schedule 1 correcting the error. Please provide the revised schedule in live, Microsoft Excel format, with all formulas and links intact.

The revenue requirement impact of the change in the overall ROR from 7.22% to 7.28%, incorporating an ROE of 9.68%, is an additional \$551,671. (See Mr. Mugrace's revenue requirement schedules).

Response by Marlon Griffing, Ph.D._____
Title Senior Consultant, PCMG and Associates_____
Department_____
Telephone 651-236-7970_____
Date of Response October 30, 2024_____

**ROE and ROR Analysis for Otter Tail Power
Comparison Group Screening
Value Line Electric Utilities Group
Downloaded from Value Line on August 15, 2024**

**Docket No. PU-23-342
Exhibit MFG-4**

Company	Ticker	Exchange where Publicly Traded
ALLETE	ALE	NYS
Alliant Energy	LNT	NDQ
Ameren Corp.	AEE	NYS
American Elec. Power	AEP	NYS
AVANGRID, Inc.	AGR	NYS
Avista Corp.	AVA	NYS
Black Hills	BKH	NYS
CenterPoint Energy	CNP	NYS
CMS Energy Corp.	CMS	NYS
Consol. Edison	ED	NYS
Dominion Energy	D	NYS
DTE Energy	DTE	NYS
Duke Energy	DUK	NYS
Edison Int'l	EIX	NYS
Emera Incorporated	EMA	TSX
Entergy Corp.	ETR	NYS
Eversource Energy	ES	NYS
Exelon Corp.	EXC	NDQ
FirstEnergy Corp.	FE	NYS
Fortis Inc.	FTS.TO	TSE
Hawaiian Elec.	HE	NYS
IDACORP, Inc.	IDA	NYS
MGE Energy	MGEE	NDQ
NextEra Energy	NEE	NYS
NorthWestern Corp.	NWE	NYS
OGE Energy	OGE	NYS
Otter Tail Corp.	OTTR	NDQ
PG&E Corp.	PCG	NYS
Pinnacle West Capital	PNW	NYS
PNM Resources	PNM	NYS
Portland General	POR	NYS
PPL Corp.	PPL	NYS
Public Serv. Enterprise	PEG	NYS
Sempra Energy	SRE	NYS
Southern Co.	SO	NYS
Unitil Corp.	UTL	AMS
WEC Energy Group	WEC	NYS
Xcel Energy Inc.	XEL	NDQ

**ROE and ROR Analysis for Otter Tail Power
Comparison Group Screening
S&P Capital IQ Pro, August 15, 2024**

**Docket No. PU-23-342
Exhibit MFG-5**

Companies in boldface are excluded for failure to meet one or more criteria

Company	Ticker	Merger, Acquisition, or Other	S&P Credit Rating	Paying Dividends	Postive EPS Growth Rates
ALLETE, Inc.*	ALE	Yes	BBB	Yes	Yes
Alliant Energy Corporation	LNT	No	A-	Yes	Yes
Ameren Corporation	AEE	No	BBB+	Yes	Yes
American Electric Power Co.	AEP	No	BBB+	Yes	Yes
Avangrid, Inc.**	AGR	Yes	BBB+	Yes	Yes
Avista Corporation	AVA	No	BBB	Yes	Yes
Black Hills Corporation	BKH	No	BBB+	Yes	Yes
CenterPoint Energy, Inc.***	CNP	Yes	BBB+	No	Yes
CMS Energy Corporation	CMS	No	BBB+	Yes	Yes
Consolidated Edison, Inc.	ED	No	A-	Yes	Yes
Dominion Energy, Inc.	D	No	BBB+	Yes	Yes
DTE Energy Company	DTE	No	BBB+	Yes	Yes
Duke Energy Corporation	DUK	No	BBB+	Yes	Yes
Edison International	EIX	No	BBB	Yes	Yes
Emera Incorporated	EMA	No	BBB	Yes	Yes
Entergy Corporation	ETR	No	BBB+	Yes	Yes
Evergy, Inc.	EVERG	No	BBB+	Yes	Yes
Eversource Energy	ES	No	A-	Yes	Yes
Exelon Corporation****	EXC	No	BBB+	Yes	No
FirstEnergy Corp.	FE	Yes	BBB	Yes	Yes
Fortis Inc.	FTS.TO	No	A-	Yes	Yes
Hawaiian Elec Industries, Inc.*****	HE	No	B-	Yes	Yes
IDACORP, Inc.	IDA	No	BBB	Yes	Yes
MGE Energy, Inc.#	MGEE	No		Yes	Yes
NextEra Energy, Inc.	NEE	No	A-	Yes	Yes
NorthWestern Corporation	NWE	No	BBB	Yes	Yes
OGE Energy Corp.	OGE	No	BBB+	Yes	Yes
PG&E Corporation##	PCG	No	BB	No	Yes
Pinnacle West Capital Corporation	PNW	No	BBB+	Yes	Yes
PNM Resources, Inc.###	PNM	No	BBB	Yes	Yes
Portland General Electric Company	POR	No	BBB+	Yes	Yes
PPL Corporation	PPL	No	A-	Yes	Yes
Public Service Enterprise Group Inc.	PEG	No	BBB+	Yes	Yes
Sempra Energy	SRE	No	BBB+	Yes	Yes
Southern Company	SO	No	A-	Yes	Yes
Unitil Corporation	UTL	No	BBB+	Yes	Yes
WEC Energy Group, Inc.	WEC	No	A-	Yes	Yes
Xcel Energy Inc.	XEL	No	BBB+	Yes	Yes

Otter Tail Corporation#### OTTR No BBB Yes Yes

*-ALLETE is being acquired and taken private by a Canadian pension fund and private equity firm. Announced May 6, 2024.

**-Avangrid is a controlled company 81.4 percent owned by Iberdrola; Iberdrola has made an offer to the independent directors of Avangrid to acquire the portion of Avangrid that it does not own.

***-CenterPoint Energy is selling its Louisiana and Mississippi natural gas operations. The transaction is expected to close in the first quarter of 2025.

****-Exelon does not have an EPS growth rate from Value Line.

*****-Hawaiian Electric Industries has a B- credit rating

#-MGE Energy does not have an S&P credit rating

##-PG&E Corporation as it exits bankruptcy pnly resumed paying dividends in the first quarter of 2024.

###-PNM Resources's share prices plunged after Avangrid withdrew an attempted acquisition.

####-Otter Tail Corp. is the parent company of subject company Otter Tail Power.

**ROE and ROR Analysis for Otter Tail Power
Comparison Group Screening
S&P Credit Ratings
S&P Capital IQ Pro, August 16, 2024**

**Docket No. PU-23-342
Exhibit MFG-11**

Company	S&P Credit Rating BBB to A-
Alliant Energy Corporation	A-
Ameren Corporation	BBB+
American Electric Power Co.	BBB+
Avista Corporation	BBB
Black Hills Corporation	BBB+
CMS Energy Corporation	BBB+
Consolidated Edison, Inc.	A-
Dominion Energy, Inc.	BBB+
DTE Energy Company	BBB+
Duke Energy Corporation	BBB+
Edison International	BBB
Emera Incorporated	BBB
Entergy Corporation	BBB+
Eversource Energy	A-
Fortis Inc.	A-
IDACORP, Inc.	BBB
NextEra Energy, Inc.	A-
NorthWestern Corporation	BBB
OGE Energy Corp.	BBB+
Pinnacle West Capital Corporation	BBB+
Portland General Electric Company	BBB+
PPL Corporation	A-
Public Service Enterprise Group Inc.	BBB+
Sempra Energy	BBB+
Southern Company	A-
Unitil Corporation	BBB+
WEC Energy Group, Inc.	A-
Xcel Energy Inc.	BBB+

Otter Tail Power	BBB+
Otter Tail Corporation	BBB

**ROE and ROR Analysis for Otter Tail Power
Comparison Group
From Company 2023 10Ks, amounts in thousands of dollars (000)**

**Docket No. PU-23-342
Exhibit MFG-13**

Name	Regulated Electricity Income*,**			Company Income*,**			Electricity as % of Company*,**			Average % Electricity	Source: 2023 10K Pages except where indicated
	2023	2022	2021	2023	2022	2021	2023	2022	2021		
PSEG ^A	1,974,000	1,892,000	1,818,000	3,685,000	1,381,000	(856,000)	53.6%	137.0%	-212.4%	-7.3%	P. 143-144
Sempra Energy*	4,334,000	4,783,000	4,658,000	16,720,000	14,439,000	12,857,000	25.9%	33.1%	36.2%	31.8%	P. F-8
Unitil Corporation***	17,900	15,700	14,000	45,200	41,400	36,100	39.6%	37.9%	38.8%	38.8%	P. 52
Black Hills Energy	248,800	214,300	202,700	472,700	455,200	409,400	52.6%	47.1%	49.5%	49.7%	P. 100-101
Consolidated Edison, Inc.	1,653,000	1,590,000	1,902,000	3,196,000	2,624,000	2,826,000	51.7%	60.6%	67.3%	59.9%	P. 159-160
Fortis Inc. ^B	1,901,000	1,654,000	1,482,000	3,084,000	2,740,000	2,469,000	61.6%	60.4%	60.0%	60.7%	Annual Reports: 2023, P. 20; 2021, P. 73
WEC Energy Group, Inc.**	971,600	889,100	814,000	1,331,700	1,409,700	1,298,500	73.0%	63.1%	62.7%	66.2%	P. 141-142
CMS Energy Corporation**	550,000	567,000	565,000	877,000	827,000	1,348,000	64.7%	68.3%	41.9%	66.5%	P. 92, 173
Emera Incorporated**	627,000	596,000	462,000	809,000	850,000	723,000	77.5%	70.1%	63.9%	70.5%	Annual Report P. 15
Avista, Inc.*	1,220,309	1,192,527	1,052,418	1,751,554	1,710,207	1,438,936	69.7%	69.7%	73.1%	70.8%	P. 20, 24, 77
DTE Energy Company** ^C	772,000	956,000	864,000	1,397,000	1,083,000	907,000	55.3%	88.3%	95.3%	71.8%	P. 144-145
Eversource Energy	1,844,900	1,694,100	1,553,900	2,399,300	2,198,200	1,993,300	76.9%	77.1%	78.0%	77.3%	P. 141
Southern Co.	4,714,000	4,518,000	2,579,000	5,826,000	5,370,000	3,698,000	80.9%	84.1%	69.7%	82.5%	P. II-75, II-83, II-90, II-97, II-104, II-251
NorthWestern Corporation	262,169	219,743	238,802	300,455	263,079	275,681	87.3%	83.5%	86.6%	85.8%	P. 1, 2, 3
Alliant Energy Corporation	827,000	805,000	716,000	943,000	928,000	795,000	87.7%	86.7%	90.1%	88.2%	P. 97
Duke Energy*** ^D	4,223,000	3,929,000	3,850,000	4,742,000	4,397,000	4,246,000	89.1%	89.4%	90.7%	89.7%	P. 134-135
Evergy, Inc.	1,115,200	1,172,200	1,203,900	1,282,400	1,267,200	1,354,900	87.0%	92.5%	88.9%	89.7%	P. 75, 80, 85
Xcel Energy Inc.**	1,686,000	1,631,000	1,478,000	1,771,000	1,736,000	1,597,000	95.2%	94.0%	92.5%	93.9%	P. 80
Ameren Corporation**	1,099,000	1,027,000	913,000	1,152,000	1,074,000	990,000	95.4%	95.6%	92.2%	94.4%	P. 157
Dominion Energy** ^E	1,684,000	1,905,000	1,863,000	1,994,000	1,321,000	3,399,000	84.5%	144.2%	54.8%	94.5%	Dominion 10K P. 91, 99, 197, DESC 10K P. 29
Entergy Corporation*	11,842,454	13,186,845	10,873,995	12,147,412	13,764,237	11,742,896	97.5%	95.8%	92.6%	96.6%	P. 233
American Electric Power Co.	3,605,800	3,515,000	3,255,500	3,556,200	3,482,700	3,411,300	101.4%	100.9%	95.4%	99.3%	P. 59-60, 90
IDACORP, Inc., Utility Ops	313,379	327,170	329,568	313,477	327,178	329,651	99.97%	100.00%	99.97%	100.0%	P. 125
Portland General Electric Co.	396,000	397,000	378,000	396,000	397,000	378,000	100.0%	100.0%	100.0%	100.0%	P. 76
OGE Energy Corp.	651,600	662,500	546,100	650,200	649,500	544,200	100.2%	102.0%	100.3%	100.9%	P. 95-96
Edison International	2,640,000	1,513,000	1,510,000	2,627,000	1,483,000	1,477,000	100.5%	102.0%	102.2%	101.3%	P. 58, 65
Pinnacle West Capital Corp.*	839,931	744,941	818,961	824,640	731,911	805,310	101.9%	101.8%	101.7%	101.8%	P. 94, 105
PPL Corporation ^F	1,731,000	1,586,000	1,515,000	1,630,000	1,274,000	1,424,000	106.2%	124.5%	106.4%	112.4%	P. 73, 80, 86, 92
NextEra Energy ^G	6,597,000	5,294,000	4,516,000	10,237,000	4,081,000	2,913,000	64.4%	129.7%	155.0%	116.4%	P. 60, 65
Otter Tail Corp. Excluded, see Notes	106,521	113,138	106,964	377,919	390,439	249,708	28.2%	29.0%	42.8%	33.3%	P. 53

Notes

The dollar amounts are operating income unless indicated otherwise
*-Indicates percentage of Operating Revenues
**-Indicates percentage of Net Income
***-Indicates percentage of Segment Profit

A-PSEG's unregulated generation unit had large losses in 2021 and 2022; percentages are not reliable
B-Includes small regulated UNS Energy Gas Operations.
C-DTE Energy 2021 results reflect separation of DTE Midstream in 2021; average is 2022, 2023

D-Duke Energy is electric share of reportable segments income; one-time losses affect company totals
E-Dominion reports reflect sales of operating divisions; further sales are planned.
F-The percentage regulated electricity operations account for of total income is
G-Operating income was erratic, so percentages are not reliable

**ROE and ROR Analysis for Otter Tail Power
Comparison Group Screening
Operating Income Analysis from Exhibit MFG-13**

**Docket No. PU-23-342
Exhibit MFG-14**

Company	S&P Credit Rating	≥ Percent of operating income from regulated electric operations
Alliant Energy Corporation	A-	88.2%
Ameren Corporation	BBB+	94.4%
American Electric Power Co.	BBB+	99.3%
Duke Energy Corporation	BBB+	89.7%
Edison International	BBB	101.3%
Entergy Corporation	BBB+	96.6%
Evergy, Inc.	BBB+	89.7%
Eversource Energy	A-	77.3%
IDACORP, Inc.	BBB	100.0%
NorthWestern Corporation	BBB	85.8%
OGE Energy Corp.	BBB+	100.9%
Pinnacle West Capital Corp.	BBB+	101.8%
Portland General Electric Co.	BBB+	100.0%
Southern Co.	A-	82.5%
Xcel Energy Inc.	BBB+	93.9%
<hr/>		
Otter Tail Power	BBB+	

ROE/ROR Analysis OTP
Equity Prices
Source: Yahoo! Finance

Docket PU-23-342
Exhibit MFG-15
Page 1 of 4

Alliant Energy (LNT)

Date	Close
7/22/2024	\$ 55.00
7/23/2024	\$ 54.65
7/24/2024	\$ 55.66
7/25/2024	\$ 55.84
7/26/2024	\$ 56.01
7/29/2024	\$ 55.88
7/30/2024	\$ 56.13
7/31/2024	\$ 55.66
8/1/2024	\$ 56.61
8/2/2024	\$ 57.11
8/5/2024	\$ 55.23
8/6/2024	\$ 55.74
8/7/2024	\$ 55.93
8/8/2024	\$ 55.90
8/9/2024	\$ 56.07
8/12/2024	\$ 55.96
8/13/2024	\$ 56.26
8/14/2024	\$ 56.48
8/15/2024	\$ 56.94
8/16/2024	\$ 57.37

Mean \$ 56.02

Ameren (AEE)

Date	Close
7/22/2024	\$ 75.74
7/23/2024	\$ 75.08
7/24/2024	\$ 77.04
7/25/2024	\$ 77.55
7/26/2024	\$ 78.04
7/29/2024	\$ 78.20
7/30/2024	\$ 79.52
7/31/2024	\$ 79.27
8/1/2024	\$ 81.26
8/2/2024	\$ 82.53
8/5/2024	\$ 80.19
8/6/2024	\$ 80.56
8/7/2024	\$ 80.49
8/8/2024	\$ 80.20
8/9/2024	\$ 80.31
8/12/2024	\$ 80.32
8/13/2024	\$ 81.30
8/14/2024	\$ 81.26
8/15/2024	\$ 81.34
8/16/2024	\$ 82.10

Mean \$ 79.61

American Electric Power (AEP)

Date	Close
7/22/2024	\$ 94.35
7/23/2024	\$ 93.64
7/24/2024	\$ 95.02
7/25/2024	\$ 95.84
7/26/2024	\$ 96.45
7/29/2024	\$ 97.07
7/30/2024	\$ 98.14
7/31/2024	\$ 98.12
8/1/2024	\$ 101.24
8/2/2024	\$ 101.79
8/5/2024	\$ 98.06
8/6/2024	\$ 98.29
8/7/2024	\$ 99.57
8/8/2024	\$ 98.04
8/9/2024	\$ 97.53
8/12/2024	\$ 97.14
8/13/2024	\$ 98.13
8/14/2024	\$ 97.24
8/15/2024	\$ 96.56
8/16/2024	\$ 96.94

Mean \$ 97.46

Duke Energy (DUK)

Date	Close
7/22/2024	\$ 107.54
7/23/2024	\$ 107.12
7/24/2024	\$ 108.60
7/25/2024	\$ 107.56
7/26/2024	\$ 108.03
7/29/2024	\$ 108.68
7/30/2024	\$ 109.90
7/31/2024	\$ 109.27
8/1/2024	\$ 112.60
8/2/2024	\$ 113.92
8/5/2024	\$ 111.01
8/6/2024	\$ 112.92
8/7/2024	\$ 113.51
8/8/2024	\$ 112.43
8/9/2024	\$ 112.67
8/12/2024	\$ 113.37
8/13/2024	\$ 113.72
8/14/2024	\$ 113.46
8/15/2024	\$ 113.11
8/16/2024	\$ 112.30

Mean \$ 111.09

ROE/ROR Analysis OTP
Equity Prices
Source: Yahoo! Finance

Docket PU-23-342
Exhibit MFG-15
Page 2 of 4

Edison International (EIX)			Entergy Corporation (ETR)			Evergy, Inc. (EVRG)			Eversource Energy (ES)		
Date		Close	Date		Close	Date		Close	Date		Close
7/22/2024	\$	75.20	7/22/2024	\$	111.02	7/22/2024	\$	55.49	7/22/2024	\$	61.76
7/23/2024	\$	75.11	7/23/2024	\$	110.35	7/23/2024	\$	55.22	7/23/2024	\$	60.82
7/24/2024	\$	76.04	7/24/2024	\$	111.86	7/24/2024	\$	56.22	7/24/2024	\$	63.03
7/25/2024	\$	76.43	7/25/2024	\$	111.42	7/25/2024	\$	56.33	7/25/2024	\$	63.60
7/26/2024	\$	78.51	7/26/2024	\$	113.63	7/26/2024	\$	56.75	7/26/2024	\$	64.50
7/29/2024	\$	78.20	7/29/2024	\$	114.36	7/29/2024	\$	57.21	7/29/2024	\$	64.94
7/30/2024	\$	79.38	7/30/2024	\$	116.34	7/30/2024	\$	57.71	7/30/2024	\$	65.96
7/31/2024	\$	80.01	7/31/2024	\$	115.97	7/31/2024	\$	58.00	7/31/2024	\$	64.91
8/1/2024	\$	81.61	8/1/2024	\$	120.82	8/1/2024	\$	59.75	8/1/2024	\$	66.07
8/2/2024	\$	82.27	8/2/2024	\$	120.80	8/2/2024	\$	60.16	8/2/2024	\$	67.11
8/5/2024	\$	80.55	8/5/2024	\$	115.51	8/5/2024	\$	58.52	8/5/2024	\$	65.02
8/6/2024	\$	81.53	8/6/2024	\$	116.16	8/6/2024	\$	58.78	8/6/2024	\$	65.49
8/7/2024	\$	81.64	8/7/2024	\$	116.98	8/7/2024	\$	59.03	8/7/2024	\$	65.34
8/8/2024	\$	81.73	8/8/2024	\$	117.22	8/8/2024	\$	59.00	8/8/2024	\$	64.85
8/9/2024	\$	81.98	8/9/2024	\$	117.53	8/9/2024	\$	58.69	8/9/2024	\$	64.91
8/12/2024	\$	82.41	8/12/2024	\$	117.52	8/12/2024	\$	58.52	8/12/2024	\$	64.87
8/13/2024	\$	82.91	8/13/2024	\$	117.27	8/13/2024	\$	58.82	8/13/2024	\$	65.75
8/14/2024	\$	83.14	8/14/2024	\$	117.99	8/14/2024	\$	59.13	8/14/2024	\$	66.45
8/15/2024	\$	83.16	8/15/2024	\$	117.10	8/15/2024	\$	58.60	8/15/2024	\$	64.85
8/16/2024	\$	83.41	8/16/2024	\$	117.60	8/16/2024	\$	58.76	8/16/2024	\$	65.11
Mean	\$	80.26	Mean	\$	115.87	Mean	\$	58.03	Mean	\$	64.77

ROE/ROR Analysis OTP
Equity Prices
Source: Yahoo! Finance

Docket PU-23-342
Exhibit MFG-15
Page 3 of 4

IDACORP, Inc. (IDA)		NorthWestern Corporation (NWE)		OGE Energy Corp. (OGE)		Pinnacle West Capital Corp. (PNW)	
Date	Close	Date	Close	Date	Close	Date	Close
7/22/2024	\$ 95.40	7/22/2024	\$ 53.09	7/22/2024	\$ 37.38	7/22/2024	\$ 82.47
7/23/2024	\$ 94.86	7/23/2024	\$ 52.10	7/23/2024	\$ 37.37	7/23/2024	\$ 82.56
7/24/2024	\$ 96.44	7/24/2024	\$ 52.68	7/24/2024	\$ 37.75	7/24/2024	\$ 83.51
7/25/2024	\$ 97.25	7/25/2024	\$ 53.13	7/25/2024	\$ 38.05	7/25/2024	\$ 83.59
7/26/2024	\$ 97.50	7/26/2024	\$ 53.27	7/26/2024	\$ 38.33	7/26/2024	\$ 84.71
7/29/2024	\$ 97.63	7/29/2024	\$ 52.87	7/29/2024	\$ 38.33	7/29/2024	\$ 85.19
7/30/2024	\$ 98.58	7/30/2024	\$ 53.51	7/30/2024	\$ 38.82	7/30/2024	\$ 85.45
7/31/2024	\$ 97.75	7/31/2024	\$ 53.77	7/31/2024	\$ 38.77	7/31/2024	\$ 85.59
8/1/2024	\$ 102.31	8/1/2024	\$ 53.46	8/1/2024	\$ 39.70	8/1/2024	\$ 88.07
8/2/2024	\$ 104.13	8/2/2024	\$ 53.91	8/2/2024	\$ 39.78	8/2/2024	\$ 88.23
8/5/2024	\$ 100.69	8/5/2024	\$ 51.49	8/5/2024	\$ 38.44	8/5/2024	\$ 85.23
8/6/2024	\$ 101.22	8/6/2024	\$ 51.91	8/6/2024	\$ 38.82	8/6/2024	\$ 85.32
8/7/2024	\$ 100.89	8/7/2024	\$ 51.74	8/7/2024	\$ 39.37	8/7/2024	\$ 85.33
8/8/2024	\$ 101.39	8/8/2024	\$ 52.18	8/8/2024	\$ 39.16	8/8/2024	\$ 85.40
8/9/2024	\$ 101.65	8/9/2024	\$ 52.17	8/9/2024	\$ 39.32	8/9/2024	\$ 86.00
8/12/2024	\$ 101.13	8/12/2024	\$ 51.81	8/12/2024	\$ 39.13	8/12/2024	\$ 85.74
8/13/2024	\$ 101.95	8/13/2024	\$ 52.24	8/13/2024	\$ 39.33	8/13/2024	\$ 86.07
8/14/2024	\$ 102.31	8/14/2024	\$ 52.60	8/14/2024	\$ 39.28	8/14/2024	\$ 85.70
8/15/2024	\$ 102.12	8/15/2024	\$ 52.93	8/15/2024	\$ 38.98	8/15/2024	\$ 85.95
8/16/2024	\$ 102.03	8/16/2024	\$ 53.20	8/16/2024	\$ 39.28	8/16/2024	\$ 86.45
Mean	\$ 99.86	Mean	\$ 52.70	Mean	\$ 38.77	Mean	\$ 85.33

ROE/ROR Analysis OTP
Equity Prices
Source: Yahoo! Finance

Docket PU-23-342
Exhibit MFG-15
Page 4 of 4

Portland General Electric (POR)			Southern Co. (SO)			Xcel Energy Inc. (XEL)		
Date	Close		Date	Close		Date	Close	
7/22/2024	\$	47.13	7/22/2024	\$	81.85	7/22/2024	\$	55.74
7/23/2024	\$	46.76	7/23/2024	\$	81.35	7/23/2024	\$	55.14
7/24/2024	\$	47.69	7/24/2024	\$	82.67	7/24/2024	\$	56.36
7/25/2024	\$	47.87	7/25/2024	\$	81.66	7/25/2024	\$	56.87
7/26/2024	\$	47.42	7/26/2024	\$	82.17	7/26/2024	\$	57.36
7/29/2024	\$	46.79	7/29/2024	\$	83.05	7/29/2024	\$	57.69
7/30/2024	\$	47.40	7/30/2024	\$	83.38	7/30/2024	\$	58.63
7/31/2024	\$	47.38	7/31/2024	\$	83.52	7/31/2024	\$	58.28
8/1/2024	\$	47.95	8/1/2024	\$	87.57	8/1/2024	\$	59.11
8/2/2024	\$	48.03	8/2/2024	\$	88.58	8/2/2024	\$	59.75
8/5/2024	\$	46.25	8/5/2024	\$	86.57	8/5/2024	\$	57.99
8/6/2024	\$	46.07	8/6/2024	\$	86.45	8/6/2024	\$	57.86
8/7/2024	\$	46.48	8/7/2024	\$	87.29	8/7/2024	\$	58.36
8/8/2024	\$	46.56	8/8/2024	\$	86.46	8/8/2024	\$	58.15
8/9/2024	\$	46.37	8/9/2024	\$	86.80	8/9/2024	\$	57.96
8/12/2024	\$	46.41	8/12/2024	\$	87.20	8/12/2024	\$	58.02
8/13/2024	\$	46.54	8/13/2024	\$	87.20	8/13/2024	\$	59.66
8/14/2024	\$	46.39	8/14/2024	\$	87.19	8/14/2024	\$	58.96
8/15/2024	\$	46.34	8/15/2024	\$	87.01	8/15/2024	\$	58.90
8/16/2024	\$	46.53	8/16/2024	\$	87.36	8/16/2024	\$	59.98
Mean	\$	46.92	Mean	\$	85.27	Mean	\$	58.04

**ROE and ROR Analysis for Otter Tail Power
Comparison Group
Dividends**

**Docket No. PU-23-342
Exhibit MFG-16**

Name	Value Line	Zacks	Highest
Alliant Energy Corporation	\$ 1.92	\$ 1.92	\$ 1.92
Ameren Corporation	\$ 2.68	\$ 2.68	\$ 2.68
American Electric Power Co.	\$ 3.52	\$ 3.52	\$ 3.52
Duke Energy Corporation	\$ 4.18	\$ 4.18	\$ 4.18
Edison International	\$ 3.12	\$ 3.12	\$ 3.12
Entergy Corporation	\$ 4.52	\$ 4.52	\$ 4.52
Evergy, Inc.	\$ 2.57	\$ 2.57	\$ 2.57
Eversource Energy	\$ 2.86	\$ 2.86	\$ 2.86
IDACORP, Inc.	\$ 3.32	\$ 3.32	\$ 3.32
NorthWestern Corporation	\$ 2.60	\$ 2.60	\$ 2.60
OGE Energy Corp.	\$ 1.67	\$ 1.67	\$ 1.67
Pinnacle West Capital Corp.	\$ 3.52	\$ 3.52	\$ 3.52
Portland General Electric Co.	\$ 2.00	\$ 2.00	\$ 2.00
Southern Co.	\$ 2.88	\$ 2.88	\$ 2.88
Xcel Energy Inc.	\$ 2.19	\$ 2.19	\$ 2.19

Value Line dividends taken from June 7, 2024; July 19, 2024; August 9, 2024 Reports

Zacks dividends taken from website on August 19, 2024

ROE and ROR Analysis for Otter Tail Power
Discounted Cash Flow Model Analysis
Common Equity Share Prices: July 22, 2024-August 16, 2024
Value Line EPS Growth-Rate Estimates--June 2024-August 2024

Docket No. PU-23-342
Exhibit MFG-17, Schedule 1
Corrected

	A	B	C	D	E
		Yahoo! Finance	Value Line EPS		
	Zacks EPS	EPS Growth	Growth Rates	Mean EPS	Average of
Company Name	Growth Rate (%)	Rates (%)	(%)	Growth Rate (%)	Closing Prices
Alliant Energy Corporation	6.84%	7.70%	6.00%	6.85%	\$ 56.02
Ameren Corporation	6.58%	5.50%	6.50%	6.19%	\$ 79.61
American Electric Power Co.	6.24%	6.62%	6.50%	6.45%	\$ 97.46
Duke Energy Corporation	6.10%	6.66%	5.00%	5.92%	\$ 111.09
Edison International	NA	7.60%	6.00%	6.80%	\$ 80.26
Entergy Corporation	7.33%	6.80%	0.50%	4.88%	\$ 115.87
Evergy, Inc.	5.00%	6.00%	7.50%	6.17%	\$ 58.03
Eversource Energy	5.73%	4.20%	6.00%	5.31%	\$ 64.77
IDACORP, Inc.	NA	4.40%	5.50%	4.95%	\$ 99.86
NorthWestern Corporation	NA	4.50%	4.00%	4.25%	\$ 52.70
OGE Energy Corp.	5.00%	-12.34%	6.50%	5.75%	\$ 38.77
Pinnacle West Capital Corp.	8.22%	7.20%	4.50%	6.64%	\$ 85.33
Portland General Electric Co.	NA	12.50%	6.00%	9.25%	\$ 46.92
Southern Co.	6.95%	7.30%	6.50%	6.92%	\$ 85.27
Xcel Energy Inc.	6.39%	6.73%	7.00%	6.71%	\$ 58.04

Mean

6.20%

Yahoo! Finance EPS removed from OGE Energy average

Evergy and OGE Energy Value
Line EPS values corrected

	F	G	H	I	J
					I > 7.26% Mean of Kroll and Value Line Low- End Tests
	Annualized Dividend	Dividend Yield (Rate/Price)	Expected Dividend Yield	Required Rate of Return on Equity	
Alliant Energy Corporation	\$ 1.92	3.43%	3.66%	10.51%	Yes
Ameren Corporation	\$ 2.68	3.37%	3.57%	9.77%	Yes
American Electric Power Co.	\$ 3.52	3.61%	3.84%	10.30%	Yes
Duke Energy Corporation	\$ 4.18	3.76%	3.99%	9.91%	Yes
Edison International	\$ 3.12	3.89%	4.15%	10.95%	Yes
Entergy Corporation	\$ 4.52	3.90%	4.09%	8.97%	Yes
Evergy, Inc.	\$ 2.57	4.43%	4.70%	10.87%	Yes
Eversource Energy	\$ 2.86	4.42%	4.65%	9.96%	Yes
IDACORP, Inc.	\$ 3.32	3.32%	3.49%	8.44%	Yes
NorthWestern Corporation	\$ 2.60	4.93%	5.14%	9.39%	Yes
OGE Energy Corp.	\$ 1.67	4.31%	4.56%	10.31%	Yes
Pinnacle West Capital Corp.	\$ 3.52	4.13%	4.40%	11.04%	Yes
Portland General Electric Co.	\$ 2.00	4.26%	4.66%	13.91%	Yes
Southern Co.	\$ 2.88	3.38%	3.61%	10.53%	Yes
Xcel Energy Inc.	\$ 2.19	3.77%	4.03%	10.73%	Yes

4.17%

Excluded

Mean 10.37%
Median 10.31%

A: Zacks website, August 19, 2024

B: Yahoo! Finance website: August 16, 2024.

C: Value Line Investment Survey reports: June 7, 2024; July 19, 2024; August 9, 2024

E: Yahoo! Finance website: August 16, 2024. See Exhibit MFG-15.

F: Higher of Zacks website, August 19, 2024, and Value Line Investment Survey Reports, June 7, 2024; July 19, 2024; August 9, 2024. See Exhibit MFG-16

J: Moody's BAA Corporate Bonds Index plus 20 percent of CAPM risk premium. See Exhibit MFG-18, Schedule 8.

D: Average (A, B, C)

H: G*(1+D)

G: F/E

I: D + H

ROE and ROR Analysis for Otter Tail Power
Discounted Cash Flow Model Analysis
Common Equity Share Prices: July 22, 2024-August 16, 2024
Value Line EPS Growth-Rate Estimates--June 2024-August 2024

Docket No. PU-23-342
Exhibit MFG-17, Schedule 1

	A	B	C	D	E
	Zacks EPS Growth Rate (%)	Yahoo! Finance EPS Growth Rates (%)	Value Line EPS Growth Rates (%)	Mean EPS Growth Rate (%)	Average of Closing Prices
Company Name					
Alliant Energy Corporation	6.84%	7.70%	6.00%	6.85%	\$ 56.02
Ameren Corporation	6.58%	5.50%	6.50%	6.19%	\$ 79.61
American Electric Power Co.	6.24%	6.62%	6.50%	6.45%	\$ 97.46
Duke Energy Corporation	6.10%	6.66%	5.00%	5.92%	\$ 111.09
Edison International	NA	7.60%	6.00%	6.80%	\$ 80.26
Entergy Corporation	7.33%	6.80%	0.50%	4.88%	\$ 115.87
Eversgy, Inc.	5.00%	6.00%	0.50%	3.83%	\$ 58.03
Eversource Energy	5.73%	4.20%	6.00%	5.31%	\$ 64.77
IDACORP, Inc.	NA	4.40%	5.50%	4.95%	\$ 99.86
NorthWestern Corporation	NA	4.50%	4.00%	4.25%	\$ 52.70
OGE Energy Corp.	5.00%	-12.34%	5.00%	5.00%	\$ 38.77
Pinnacle West Capital Corp.	8.22%	7.20%	4.50%	6.64%	\$ 85.33
Portland General Electric Co.	NA	12.50%	6.00%	9.25%	\$ 46.92
Southern Co.	6.95%	7.30%	6.50%	6.92%	\$ 85.27
Xcel Energy Inc.	6.39%	6.73%	7.00%	6.71%	\$ 58.04

Mean 6.00%

Yahoo! Finance EPS removed from OGE Energy average

	F	G	H	I	J
	Annualized Dividend	Dividend Yield (Rate/Price)	Expected Dividend Yield	Required Rate of Return on Equity	J > 7.26% Mean of Kroll and Value Line Low- End Tests
Alliant Energy Corporation	\$ 1.92	3.43%	3.66%	10.51%	Yes
Ameren Corporation	\$ 2.68	3.37%	3.57%	9.77%	Yes
American Electric Power Co.	\$ 3.52	3.61%	3.84%	10.30%	Yes
Duke Energy Corporation	\$ 4.18	3.76%	3.99%	9.91%	Yes
Edison International	\$ 3.12	3.89%	4.15%	10.95%	Yes
Entergy Corporation	\$ 4.52	3.90%	4.09%	8.97%	Yes
Eversgy, Inc.	\$ 2.57	4.43%	4.60%	8.43%	Yes
Eversource Energy	\$ 2.86	4.42%	4.65%	9.96%	Yes
IDACORP, Inc.	\$ 3.32	3.32%	3.49%	8.44%	Yes
NorthWestern Corporation	\$ 2.60	4.93%	5.14%	9.39%	Yes
OGE Energy Corp.	\$ 1.67	4.31%	4.53%	9.53%	Yes
Pinnacle West Capital Corp.	\$ 3.52	4.13%	4.40%	11.04%	Yes
Portland General Electric Co.	\$ 2.00	4.26%	4.66%	13.91%	Yes
Southern Co.	\$ 2.88	3.38%	3.61%	10.53%	Yes
Xcel Energy Inc.	\$ 2.19	3.77%	4.03%	10.73%	Yes

4.16%

Excluded

Mean 10.16%
Median 9.96%

A: Zacks website, August 19, 2024
B: Yahoo! Finance website: August 16, 2024.
C: Value Line Investment Survey reports: June 7, 2024; July 19, 2024; August 9, 2024
E: Yahoo! Finance website: August 16, 2024. See Exhibit MFG-15.
F: Higher of Zacks website, August 19, 2024, and Value Line Investment Survey Reports, June 7, 2024; July 19, 2024; August 9, 2024. See Exhibit MFG-16
J: Moody's BAA Corporate Bonds Index plus 20 percent of CAPM risk premium. See Exhibit MFG-18, Schedule 8.

D: Average (A, B, C) H: G*(1+D)
G: F/E I: D + H

ROE and ROR Analysis for Otter Tail Power
DCF Analysis
Social Security Administration Long-Term Growth Rate

Docket No. PU-23-342
Exhibit MFG-17
Schedule 3

Table VI.G6.—Selected Economic Variables, Calendar Years 2022-2095
[GDP and taxable payroll in billions]

Calendar year	Adjusted CPI	Average wage index	Taxable payroll	Gross domestic product	Compound new- issue interest factor	Compound effective trust-fund interest factor
Intermediate:						
2022	96.15	\$63,467.98	\$9,069	\$25,422	0.9711	0.9884
2023	100.00	66,147.17	9,552	26,592	1.0000	1.0117
2024	102.53	68,627.58	9,986	27,655	1.0357	1.0356
2025	104.99	71,411.99	10,465	28,902	1.0727	1.0602
2026	107.51	74,348.48	10,944	30,177	1.1112	1.0862
2027	110.09	77,393.67	11,443	31,478	1.1530	1.1140
2028	112.73	80,510.73	11,934	32,778	1.1985	1.1442
2029	115.44	83,757.03	12,438	34,125	1.2492	1.1768
2030	118.21	87,106.49	12,954	35,521	1.3051	1.2123
2031	121.04	90,574.48	13,492	36,976	1.3656	1.2512
2032	123.95	93,995.33	14,023	38,487	1.4295	1.2946
2035	133.09	104,726.27	15,730	43,392	1.6429	1.4693
2040	149.85	125,312.66	18,992	52,850	2.0725	1.8502
2045	168.71	149,423.47	22,925	64,333	2.6144	2.3337
2050	189.95	177,750.26	27,736	78,438	3.2980	2.9438
2055	213.87	211,432.09	33,623	95,785	4.1603	3.7136
2060	240.79	251,610.19	40,795	116,988	5.2481	4.6846
2065	271.11	299,758.28	49,472	142,731	6.6204	5.9095
2070	305.24	357,187.25	59,924	173,850	8.3514	7.4546
2075	343.67	425,523.96	72,602	211,710	10.5351	9.4038
2080	386.94	506,962.67	88,194	258,358	13.2897	11.8627
2085	435.65	603,863.51	107,502	316,227	16.7646	14.9644
2090	490.50	719,124.11	131,330	387,813	21.1481	18.8772
2095	552.26	856,091.73	160,374	475,384	26.6778	23.8131
2100	621.79	1,019,162.94	195,457	581,611	33.6533	30.0396

(Intermediate economy performance case)

Growth Rate 2029-2050*

4.04%

Source: Social Security 2023 Trustees' Report

* = $(2050/2030)^{(1/20)} - 1$

ROE and ROR Analysis for Otter Tail Power U.S Energy Information Administration Long-Term Growth Rate

Docket No. PU-23-342
Exhibit MFG-17
Schedule 4

Source: U.S. Energy Information Administration, Annual Energy Outlook 2023

Table 20. Macroeconomic Indicators

(Billions 2012 chain-weighted dollars unless otherwise noted)

	2024	2025	2026	2027	2028	2029	2030
Real Gross Domestic Product							
Reference case	20,095	20,409	20,841	21,273	21,681	22,052	22,392
Price Indices							
GDP Chain-type Price Index (2012=1.000)							
Reference case	1.35	1.38	1.41	1.44	1.47	1.51	1.54

	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Real Gross Domestic Product										
Reference case	22,742	23,153	23,604	24,055	24,511	24,996	25,507	26,032	26,566	27,149
Price Indices										
GDP Chain-type Price Index (2012=1.000)										
Reference case	1.58	1.61	1.65	1.69	1.73	1.77	1.81	1.85	1.89	1.93

	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050		Growth Rate
Real Gross Domestic Product												2030-2050
Reference case	27,734	28,324	28,927	29,527	30,130	30,748	31,389	32,040	32,699	33,405		2.02%
Price Indices												
GDP Chain-type Price Index (2012=1.000)												
Reference case	1.97	2.02	2.07	2.11	2.16	2.21	2.27	2.32	2.38	2.43	Plus	2.31%

Total 2030-2050 Growth Rate 4.33%

ROE and ROR Analysis for Otter Tail Power
Discounted Cash Flow Model Analysis
Common Equity Share Prices: July 22, 2024-August 16, 2024
Multistage DCF with Zacks, Yahoo! Finance, and Value Line EPS Growth-Rate
Estimates; 2023 SSA and 2023 EIA long-term growth rates

Docket No. PU-23-342
Exhibit MFG-17
Schedule 6 Corrected

	A	B	C	D	E	F	G	H
	Zacks EPS Growth Rates (%)	Yahoo! EPS Growth Rates (%)	Value Line EPS Growth Rates (%)	Mean EPS Growth Rate (%)	Average of Closing Prices	Annualized Dividend	Dividend Yield (Rate/Price)	Expected Dividend Yield
Company Name								
Alliant Energy Corporation	6.84%	7.70%	6.00%	6.85%	\$ 56.02	\$ 1.92	3.43%	3.66%
Ameren Corporation	6.58%	5.50%	6.50%	6.19%	\$ 79.61	\$ 2.68	3.37%	3.57%
American Electric Power Co.	6.24%	6.62%	6.50%	6.45%	\$ 97.46	\$ 3.52	3.61%	3.84%
Duke Energy Corporation	6.10%	6.66%	5.00%	5.92%	\$ 111.09	\$ 4.18	3.76%	3.99%
Edison International	NA	7.60%	6.00%	6.80%	\$ 80.26	\$ 3.12	3.89%	4.15%
Entergy Corporation	7.33%	6.80%	0.50%	4.88%	\$ 115.87	\$ 4.52	3.90%	4.09%
Evergy, Inc.	5.00%	6.00%	7.50%	6.17%	\$ 58.03	\$ 2.57	4.43%	4.70%
Eversource Energy	5.73%	4.20%	6.00%	5.31%	\$ 64.77	\$ 2.86	4.42%	4.65%
IDACORP, Inc.	NA	4.40%	5.50%	4.95%	\$ 99.86	\$ 3.32	3.32%	3.49%
NorthWestern Corporation	NA	4.50%	4.00%	4.25%	\$ 52.70	\$ 2.60	4.93%	5.14%
OGE Energy Corp.	5.00%	-12.34%	6.50%	5.75%	\$ 38.77	\$ 1.67	4.31%	4.56%
Pinnacle West Capital Corp.	8.22%	7.20%	4.50%	6.64%	\$ 85.33	\$ 3.52	4.13%	4.40%
Portland General Electric Co.	NA	12.50%	6.00%	9.25%	\$ 46.92	\$ 2.00	4.26%	4.66%
Southern Co.	6.95%	7.30%	6.50%	6.92%	\$ 85.27	\$ 2.88	3.38%	3.61%
Xcel Energy Inc.	6.39%	6.73%	7.00%	6.71%	\$ 58.04	\$ 2.19	3.77%	4.03%

Yahoo! Finance EPS removed from OGE Energy average

Evergy and OGE Energy Value Line EPS values corrected

	I	J	K	L	M	N	O	P
	SSA Long- Run Projected EPS Growth Rate = 4.04%	SSA Long- Run Weighted EPS Growth Rate 4.04%	SSA Weighted Cost of Equity, Long-Run Rate	EIA Long- Run Projected EPS Growth Rate = 4.33%	Weighted Long-Run Projected EPS Growth Rate = 4.33%	EIA Weighted Cost of Equity, Long Run Rate	Multistage Mean Cost of Equity	O > 7.26% Mean of Kroll and Value Line Low-End Tests
Company Name								
Alliant Energy Corporation	4.04%	5.91%	9.57%	4.33%	6.01%	9.67%	9.62%	Yes
Ameren Corporation	4.04%	5.48%	9.05%	4.33%	5.57%	9.15%	9.10%	Yes
American Electric Power Co.	4.04%	5.65%	9.49%	4.33%	5.75%	9.59%	9.54%	Yes
Duke Energy Corporation	4.04%	5.29%	9.28%	4.33%	5.39%	9.38%	9.33%	Yes
Edison International	4.04%	5.88%	10.03%	4.33%	5.98%	10.13%	10.08%	Yes
Entergy Corporation	4.04%	4.60%	8.69%	4.33%	4.69%	8.79%	8.74%	Yes
Evergy, Inc.	4.04%	5.46%	10.16%	4.33%	5.55%	10.26%	10.21%	Yes
Eversource Energy	4.04%	4.89%	9.54%	4.33%	4.98%	9.63%	9.59%	Yes
IDACORP, Inc.	4.04%	4.65%	8.14%	4.33%	4.74%	8.23%	8.18%	Yes
NorthWestern Corporation	4.04%	4.18%	9.32%	4.33%	4.28%	9.42%	9.37%	Yes
OGE Energy Corp.	4.04%	5.18%	9.74%	4.33%	5.28%	9.84%	9.79%	Yes
Pinnacle West Capital Corp.	4.04%	5.77%	10.17%	4.33%	5.87%	10.27%	10.22%	Yes
Portland General Electric Co.	4.04%	7.51%	12.17%	4.33%	7.61%	12.27%	12.22%	Yes
Southern Co.	4.04%	5.96%	9.57%	4.33%	6.05%	9.67%	9.62%	Yes
Xcel Energy Inc.	4.04%	5.82%	9.84%	4.33%	5.91%	9.94%	9.89%	Yes

Ameren-Xcel Energy weighted values corrected

Excluded	Mean	9.70%
	Median	9.62%

A: Zacks website, August 19, 2024

B: Yahoo! Finance website: August 16, 2024.

C: Value Line Investment Survey reports: June 7, 2024; July 19, 2024; August 9, 2024

E: Yahoo! Finance website: August 16, 2024. See Exhibit MFG-15.

F: Higher of Zacks website, August 19, 2024, and Value Line Investment Survey Reports, June 7, 2024; July 19, 2024; August 9, 2024. See Exhibit MFG-16.

I: U.S. Social Security Administration, The 2023 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, (OASDI Trustees Report), Table VIG6. See Exhibit MFG-17, Schedule 2

L: U.S. Energy Information Administration, *Annual Energy Outlook 2022, Macroeconomic Indicators* (Real GDP Growth + GDP Chain-Type Index Increase 2022-2050), <https://www.eia.gov/analysis/projection-data.php?annualproj>. See Exhibit MFG-17, Schedule 2

P: Moody's BAA Corporate Bonds Index plus 20 percent of CAPM risk premium. See Exhibit MFG-18, Schedule 8.

D: Average (A, B, C) H: $G \cdot (1 + D)$

J: $2/3 \cdot D + 1/3 \cdot I$

M: $2/3 \cdot D + 1/3 \cdot J$

O: $=(H + K)/2$

G: F/E

K: H + J

N: H + M

ROE and ROR Analysis for Otter Tail Power
Discounted Cash Flow Model Analysis
Common Equity Share Prices: July 22, 2024-August 16, 2024
Multistage DCF with Zacks, Yahoo! Finance, and Value Line EPS Growth-Rate
Estimates; 2023 SSA and 2023 EIA long-term growth rates

Docket No. PU-23-342
Exhibit MFG-17
Schedule 6

	A	B	C	D	E	F	G	H
Company Name	Zacks EPS Growth Rates (%)	Yahoo! EPS Growth Rates (%)	Value Line EPS Growth Rates (%)	Mean EPS Growth Rate (%)	Average of Closing Prices	Annualized Dividend	Dividend Yield (Rate/Price)	Expected Dividend Yield
Alliant Energy Corporation	6.84%	7.70%	6.00%	6.85%	\$ 56.02	\$ 1.92	3.43%	3.66%
Ameren Corporation	6.58%	5.50%	6.50%	6.19%	\$ 79.61	\$ 2.68	3.37%	3.57%
American Electric Power Co.	6.24%	6.62%	6.50%	6.45%	\$ 97.46	\$ 3.52	3.61%	3.84%
Duke Energy Corporation	6.10%	6.66%	5.00%	5.92%	\$ 111.09	\$ 4.18	3.76%	3.99%
Edison International	NA	7.60%	6.00%	6.80%	\$ 80.26	\$ 3.12	3.89%	4.15%
Entergy Corporation	7.33%	6.80%	0.50%	4.88%	\$ 115.87	\$ 4.52	3.90%	4.09%
Evergy, Inc.	5.00%	6.00%	0.50%	3.83%	\$ 58.03	\$ 2.57	4.43%	4.60%
Eversource Energy	5.73%	4.20%	6.00%	5.31%	\$ 64.77	\$ 2.86	4.42%	4.65%
IDACORP, Inc.	NA	4.40%	5.50%	4.95%	\$ 99.86	\$ 3.32	3.32%	3.49%
NorthWestern Corporation	NA	4.50%	4.00%	4.25%	\$ 52.70	\$ 2.60	4.93%	5.14%
OGE Energy Corp.	5.00%	-12.34%	5.00%	5.00%	\$ 38.77	\$ 1.67	4.31%	4.53%
Pinnacle West Capital Corp.	8.22%	7.20%	4.50%	6.64%	\$ 85.33	\$ 3.52	4.13%	4.40%
Portland General Electric Co.	NA	12.50%	6.00%	9.25%	\$ 46.92	\$ 2.00	4.26%	4.66%
Southern Co.	6.95%	7.30%	6.50%	6.92%	\$ 85.27	\$ 2.88	3.38%	3.61%
Xcel Energy Inc.	6.39%	6.73%	7.00%	6.71%	\$ 58.04	\$ 2.19	3.77%	4.03%

Yahoo! Finance EPS removed from OGE Energy average

	I	J	K	L	M	N	O	P
Company Name	SSA Long-Run Projected EPS Growth Rate = 4.04%	SSA Long-Run Weighted EPS Growth Rate 4.04%	SSA Weighted Cost of Equity, Long-Run Rate	EIA Long-Run Projected EPS Growth Rate = 4.33%	Weighted Long-Run Projected EPS Growth Rate = 4.33%	EIA Weighted Cost of Equity, Long-Run Rate	Multistage Mean Cost of Equity	J > 7.26% Mean of Kroll and Value Line Low-End Tests
Alliant Energy Corporation	4.04%	5.91%	9.57%	4.33%	6.01%	9.67%	9.62%	Yes
Ameren Corporation	4.04%	5.48%	9.05%	4.33%	4.13%	7.70%	8.38%	Yes
American Electric Power Co.	4.04%	5.65%	9.49%	4.33%	4.30%	8.15%	8.82%	Yes
Duke Energy Corporation	4.04%	5.29%	9.28%	4.33%	3.95%	7.93%	8.61%	Yes
Edison International	4.04%	5.88%	10.03%	4.33%	4.53%	8.68%	9.36%	Yes
Entergy Corporation	4.04%	4.60%	8.69%	4.33%	3.25%	7.34%	8.02%	Yes
Evergy, Inc.	4.04%	3.90%	8.50%	4.33%	2.56%	7.15%	7.83%	Yes
Eversource Energy	4.04%	4.89%	9.54%	4.33%	3.54%	8.19%	8.86%	Yes
IDACORP, Inc.	4.04%	4.65%	8.14%	4.33%	3.30%	6.79%	7.46%	Yes
NorthWestern Corporation	4.04%	4.18%	9.32%	4.33%	2.83%	7.98%	8.65%	Yes
OGE Energy Corp.	4.04%	4.68%	9.21%	4.33%	3.33%	7.86%	8.54%	Yes
Pinnacle West Capital Corp.	4.04%	5.77%	10.17%	4.33%	4.43%	8.83%	9.50%	Yes
Portland General Electric Co.	4.04%	7.51%	12.17%	4.33%	6.17%	10.82%	11.50%	Yes
Southern Co.	4.04%	5.96%	9.57%	4.33%	4.61%	8.22%	8.90%	Yes
Xcel Energy Inc.	4.04%	5.82%	9.84%	4.33%	4.47%	8.50%	9.17%	Yes
				Excluded		Mean	8.88%	
						Median	8.82%	

A: Zacks website, August 19, 2024

B: Yahoo! Finance website: August 16, 2024.

C: Value Line Investment Survey reports: June 7, 2024; July 19, 2024; August 9, 2024

E: Yahoo! Finance website: August 16, 2024. See Exhibit MFG-15.

F: Higher of Zacks website, August 19, 2024, and Value Line Investment Survey Reports, June 7, 2024; July 19, 2024; August 9, 2024. See Exhibit MFG-16.

I: U.S. Social Security Administration, The 2023 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, (OASDI Trustees Report), Table VIG6. See Exhibit MFG-17, Schedule 2.

L: U.S. Energy Information Administration, *Annual Energy Outlook 2022, Macroeconomic Indicators* (Real GDP Growth + GDP Chain-Type Index Increase 2022-2050), <https://www.eia.gov/analysis/projection-data.php#annualproj>. See Exhibit MFG-17, Schedule 3.

P: Moody's BAA Corporate Bonds Index plus 20 percent of CAPM risk premium. See Exhibit MFG-18, Schedule 8.

D: Average (A, B, C)

H: $G \times (1 + D)$

J: $2/3 \times D + 1/3 \times I$

M: $2/3 \times D + 1/3 \times J$

O: $(H + K) / 2$

G: F/E

K: H + J

N: H + M

ROE and ROR Analysis for Otter Tail Power
CAPM Analysis
Risk-Free Rate Analysis
Downloaded August 20, 2024

Docket No. PU-23-342
Exhibit MFG-18, Schedule 1

Daily Treasury Yield Curve Rates

July 22, 2024-August 16, 2024

[illegible]

**ROE and ROR Analysis for Otter Tail Power
CAPM Analysis**

Beta calculation for Comparison Group

Value Line Investment Survey

Betas taken from reports of June 7, 2024; July 19, 2024; August 9, 2024

Docket No. PU-23-342

Exhibit MFG-18

Schedule 2

Company Name	Value Line Betas-- Comparison Group
Alliant Energy Corporation	0.90
Ameren Corporation	0.90
American Electric Power Co.	0.85
Duke Energy Corporation	0.90
Edison International	1.00
Entergy Corporation	1.00
Evergy, Inc.	0.95
Eversource Energy	0.95
IDACORP, Inc.	0.85
NorthWestern Corporation	0.95
OGE Energy Corp.	1.05
Pinnacle West Capital Corp.	0.95
Portland General Electric Co.	0.95
Southern Co.	0.95
Xcel Energy Inc.	0.85

ROE and ROR Analysis for Otter Tail Power
CAPM Analysis
Moody's 10-Year Baa Corporate Bonds Index July 22, 2024-August 16, 2024
Downloaded August 20, 2024

Docket No. PU-23-342
Exhibit MFG-18
Schedule 3

S&P Global
Market Intelligence
Chart Builder

Entities: Moodys Bond Yield Avg - BAA Rated Corporates
Metrics: Index Value

SERIES NAME	CATEGORY	HIGH	LOW	AVERAGE
Moodys Bond Yield Avg - BAA Rated Corporates-Index Value (Daily)	Market Data	5.93	5.57	5.73

Pricing Date	Moodys Bond Yield Avg - BAA Rated Corporates-Index Value (Daily)
8/16/2024	5.58
8/15/2024	5.60
8/14/2024	5.57
8/13/2024	5.65
8/12/2024	5.68
8/9/2024	5.71
8/8/2024	5.77
8/7/2024	5.76
8/6/2024	5.68
8/5/2024	5.63
8/2/2024	5.60
8/1/2024	5.70
7/31/2024	5.77
7/30/2024	5.80
7/29/2024	5.83
7/26/2024	5.85
7/25/2024	5.89
7/24/2024	5.93
7/23/2024	5.84
7/22/2024	5.84
Mean	5.73

ROE and ROR Analysis for Otter Tail Power
CAPM ROE Analysis--Kroll Risk Premium
Calculation for Proxy Group

Docket No. PU-23-342
Exhibit MFG-18
Schedule 5

	A	B	C	D	E	F
Company Name	Rf	MRP	Beta	RP	CAPM ROE	Filtered Results
Alliant Energy Corporation	4.29%	5.00%	0.90	4.50%	8.79%	8.79%
Ameren Corporation	4.29%	5.00%	0.90	4.50%	8.79%	8.79%
American Electric Power Co.	4.29%	5.00%	0.85	4.25%	8.54%	8.54%
Duke Energy Corporation	4.29%	5.00%	0.90	4.50%	8.79%	8.79%
Edison International	4.29%	5.00%	1.00	5.00%	9.29%	9.29%
Entergy Corporation	4.29%	5.00%	1.00	5.00%	9.29%	9.29%
Eversource Energy	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
IDACORP, Inc.	4.29%	5.00%	0.85	4.25%	8.54%	8.54%
NorthWestern Corporation	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
OGE Energy Corp.	4.29%	5.00%	1.05	5.25%	9.54%	9.54%
Pinnacle West Capital Corp.	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
Portland General Electric Co.	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
Southern Co.	4.29%	5.00%	0.95	4.75%	9.04%	9.04%
Xcel Energy Inc.	4.29%	5.00%	0.85	4.25%	8.54%	8.54%

Mean 8.96% 8.96%
Median 9.04% 9.04%

A: MFG-18, Sch 1
B: MFG-18, Sch 4
C: MFG-18 Sch 2

D: B * C
E: B + E
F: Low-end test < Column E < High-end test

Low-End Test: Moody's 10-Year Baa Corporate Bond Index, MFG-18, Schedule 3	5.73%
CAPM Risk Premium, Column B	5.00%
20 percent of CAPM risk premium	1.00%
Moody's 10-Year Baa Corporate Bond Index + 20 percent of CAPM risk	6.73%
High-End Test: Proxy Group median, Column E	9.04%
200 percent of Proxy Group median	18.08%

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 1 of 22**

**Constant-Growth DCF Analysis for S&P 500--Value Line
All companies shown
A, B, and E: Value Line Analyzer, August 21, 2024**

C = B * (1 + A/100)		Companies Excluded				EPS	
D = A + C		Companies not paying dividends				Market	14.57
F = E/(Sum of Column E)		Companies with EPS ≤ 1				Return	
G = D * F		Companies with EPS > 20%				%	
	A	B	C	D	E	F	G

Companies not paying dividends

Adobe Inc.	24.00	0.00	0.00	24.00	242,366
Advanced Micro Dev.	78.50	0.00	0.00	78.50	227,734
Airbnb Inc.	0.00	0.00	0.00	0.00	73,696
Akamai Technologies	17.50	0.00	0.00	17.50	15,150
Align Techn.	12.50	0.00	0.00	12.50	16,564
Alphabet Inc. 'A'	39.00	0.00	0.00	39.00	1,976,079
Amazon.com	32.50	0.00	0.00	32.50	1,784,349
Amer. Airlines	0.00	0.00	0.00	0.00	6,395
ANSYS Inc.	12.00	0.00	0.00	12.00	27,884
Aptiv PLC	-10.50	0.00	0.00	-10.50	17,864
Arch Capital Group	28.50	0.00	0.00	28.50	37,868
Arista Networks	28.00	0.00	0.00	28.00	109,506

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 2 of 22**

	A	B	C	D	E	F	G
	EPS	Dividend	Expected	Rate of		Market	Weighted
Company Name	Growth	Yield	Dividend	Return on	Market Cap \$	Cap	Rate of
	Rate (%)	(%)	Yield (%)	Equity (%)	(Mil)	Weight	Return on
						Factor	Equity (%)
Autodesk Inc.	0.00	0.00	0.00	0.00	52,937		
AutoZone Inc.	20.50	0.00	0.00	20.50	54,799		
Axon Enterprise	48.50	0.00	0.00	48.50	27,965		
Bio-Rad Labs. 'A'	30.00	0.00	0.00	30.00	9,141		
Biogen	-7.00	0.00	0.00	-7.00	29,226		
Boeing	0.00	0.00	0.00	0.00	103,717		
Boston Scientific	11.50	0.00	0.00	11.50	112,338		
Builders FirstSource	87.50	0.00	0.00	87.50	19,601		
Cadence Design Sys.	23.00	0.00	0.00	23.00	74,419		
Caesars Entertainment	0.00	0.00	0.00	0.00	7,500		
CarMax Inc.	2.00	0.00	0.00	2.00	12,110		
Carnival Corp.	0.00	0.00	0.00	0.00	18,701		
Catalent Inc.	9.50	0.00	0.00	9.50	10,692		
CBRE Group	13.00	0.00	0.00	13.00	33,862		
Centene Corp.	16.50	0.00	0.00	16.50	40,518		
Charles River	17.00	0.00	0.00	17.00	10,227		
Charter Communic.	29.50	0.00	0.00	29.50	50,586		
Chipotle Mex. Grill	43.50	0.00	0.00	43.50	70,831		
Cooper Cos.	14.00	0.00	0.00	14.00	18,202		
Copart Inc.	26.50	0.00	0.00	26.50	49,066		
Corpay	14.00	0.00	0.00	14.00	19,990		
CoStar Group	16.00	0.00	0.00	16.00	30,100		
CrowdStrike Hldgs.	0.00	0.00	0.00	0.00	62,309		
DaVita Inc.	17.50	0.00	0.00	17.50	13,057		
Dayforce Inc.	0.00	0.00	0.00	0.00	8,639		

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 3 of 22**

	A	B	C	D	E	F	G
	EPS	Dividend	Expected	Rate of		Market	Weighted
Company Name	Growth	Yield	Dividend	Return on	Market Cap \$	Cap	Rate of
	Rate (%)	(%)	Yield (%)	Equity (%)	(Mil)	Weight	Return on
						Factor	Equity (%)
Deckers Outdoor	28.50	0.00	0.00	28.50	23,376		
DexCom Inc.	0.00	0.00	0.00	0.00	28,069		
Dollar Tree Inc.	-9.50	0.00	0.00	-9.50	19,967		
Edwards Lifesciences	13.50	0.00	0.00	13.50	40,053		
Enphase Energy	0.00	0.00	0.00	0.00	15,049		
EPAM Systems	22.00	0.00	0.00	22.00	11,584		
Etsy Inc.	51.00	0.00	0.00	51.00	5,939		
Expedia Group	-4.00	0.00	0.00	-4.00	17,229		
F5 Inc.	-2.00	0.00	0.00	-2.00	11,153		
Fair Isaac	28.00	0.00	0.00	28.00	44,455		
First Solar Inc.	0.00	0.00	0.00	0.00	24,143		
Fiserv Inc.	20.00	0.00	0.00	20.00	94,645		
Fortinet Inc.	53.50	0.00	0.00	53.50	55,553		
Gartner Inc.	26.00	0.00	0.00	26.00	37,095		
GE Vernova Inc	0.00	0.00	0.00	0.00	50,476		
Generac Holdings	17.50	0.00	0.00	17.50	8,726		
GoDaddy Inc.	0.00	0.00	0.00	0.00	22,907		
Hologic Inc.	33.00	0.00	0.00	33.00	18,794		
IDEXX Labs.	21.50	0.00	0.00	21.50	39,360		
Incyte Corp.	0.00	0.00	0.00	0.00	13,737		
Insulet Corp.	0.00	0.00	0.00	0.00	13,429		
Intuitive Surgical	10.50	0.00	0.00	10.50	167,421		
IQVIA Holdings	16.00	0.00	0.00	16.00	43,061		
Keysight Technologies	31.00	0.00	0.00	31.00	22,221		
Live Nation Entertain.	0.00	0.00	0.00	0.00	21,531		

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 4 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
lululemon athletica	29.00	0.00	0.00	29.00	30,202		
Match Group	8.50	0.00	0.00	8.50	8,893		
Mettler-Toledo Int'l	16.50	0.00	0.00	16.50	29,761		
MGM Resorts Int'l	0.00	0.00	0.00	0.00	11,613		
Moderna Inc.	0.00	0.00	0.00	0.00	31,584		
Mohawk Inds.	-1.00	0.00	0.00	-1.00	10,140		
Molina Healthcare	37.00	0.00	0.00	37.00	20,014		
Monster Beverage	13.00	0.00	0.00	13.00	48,168		
Netflix Inc.	49.00	0.00	0.00	49.00	283,970		
Norwegian Cruise Line	0.00	0.00	0.00	0.00	6,620		
NVR Inc.	24.50	0.00	0.00	24.50	27,154		
O'Reilly Automotive	21.00	0.00	0.00	21.00	66,604		
ON Semiconductor	25.50	0.00	0.00	25.50	30,438		
Palo Alto Networks	0.00	0.00	0.00	0.00	109,927		
PayPal Holdings	17.00	0.00	0.00	17.00	68,257		
PTC Inc.	0.00	0.00	0.00	0.00	20,642		
Qorvo Inc.	0.00	0.00	0.00	0.00	10,305		
Regeneron Pharmac.	30.50	0.00	0.00	30.50	128,527		
Royal Caribbean	0.00	0.00	0.00	0.00	39,307		
Schein (Henry)	3.00	0.00	0.00	3.00	8,802		
ServiceNow Inc.	0.00	0.00	0.00	0.00	168,601		
Solventum Corp	0.00	0.00	0.00	0.00	9,979		
Super Micro Computer	39.50	0.00	0.00	39.50	33,790		
Synopsys Inc.	21.00	0.00	0.00	21.00	81,321		
Take-Two Interactive	0.00	0.00	0.00	0.00	24,751		

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 5 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Teledyne Technologies	21.50	0.00	0.00	21.50	19,178		
Tesla Inc.	0.00	0.00	0.00	0.00	643,208		
TransDigm Group	4.00	0.00	0.00	4.00	69,826		
Trimble Inc.	27.50	0.00	0.00	27.50	13,106		
Tyler Technologies	13.00	0.00	0.00	13.00	27,982		
Uber Technologies	0.00	0.00	0.00	0.00	150,906		
Ulta Beauty	21.50	0.00	0.00	21.50	15,743		
Under Armour 'C'	-16.00	0.00	0.00	-16.00	3,398		
United Airlines Hldgs.	0.00	0.00	0.00	0.00	13,231		
VeriSign Inc.	9.50	0.00	0.00	9.50	17,143		
Vertex Pharmac.	68.50	0.00	0.00	68.50	121,639		
Warner Bros. Discovery	0.00	0.00	0.00	0.00	17,059		
Waters Corp.	9.00	0.00	0.00	9.00	19,972		
Western Digital	-20.50	0.00	0.00	-20.50	20,052		
Zebra Techn. 'A'	14.00	0.00	0.00	14.00	17,185		

Companies with EPS ≤ 0%

3M Company	-22.50	2.22	1.72	-20.78	69,312		
AES Corp.	0.00	4.13	4.13	4.13	12,041		
Alexandria Real Estate	0.00	4.49	4.49	4.49	19,336		
Allstate Corp.	-7.50	2.03	1.88	-5.62	47,771		
Amcor plc	0.00	4.69	4.69	4.69	15,393		

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 6 of 22**

	A	B	C	D	E	F	G
	EPS	Dividend	Expected	Rate of		Market	Weighted
Company Name	Growth	Yield	Dividend	Return on	Market Cap \$	Cap	Rate of
	Rate (%)	(%)	Yield (%)	Equity (%)	(Mil)	Weight	Return on
						Factor	Equity (%)
AT&T Inc.	-3.00	5.66	5.49	2.49	140,752		
Baker Hughes	0.00	2.53	2.53	2.53	34,681		
Bath & Body Works	-2.00	2.55	2.50	0.50	7,002		
Campbell Soup	0.00	3.14	3.14	3.14	14,790		
Carrier Global	0.00	1.16	1.16	1.16	59,174		
CF Industries	0.00	2.61	2.61	2.61	14,849		
Clorox Co.	0.00	3.32	3.32	3.32	17,948		
Colgate-Palmolive	-1.50	1.96	1.93	0.43	83,490		
Constellation Energy	0.00	0.76	0.76	0.76	58,637		
Corteva Inc.	0.00	1.31	1.31	1.31	36,061		
Coterra Energy	0.00	3.51	3.51	3.51	17,979		
Delta Air Lines	-19.50	1.55	1.25	-18.25	24,971		
Disney (Walt)	-27.00	1.04	0.76	-26.24	161,640		
Dominion Energy	-2.00	4.81	4.71	2.71	46,517		
Dow Inc.	0.00	5.50	5.50	5.50	37,101		
DTE Energy	-0.50	3.34	3.32	2.82	25,263		
DuPont de Nemours	0.00	1.98	1.98	1.98	32,876		
Eastman Chemical	-0.50	3.39	3.37	2.87	11,168		
Ecolab Inc.	-2.00	0.95	0.93	-1.07	68,129		
Electronic Arts	0.00	0.55	0.55	0.55	38,958		
EQT Corp.	-25.00	2.00	1.50	-23.50	13,902		
Equity Residential	-12.50	3.79	3.32	-9.18	26,940		
Exelon Corp.	-2.50	4.11	4.01	1.51	37,030		
Federal Rlty. Inv. Trust	0.00	3.87	3.87	3.87	9,161		
FirstEnergy Corp.	-1.00	4.09	4.05	3.05	24,333		

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 7 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name							
Ford Motor	-14.00	5.89	5.07	-8.93	42,542		
Fortive Corp.	-5.00	0.47	0.45	-4.55	24,076		
Fox Corp. 'A'	0.00	1.33	1.33	1.33	18,286		
Fox Corp. 'B'	0.00	1.43	1.43	1.43			
Franklin Resources	-3.50	5.63	5.43	1.93	11,496		
GE HealthCare	0.00	0.14	0.14	0.14	38,117		
Gen'l Electric	-21.50	0.67	0.53	-20.97	183,839		
Gilead Sciences	-9.50	4.15	3.76	-5.74	92,378		
Hasbro Inc.	-2.50	4.33	4.22	1.72	8,996		
Hess Corp.	0.00	1.30	1.30	1.30	41,330		
Hormel Foods	0.00	3.50	3.50	3.50	17,679		
Host Hotels & Resorts	0.00	5.20	5.20	5.20	11,529		
Howmet Aerospace	0.00	0.53	0.53	0.53	38,292		
Ingersoll Rand Inc.	0.00	0.09	0.09	0.09	36,756		
Int'l Business Mach.	-6.50	3.47	3.24	-3.26	176,666		
Int'l Flavors & Frag.	-3.50	1.65	1.59	-1.91	24,692		
Int'l Paper	-3.00	4.01	3.89	0.89	16,021		
Intel Corp.	-5.00	2.51	2.38	-2.62	85,178		
Invesco Ltd.	-11.50	5.16	4.57	-6.93	7,413		
Invitation Homes	0.00	3.19	3.19	3.19	21,473		
Kellanova	-1.00	2.85	2.82	1.82	27,479		
Kenvue Inc.	0.00	3.78	3.78	3.78	40,560		
Kimberly-Clark	-1.00	3.46	3.43	2.43	47,456		
Kraft Heinz Co.	-3.50	4.64	4.48	0.98	41,698		
L3Harris Technologies	0.00	2.06	2.06	2.06	42,901		

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 8 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name							
Lamb Weston Holdings	0.00	2.57	2.57	2.57	8,538		
Las Vegas Sands	0.00	2.03	2.03	2.03	29,072		
Linde plc	0.00	1.23	1.23	1.23	216,871		
Marathon Oil Corp.	0.00	1.59	1.59	1.59	15,705		
Micron Technology	-9.00	0.47	0.43	-8.57	111,355		
Molson Coors Beverage	-2.00	3.39	3.32	1.32	10,885		
News Corp. 'A'	0.00	0.73	0.73	0.73	15,585		
News Corp. 'B'	0.00	0.71	0.71	0.71	16,739		
NRG Energy	0.00	1.98	1.98	1.98	17,094		
Otis Worldwide	0.00	1.48	1.48	1.48	36,964		
Paramount Global	-14.00	1.96	1.69	-12.31	6,701		
PG&E Corp.	0.00	0.22	0.22	0.22	39,308		
PPL Corp.	-14.00	3.32	2.86	-11.14	22,908		
RTX Corp.	-7.50	2.14	1.98	-5.52	156,503		
Southwest Airlines	-44.50	2.84	1.58	-42.92	15,189		
Stanley Black & Decker	-5.50	3.43	3.24	-2.26	14,685		
Targa Resources	0.00	2.32	2.32	2.32	30,719		
Trane Technologies plc	0.00	0.97	0.97	0.97	78,098		
UDR Inc.	-1.50	4.19	4.13	2.63	13,746		
Ventas Inc.	0.00	3.18	3.18	3.18	23,531		
Viatis Inc.	0.00	4.21	4.21	4.21	13,603		
Vistra Corp.	0.00	1.10	1.10	1.10	27,365		
Walgreens Boots	-2.50	9.59	9.35	6.85	9,004		
Wells Fargo	-5.00	2.98	2.83	-2.17	182,590		
Welltower Inc.	-22.00	2.28	1.78	-20.22	66,304		

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 9 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Wynn Resorts	0.00	4.05	4.05	4.05	8,298		
Zimmer Biomet Hldgs.	-3.00	0.89	0.86	-2.14	22,345		

Companies with EPS > 20%

Alphabet Inc.	23.50	0.49	0.61	24.11	2,002,367
Amer. Int'l Group	22.50	2.19	2.68	25.18	48,924
APA Corp.	66.50	3.45	5.74	72.24	10,707
Archer Daniels Midl'd	20.50	3.43	4.13	24.63	27,906
Ball Corp.	23.00	1.29	1.59	24.59	19,031
Berkley (W.R.)	24.00	0.56	0.69	24.69	22,054
Broadcom Inc.	55.00	1.33	2.06	57.06	733,259
Bunge Global SA	37.00	2.87	3.93	40.93	13,564
Chevron Corp.	28.50	4.67	6.00	34.50	267,207
ConocoPhillips	54.00	2.85	4.39	58.39	126,960
Crown Castle Int'l	25.00	5.82	7.28	32.28	47,941
Deere & Co.	32.50	1.67	2.21	34.71	96,802
Devon Energy	45.00	1.98	2.87	47.87	28,162
Diamondback Energy	38.00	1.83	2.53	40.53	35,035

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 10 of 22**

	A	B	C	D	E	F	G
	EPS	Dividend	Expected	Rate of		Market	Weighted
Company Name	Growth	Yield	Dividend	Return on	Market Cap \$	Cap	Rate of
	Rate (%)	(%)	Yield (%)	Equity (%)	(Mil)	Weight	Return on
						Factor	Equity (%)
EOG Resources	46.50	3.02	4.42	50.92	72,713		
Equinix Inc.	21.00	2.03	2.46	23.46	79,861		
Expeditors Int'l	21.00	1.22	1.48	22.48	16,840		
Exxon Mobil Corp.	22.50	3.19	3.91	26.41	469,020		
Fidelity Nat'l Info.	23.00	1.84	2.26	25.26	43,965		
Healthpeak Properties	26.00	5.51	6.94	32.94	11,911		
Horton D.R.	35.50	0.69	0.93	36.43	57,032		
Intuit Inc.	21.00	0.57	0.69	21.69	177,999		
Jabil Inc.	28.50	0.31	0.40	28.90	12,260		
Keurig Dr Pepper	20.50	2.55	3.07	23.57	47,872		
Kinder Morgan Inc.	26.50	5.49	6.94	33.44	46,519		
KLA Corp.	27.00	0.73	0.93	27.93	106,947		
Lam Research	23.00	0.98	1.21	24.21	110,515		
Lennar Corp.	27.50	1.18	1.50	29.00	46,441		
Lowe's Cos.	23.50	1.94	2.40	25.90	135,930		
Marathon Petroleum	33.50	1.84	2.46	35.96	63,563		
Microsoft Corp.	22.50	0.78	0.96	23.46	3,098,520		
Monolithic Power Sys.	42.50	0.58	0.83	43.33	41,981		
Mosaic Company	45.00	3.04	4.41	49.41	8,883		
MSCI Inc.	23.00	1.15	1.41	24.41	43,654		
Nucor Corp.	39.00	1.59	2.21	41.21	33,869		
NVIDIA Corp.	42.00	0.03	0.04	42.04	2,903,587		
Occidental Petroleum	26.00	1.72	2.17	28.17	50,490		
Old Dominion Freight	26.00	0.55	0.69	26.69	41,997		
Paycom Software	32.50	0.97	1.29	33.79	8,713		

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 11 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name							
Pool Corp.	29.50	1.39	1.80	31.30	13,173		
PulteGroup Inc.	32.50	0.66	0.87	33.37	25,337		
Quanta Services	24.00	0.14	0.17	24.17	38,584		
Revvity Inc.	27.00	0.24	0.30	27.30	14,488		
Salesforce Inc.	26.00	0.63	0.79	26.79	266,043		
SBA Communications	42.50	1.82	2.59	45.09	23,504		
Steel Dynamics	40.00	1.60	2.24	42.24	18,164		
Thermo Fisher Sci.	24.00	0.26	0.32	24.32	229,831		
Tractor Supply	21.00	1.75	2.12	23.12	28,299		
United Rentals	22.00	0.93	1.13	23.13	46,510		
Valero Energy	26.50	2.89	3.66	30.16	47,359		
VICI Properties	53.00	5.25	8.03	61.03	30,444		
West Pharmac. Svcs.	30.50	0.27	0.35	30.85	21,214		
Weyerhaeuser Co.	24.00	2.66	3.30	27.30	21,840		

Qualifying Companies

Abbott Labs.	14.50	2.00	2.29	16.79	191,197	0.00758	0.1272
AbbVie Inc.	15.50	3.21	3.71	19.21	340,785	0.01351	0.2595
Accenture Plc	11.50	1.61	1.80	13.30	200,413	0.00794	0.1056
Aflac Inc.	10.00	2.01	2.21	12.21	59,117	0.00234	0.0286
Agilent Technologies	16.00	0.69	0.80	16.80	39,665	0.00157	0.0264
Air Products & Chem.	8.00	2.56	2.76	10.76	61,468	0.00244	0.0262

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 12 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name							
Albemarle Corp.	18.50	2.20	2.61	21.11	8,562	0.00034	0.0072
Allegion plc	9.50	1.47	1.61	11.11	11,422	0.00045	0.0050
Alliant Energy	7.00	3.40	3.64	10.64	14,487	0.00057	0.0061
Altria Group	7.50	7.66	8.23	15.73	87,925	0.00349	0.0548
Amer. Elec. Power	4.50	3.70	3.87	8.37	51,247	0.00203	0.0170
Amer. Express	10.50	0.99	1.09	11.59	175,264	0.00695	0.0805
Amer. Tower 'A'	11.50	3.20	3.57	15.07	104,242	0.00413	0.0623
Amer. Water Works	15.00	2.20	2.53	17.53	27,606	0.00109	0.0192
Ameren Corp.	7.00	3.30	3.53	10.53	21,664	0.00086	0.0090
Ameriprise Fin'l	17.00	1.41	1.65	18.65	41,838	0.00166	0.0309
AMETEK Inc.	13.00	0.69	0.78	13.78	37,388	0.00148	0.0204
Amgen	6.50	2.91	3.10	9.60	173,112	0.00686	0.0659
Amphenol Corp.	12.50	0.71	0.80	13.30	78,018	0.00309	0.0411
Analog Devices	14.00	1.71	1.95	15.95	106,845	0.00424	0.0675
Aon plc	16.50	0.82	0.96	17.46	71,893	0.00285	0.0497
Apple Inc.	19.50	0.45	0.54	20.04	3,375,079	0.13378	2.6807
Applied Materials	20.00	0.70	0.84	20.84	166,944	0.00662	0.1379
Assurant Inc.	4.00	1.55	1.61	5.61	9,675	0.00038	0.0022
Atmos Energy	9.00	2.69	2.93	11.93	19,412	0.00077	0.0092
Automatic Data Proc.	15.00	2.13	2.45	17.45	107,704	0.00427	0.0745
AvalonBay Communities	1.00	3.28	3.31	4.31	30,325	0.00120	0.0052
Avery Dennison	12.00	1.75	1.96	13.96	16,835	0.00067	0.0093
Bank of America	13.00	2.47	2.79	15.79	305,313	0.01210	0.1911
Bank of NY Mellon	6.00	2.93	3.11	9.11	47,943	0.00190	0.0173
Baxter Int'l Inc.	6.00	3.27	3.47	9.47	18,105	0.00072	0.0068

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 13 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name							
Becton Dickinson	4.50	1.67	1.75	6.25	67,659	0.00268	0.0167
Best Buy Co.	12.00	4.53	5.07	17.07	17,917	0.00071	0.0121
Bio-Techne Corp.	16.50	0.44	0.51	17.01	11,462	0.00045	0.0077
BlackRock Inc.	10.50	2.52	2.78	13.28	127,565	0.00506	0.0672
Blackstone Inc.	12.00	2.41	2.70	14.70	97,948	0.00388	0.0571
Booking Holdings	5.00	0.98	1.03	6.03	121,704	0.00482	0.0291
BorgWarner	2.00	1.39	1.42	3.42	7,227	0.00029	0.0010
Bristol-Myers Squibb	4.50	4.96	5.18	9.68	98,127	0.00389	0.0377
Broadridge Fin'l	15.00	1.53	1.76	16.76	24,739	0.00098	0.0164
Brown & Brown	19.50	0.53	0.63	20.13	28,871	0.00114	0.0230
Brown-Forman 'B'	3.50	2.27	2.35	5.85	21,035	0.00083	0.0049
BXP Inc.	4.00	5.72	5.95	9.95	10,728	0.00043	0.0042
C.H. Robinson	7.00	2.49	2.66	9.66	11,467	0.00045	0.0044
Camden Property Trust	8.00	3.49	3.77	11.77	12,795	0.00051	0.0060
Capital One Fin'l	17.00	1.76	2.06	19.06	51,913	0.00206	0.0392
Cardinal Health	12.50	1.90	2.14	14.64	25,952	0.00103	0.0151
Caterpillar Inc.	16.50	1.67	1.95	18.45	165,174	0.00655	0.1208
Cboe Global Markets	8.00	1.07	1.16	9.16	21,586	0.00086	0.0078
CDW Corp.	18.50	1.14	1.35	19.85	28,948	0.00115	0.0228
Celanese Corp.	11.50	2.23	2.49	13.99	13,732	0.00054	0.0076
Cencora	12.50	0.86	0.97	13.47	47,405	0.00188	0.0253
CenterPoint Energy	3.50	3.10	3.21	6.71	16,543	0.00066	0.0044
Chubb Ltd.	11.50	1.36	1.52	13.02	110,591	0.00438	0.0571
Church & Dwight	9.50	1.13	1.24	10.74	24,595	0.00097	0.0105
Cigna Group	16.00	1.67	1.94	17.94	95,136	0.00377	0.0676

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 14 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name							
Cincinnati Financial	12.50	2.58	2.90	15.40	20,356	0.00081	0.0124
Cintas Corp.	17.50	0.82	0.96	18.46	77,272	0.00306	0.0566
Cisco Systems	7.50	3.52	3.78	11.28	183,169	0.00726	0.0819
Citigroup Inc.	13.00	3.78	4.27	17.27	113,073	0.00448	0.0774
Citizens Fin'l Group	7.00	4.19	4.48	11.48	18,390	0.00073	0.0084
CME Group	1.00	2.21	2.23	3.23	74,686	0.00296	0.0096
CMS Energy Corp.	5.50	3.11	3.28	8.78	19,810	0.00079	0.0069
Coca-Cola	5.00	2.90	3.05	8.05	295,511	0.01171	0.0942
Cognizant Technology	2.00	1.65	1.68	3.68	36,967	0.00147	0.0054
Comcast Corp.	11.50	3.18	3.55	15.05	151,420	0.00600	0.0903
Conagra Brands	5.50	4.67	4.93	10.43	14,734	0.00058	0.0061
Consol. Edison	2.00	3.33	3.40	5.40	34,898	0.00138	0.0075
Constellation Brands	6.00	1.69	1.79	7.79	43,963	0.00174	0.0136
Corning Inc.	4.00	2.83	2.94	6.94	32,424	0.00129	0.0089
Costco Wholesale	16.00	0.54	0.63	16.63	382,503	0.01516	0.2521
CSX Corp.	15.00	1.47	1.69	16.69	65,216	0.00259	0.0431
Cummins Inc.	9.50	2.49	2.73	12.23	40,017	0.00159	0.0194
CVS Health	6.50	4.86	5.18	11.68	70,100	0.00278	0.0324
Danaher Corp.	17.50	0.43	0.51	18.01	194,090	0.00769	0.1385
Darden Restaurants	10.50	3.98	4.40	14.90	16,744	0.00066	0.0099
Digital Realty Trust	18.00	3.31	3.91	21.91	47,109	0.00187	0.0409
Discover Fin'l Svcs.	18.00	2.19	2.58	20.58	32,014	0.00127	0.0261
Dollar General	14.00	2.03	2.31	16.31	25,626	0.00102	0.0166
Domino's Pizza	17.00	1.41	1.65	18.65	15,391	0.00061	0.0114
Dover Corp.	14.50	1.15	1.32	15.82	24,300	0.00096	0.0152

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 15 of 22**

	A	B	C	D	E	F	G
	EPS	Dividend	Expected	Rate of		Market	Weighted
Company Name	Growth	Yield	Dividend	Return on	Market Cap \$	Cap	Rate of
	Rate (%)	(%)	Yield (%)	Equity (%)	(Mil)	Weight	Return on
						Factor	Equity (%)
Duke Energy	4.50	3.65	3.81	8.31	87,591	0.00347	0.0289
Eaton Corp. plc	10.50	1.26	1.39	11.89	119,260	0.00473	0.0562
eBay Inc.	14.50	1.94	2.22	16.72	27,545	0.00109	0.0183
Edison Int'l	14.00	3.86	4.40	18.40	32,100	0.00127	0.0234
Elevance Health	20.00	1.21	1.45	21.45	125,393	0.00497	0.1066
Emerson Electric	10.00	2.05	2.26	12.26	59,207	0.00235	0.0288
Entergy Corp.	5.50	3.83	4.04	9.54	25,164	0.00100	0.0095
Equifax Inc.	5.00	0.53	0.56	5.56	36,662	0.00145	0.0081
Essex Property Trust	6.50	3.38	3.60	10.10	18,486	0.00073	0.0074
Everest Group	2.00	2.22	2.26	4.26	16,038	0.00064	0.0027
Evergy Inc.	6.50	4.41	4.70	11.20	13,597	0.00054	0.0060
Eversource Energy	5.50	4.44	4.68	10.18	23,349	0.00093	0.0094
Extra Space Storage	17.00	4.09	4.79	21.79	22,322	0.00088	0.0193
FactSet Research	15.00	1.08	1.24	16.24	15,391	0.00061	0.0099
Fastenal Co.	11.00	2.35	2.61	13.61	37,948	0.00150	0.0205
FedEx Corp.	7.00	1.95	2.09	9.09	69,722	0.00276	0.0251
Fifth Third Bancorp	7.50	3.68	3.96	11.46	27,154	0.00108	0.0123
FMC Corp.	9.00	3.94	4.29	13.29	7,667	0.00030	0.0040
Freep't-McMoRan Inc.	19.50	1.43	1.71	21.21	60,183	0.00239	0.0506
Gallagher (Arthur J.)	11.00	0.84	0.93	11.93	62,378	0.00247	0.0295
Garmin Ltd.	13.00	1.76	1.99	14.99	32,683	0.00130	0.0194
Gen Digital Inc.	5.00	2.01	2.11	7.11	15,338	0.00061	0.0043
Gen'l Dynamics	3.00	1.97	2.03	5.03	80,711	0.00320	0.0161
Gen'l Mills	6.50	3.47	3.70	10.20	39,361	0.00156	0.0159
Gen'l Motors	1.00	1.10	1.11	2.11	47,971	0.00190	0.0040

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 16 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name							
Genuine Parts	10.50	2.99	3.30	13.80	19,117	0.00076	0.0105
Global Payments	10.00	0.95	1.05	11.05	26,809	0.00106	0.0117
Globe Life Inc.	10.50	1.02	1.13	11.63	8,840	0.00035	0.0041
Goldman Sachs	13.00	2.21	2.50	15.50	161,586	0.00640	0.0993
Grainger (W.W.)	16.50	0.86	1.00	17.50	46,570	0.00185	0.0323
Halliburton Co.	18.00	2.27	2.68	20.68	27,320	0.00108	0.0224
Hartford Fin'l Sves.	16.50	1.72	2.00	18.50	32,533	0.00129	0.0239
HCA Healthcare	18.00	0.71	0.84	18.84	97,806	0.00388	0.0730
Henry (Jack) & Assoc.	7.50	1.34	1.44	8.94	12,013	0.00048	0.0043
Hershey Co.	10.50	2.81	3.11	13.61	40,578	0.00161	0.0219
Hewlett Packard Ent.	7.00	2.92	3.12	10.12	23,077	0.00091	0.0093
Hilton Worldwide	14.00	0.29	0.33	14.33	52,162	0.00207	0.0296
Home Depot	14.50	2.53	2.90	17.40	352,815	0.01398	0.2433
Honeywell Int'l	3.50	2.19	2.27	5.77	128,375	0.00509	0.0293
HP Inc.	17.50	3.19	3.75	21.25	33,986	0.00135	0.0286
Hubbell Inc.	12.50	1.29	1.45	13.95	20,382	0.00081	0.0113
Humana Inc.	15.00	0.99	1.14	16.14	42,944	0.00170	0.0275
Hunt (J.B.)	12.00	1.09	1.22	13.22	16,688	0.00066	0.0087
Huntington Bancshs.	8.50	4.75	5.15	13.65	19,579	0.00078	0.0106
Huntington Ingalls	1.50	1.95	1.98	3.48	10,468	0.00041	0.0014
IDEX Corp.	11.00	1.45	1.61	12.61	14,672	0.00058	0.0073
Illinois Tool Works	7.00	2.35	2.51	9.51	70,858	0.00281	0.0267
Intercontinental Exch.	11.50	1.15	1.28	12.78	89,457	0.00355	0.0453
Interpublic Group	11.50	4.45	4.96	16.46	11,583	0.00046	0.0076
Iron Mountain	9.00	2.39	2.61	11.61	31,879	0.00126	0.0147

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 17 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name							
Jacobs Solutions	13.50	0.83	0.94	14.44	18,016	0.00071	0.0103
Johnson Ctrl's. Int'l plc	0.50	2.16	2.17	2.67	45,759	0.00181	0.0048
Johnson & Johnson	9.00	3.16	3.44	12.44	381,437	0.01512	0.1882
JPMorgan Chase	14.50	2.19	2.51	17.01	603,739	0.02393	0.4070
Juniper Networks	1.00	2.27	2.29	3.29	12,618	0.00050	0.0016
KeyCorp	8.00	5.24	5.66	13.66	14,752	0.00058	0.0080
Kimco Realty	0.50	4.50	4.52	5.02	13,650	0.00054	0.0027
KKR & Co.	18.50	0.59	0.70	19.20	104,767	0.00415	0.0797
Kroger Co.	15.00	2.43	2.79	17.79	38,049	0.00151	0.0268
Labcorp Holdings	16.00	1.30	1.51	17.51	18,658	0.00074	0.0129
Lauder (Estee)	9.50	2.88	3.15	12.65	32,855	0.00130	0.0165
Leidos Hldgs.	12.00	1.03	1.15	13.15	19,905	0.00079	0.0104
Lilly (Eli)	11.00	0.56	0.62	11.62	885,472	0.03510	0.4079
LKQ Corp.	14.50	3.05	3.49	17.99	10,407	0.00041	0.0074
Lockheed Martin	13.50	2.29	2.60	16.10	133,483	0.00529	0.0852
Loews Corp.	15.50	0.32	0.37	15.87	17,247	0.00068	0.0108
LyondellBasell Inds.	1.50	0.37	0.38	1.88	31,297	0.00124	0.0023
M&T Bank Corp.	8.00	3.37	3.64	11.64	26,701	0.00106	0.0123
MarketAxess Holdings	11.00	1.23	1.37	12.37	9,141	0.00036	0.0045
Marriott Int'l	9.50	1.16	1.27	10.77	61,418	0.00243	0.0262
Marsh & McLennan	9.50	1.48	1.62	11.12	108,939	0.00432	0.0480
Martin Marietta	15.00	0.58	0.67	15.67	32,389	0.00128	0.0201
Masco Corp.	13.50	1.54	1.75	15.25	16,623	0.00066	0.0100
MasterCard Inc.	15.50	0.57	0.66	16.16	426,108	0.01689	0.2729
McCormick & Co.	5.00	2.15	2.26	7.26	20,942	0.00083	0.0060

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 18 of 22**

	A	B	C	D	E	F	G
	EPS	Dividend	Expected	Rate of		Market	Weighted
Company Name	Growth	Yield	Dividend	Return on	Market Cap \$	Cap	Rate of
	Rate (%)	(%)	Yield (%)	Equity (%)	(Mil)	Weight	Return on
						Factor	Equity (%)
McDonald's Corp.	9.00	2.63	2.87	11.87	195,418	0.00775	0.0919
McKesson Corp.	14.50	0.49	0.56	15.06	72,421	0.00287	0.0432
Medtronic plc	2.00	3.42	3.49	5.49	107,189	0.00425	0.0233
Merck & Co.	4.50	2.71	2.83	7.33	287,664	0.01140	0.0836
Meta Platforms	16.50	0.38	0.44	16.94	1,334,283	0.05289	0.8961
MetLife Inc.	11.00	3.06	3.40	14.40	50,941	0.00202	0.0291
Microchip Technology	18.00	2.37	2.80	20.80	41,901	0.00166	0.0345
Mid-America Apt.	4.00	3.84	3.99	7.99	17,707	0.00070	0.0056
Mondelez Int'l	6.00	2.39	2.53	8.53	95,205	0.00377	0.0322
Moody's Corp.	11.00	0.73	0.81	11.81	84,879	0.00336	0.0397
Morgan Stanley	11.00	3.72	4.13	15.13	161,755	0.00641	0.0970
Motorola Solutions	12.50	0.94	1.06	13.56	69,821	0.00277	0.0375
Nasdaq Inc.	14.00	1.38	1.57	15.57	39,900	0.00158	0.0246
NetApp Inc.	13.50	1.64	1.86	15.36	26,185	0.00104	0.0159
Newmont Corp.	10.50	2.04	2.25	12.75	56,665	0.00225	0.0286
NextEra Energy	12.50	2.77	3.12	15.62	160,311	0.00635	0.0992
NIKE Inc. 'B'	8.50	1.88	2.04	10.54	118,644	0.00470	0.0496
NiSource Inc.	10.50	3.49	3.86	14.36	14,271	0.00057	0.0081
Nordson Corp.	10.50	1.15	1.27	11.77	13,543	0.00054	0.0063
Norfolk Southern	9.50	2.23	2.44	11.94	54,708	0.00217	0.0259
Northern Trust Corp.	3.00	3.54	3.65	6.65	17,101	0.00068	0.0045
Northrop Grumman	12.00	1.67	1.87	13.87	73,964	0.00293	0.0407
NXP Semi. NV	14.50	1.67	1.91	16.41	62,662	0.00248	0.0408
Omnicom Group	4.50	3.02	3.16	7.66	18,479	0.00073	0.0056
ONEOK Inc.	13.00	4.67	5.28	18.28	50,392	0.00200	0.0365

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 19 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name							
Oracle Corp.	10.50	1.18	1.30	11.80	373,578	0.01481	0.1748
PACCAR Inc.	14.50	4.66	5.34	19.84	49,118	0.00195	0.0386
Packaging Corp.	10.00	2.57	2.83	12.83	17,452	0.00069	0.0089
Parker-Hannifin	17.00	1.13	1.32	18.32	74,347	0.00295	0.0540
Paychex Inc.	11.00	3.13	3.47	14.47	45,049	0.00179	0.0258
Pentair plc	3.50	1.11	1.15	4.65	13,758	0.00055	0.0025
PepsiCo Inc.	5.50	3.15	3.32	8.82	238,678	0.00946	0.0835
Pfizer Inc.	15.50	5.82	6.72	22.22	163,663	0.00649	0.1442
Philip Morris Int'l	5.00	4.44	4.66	9.66	182,218	0.00722	0.0698
Phillips 66	13.50	3.38	3.84	17.34	57,637	0.00228	0.0396
Pinnacle West Capital	2.00	4.18	4.26	6.26	9,736	0.00039	0.0024
PNC Financial Serv.	8.50	3.80	4.12	12.62	66,937	0.00265	0.0335
PPG Inds.	1.00	2.27	2.29	3.29	28,110	0.00111	0.0037
Price (T. Rowe) Group	9.00	4.80	5.23	14.23	23,581	0.00093	0.0133
Principal Fin'l Group	5.50	3.74	3.95	9.45	17,839	0.00071	0.0067
Procter & Gamble	8.00	2.39	2.58	10.58	398,391	0.01579	0.1671
Progressive Corp.	8.00	0.17	0.18	8.18	137,253	0.00544	0.0445
Prologis	7.00	3.21	3.43	10.43	114,088	0.00452	0.0472
Prudential Fin'l	2.00	4.67	4.76	6.76	40,001	0.00159	0.0107
Public Serv. Enterprise	4.00	3.06	3.18	7.18	40,094	0.00159	0.0114
Public Storage	5.50	3.74	3.95	9.45	56,197	0.00223	0.0210
Qualcomm Inc.	19.00	2.03	2.42	21.42	186,539	0.00739	0.1583
Quest Diagnostics	14.00	2.00	2.28	16.28	16,633	0.00066	0.0107
Ralph Lauren	7.50	2.08	2.24	9.74	10,035	0.00040	0.0039
Raymond James Fin'l	17.50	1.70	2.00	19.50	23,823	0.00094	0.0184

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 20 of 22**

	A	B	C	D	E	F	G
	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)	Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name							
Realty Income Corp.	1.00	5.27	5.32	6.32	35,570	0.00141	0.0089
Regency Centers Corp.	10.50	3.81	4.21	14.71	11,991	0.00048	0.0070
Regions Financial	16.00	4.79	5.56	21.56	19,156	0.00076	0.0164
Republic Services	13.50	1.06	1.20	14.70	63,569	0.00252	0.0370
ResMed Inc.	16.00	0.94	1.09	17.09	32,640	0.00129	0.0221
Rockwell Automation	9.00	1.91	2.08	11.08	29,773	0.00118	0.0131
Rollins Inc.	14.50	1.24	1.42	15.92	23,489	0.00093	0.0148
Roper Tech.	12.00	0.61	0.68	12.68	56,601	0.00224	0.0285
Ross Stores	2.00	1.09	1.11	3.11	47,197	0.00187	0.0058
S&P Global	12.50	0.74	0.83	13.33	154,200	0.00611	0.0815
Schlumberger Ltd.	10.00	2.63	2.89	12.89	62,168	0.00246	0.0318
Schwab (Charles)	10.50	1.53	1.69	12.19	119,412	0.00473	0.0577
Seagate Technology plc	3.50	2.88	2.98	6.48	20,381	0.00081	0.0052
Sempra Energy	13.50	3.21	3.64	17.14	49,817	0.00197	0.0339
Sherwin-Williams	12.50	0.84	0.95	13.45	88,848	0.00352	0.0473
Simon Property Group	1.50	5.16	5.24	6.74	51,529	0.00204	0.0138
Skyworks Solutions	10.00	2.77	3.05	13.05	16,749	0.00066	0.0087
Smith (A.O.)	8.50	1.61	1.75	10.25	11,767	0.00047	0.0048
Smucker (J.M.)	2.00	3.64	3.71	5.71	12,713	0.00050	0.0029
Snap-on Inc.	10.50	3.01	3.33	13.83	14,404	0.00057	0.0079
Southern Co.	3.50	3.30	3.42	6.92	95,435	0.00378	0.0262
Starbucks Corp.	9.00	2.49	2.71	11.71	106,398	0.00422	0.0494
State Street Corp.	5.00	3.96	4.16	9.16	23,624	0.00094	0.0086
STERIS plc	14.50	0.94	1.08	15.58	23,002	0.00091	0.0142
Stryker Corp.	12.00	0.99	1.11	13.11	126,784	0.00503	0.0659

**ROE and ROR Analysis for OTP
CAPM Analysis—Value Line EPS
Standard and Poor's 500 Adjusted**

**Docket No. PU-23-342
Exhibit MFG-18, Schedule 6
Page 21 of 22**

	A	B	C	D	E	F	G
	EPS	Dividend	Expected	Rate of		Market	Weighted
Company Name	Growth	Yield	Dividend	Return on	Market Cap \$	Cap	Rate of
	Rate (%)	(%)	Yield (%)	Equity (%)	(Mil)	Weight	Return on
						Factor	Equity (%)
Synchrony Financial	15.50	2.16	2.49	17.99	18,302	0.00073	0.0131
Sysco Corp.	3.00	2.68	2.76	5.76	37,923	0.00150	0.0087
T-Mobile US	20.00	1.35	1.62	21.62	229,259	0.00909	0.1965
Tapestry Inc.	9.00	3.69	4.02	13.02	8,723	0.00035	0.0045
Target Corp.	13.50	3.30	3.75	17.25	62,808	0.00249	0.0429
TE Connectivity	7.00	1.79	1.92	8.92	44,184	0.00175	0.0156
Teleflex Inc.	11.50	0.58	0.65	12.15	10,962	0.00043	0.0053
Teradyne Inc.	17.00	0.39	0.46	17.46	19,258	0.00076	0.0133
Texas Instruments	13.00	2.66	3.01	16.01	178,592	0.00708	0.1133
Textron Inc.	7.00	0.09	0.10	7.10	16,123	0.00064	0.0045
TJX Companies	9.00	1.38	1.50	10.50	123,351	0.00489	0.0514
Travelers Cos.	8.50	1.96	2.13	10.63	49,027	0.00194	0.0207
Truist Fin'l	7.50	4.96	5.33	12.83	56,066	0.00222	0.0285
Tyson Foods 'A'	3.00	3.16	3.25	6.25	22,145	0.00088	0.0055
U.S. Bancorp	5.00	4.63	4.86	9.86	66,068	0.00262	0.0258
Union Pacific	11.00	2.20	2.44	13.44	147,078	0.00583	0.0784
United Parcel Serv.	12.00	5.16	5.78	17.78	108,329	0.00429	0.0763
UnitedHealth Group	16.50	1.45	1.69	18.19	533,296	0.02114	0.3845
Universal Health 'B'	6.50	0.36	0.38	6.88	14,848	0.00059	0.0041
Verisk Analytics	9.50	0.58	0.64	10.14	38,264	0.00152	0.0154
Verizon Communic.	6.00	6.58	6.97	12.97	172,169	0.00682	0.0885
Visa Inc.	14.50	0.80	0.92	15.42	499,806	0.01981	0.3054
Vulcan Materials	12.00	0.76	0.85	12.85	32,083	0.00127	0.0163
Wabtec Corp.	7.50	0.54	0.58	8.08	27,408	0.00109	0.0088
Walmart Inc.	7.50	1.21	1.30	8.80	552,644	0.02191	0.1928

	A	B	C	D	E	F	G
						Market Cap Weight Factor	Weighted Rate of Return on Equity (%)
Company Name	EPS Growth Rate (%)	Dividend Yield (%)	Expected Dividend Yield (%)	Rate of Return on Equity (%)	Market Cap \$ (Mil)		
Waste Management	10.00	1.45	1.60	11.60	82,767	0.00328	0.0380
WEC Energy Group	6.00	3.73	3.95	9.95	28,333	0.00112	0.0112
Williams Cos.	19.50	4.38	5.23	24.73	52,892	0.00210	0.0519
Willis Towers Wat. plc	19.50	1.27	1.52	21.02	28,618	0.00113	0.0238
Xcel Energy Inc.	6.50	3.82	4.07	10.57	32,861	0.00130	0.0138
Xylem Inc.	6.50	1.14	1.21	7.71	31,939	0.00127	0.0098
Yum! Brands	10.50	1.95	2.15	12.65	38,570	0.00153	0.0193
Zoetis Inc.	14.50	0.94	1.08	15.58	83,795	0.00332	0.0517
Totals					25,228,241	1.00	14.57

ROE and ROR Analysis for Otter Tail Power
CAPM ROE Analysis--Value Line
Calculation for Proxy Group

Docket No. PU-23-342
Exhibit MFG-18
Schedule 7

	A	B	C	D	E	F	G
	Market Return	Rf	MRP	Beta	RP	CAPM ROE	Filtered Results
Alliant Energy Corporation	14.57%	4.29%	10.28%	0.90	9.25%	13.54%	13.54%
Ameren Corporation	14.57%	4.29%	10.28%	0.90	9.25%	13.54%	13.54%
American Electric Power Co.	14.57%	4.29%	10.28%	0.85	8.74%	13.03%	13.03%
Duke Energy Corporation	14.57%	4.29%	10.28%	0.90	9.25%	13.54%	13.54%
Edison International	14.57%	4.29%	10.28%	1.00	10.28%	14.57%	14.57%
Entergy Corporation	14.57%	4.29%	10.28%	1.00	10.28%	14.57%	14.57%
Evergy, Inc.	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
Eversource Energy	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
IDACORP, Inc.	14.57%	4.29%	10.28%	0.85	8.74%	13.03%	13.03%
NorthWestern Corporation	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
OGE Energy Corp.	14.57%	4.29%	10.28%	1.05	10.79%	15.08%	15.08%
Pinnacle West Capital Corp.	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
Portland General Electric Co.	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
Southern Co.	14.57%	4.29%	10.28%	0.95	9.77%	14.06%	14.06%
Xcel Energy Inc.	14.57%	4.29%	10.28%	0.85	8.74%	13.03%	13.03%
					Mean	13.88%	13.88%
					Median	14.06%	14.06%

A: MFG-18, Sch 6
B: MFG-18, Sch 1
C: A - B
D: MFG-18, Sch 2

E: C * D
F: B + E
G: Low-end test < Column F < High-end test

Low-End Test:	Moody's 10-Year Baa Corporate Bond Index, MFG-18, Schedule 3	5.73%
	CAPM Risk Premium, Column C	10.28%
	20 percent of CAPM risk premium	2.06%
	Moody's 10-Year Baa Corporate Bond Index + 20 percent of CAPM risk premium	7.79%
High-End Test:	Proxy Group median, Column F	14.06%
	200 percent of Proxy Group median	28.11%

ROE and ROR Analysis for Otter Tail Power
CAPM ROE Analysis
Low-End Tests

Docket No. PU-23-342
Exhibit MFG-18
Schedule 8

Kroll Low-End Test:	Moody's 10-Year Baa Corporate Bond Index, S&P	5.73%
	CAPM Risk Premium, Value Line, MFG-18, Schedule 5	5.00%
	20 percent of CAPM risk premium	1.00%
	Moody's 10-Year Baa Public Corporate Bond Index + 20 percent of CAPM risk premium	6.73%
<hr/>		
Value Line Low-End Test:	Moody's 10-Year Baa Corporate Bond Index, S&P	5.73%
	CAPM Risk Premium, Value Line, MFG-18, Schedule 7	10.28%
	20 percent of CAPM risk premium	2.06%
	Moody's 10-Year Baa Public Corporate Bond Index + 20 percent of CAPM risk premium	7.79%

Mean of Kroll and Value Line Low-End Tests 7.26%

ROE and ROR Analysis for Otter Tail Power
Summary of Authorized ROEs in Electric Rate Cases
January 1, 2021-August 21, 2024

Docket No. PU-23-342
Exhibit MFG-19

<https://www.capitaliq.spglobal.com/web/client?auth=inherit#industry/pastRateCases?Type=1>

S&P Capital IQ PRO

Rate Case History

List: None

Company List: All

States: All

Years: 2021, 2022, 2023, 2024

2021

State	Company	Docket	Rate Case Service		Date	Decision Type	Return on Equity (%)	Common Equity to	
			Type	Case Type				Total Capital (%)	
New Mexico	Southwestern Public Svc Co.	C-20-00238-UT	Electric	Vertically Integrated	1/4/2021	Settled	9.35	54.72	
Florida	Florida Power & Light Co.	D-20210015-EI	Electric	Vertically Integrated	1/11/2021	Settled	10.60	NA	
Florida	Duke Energy Florida LLC	D-20210016-EI	Electric	Vertically Integrated	1/14/2021	Settled	9.85	44.84	
Maine	Versant Power	D-2020-00316	Electric	Distribution	1/19/2021	Fully Litigated	9.35	49.00	
Idaho	Avista Corp.	C-AVU-E-21-01	Electric	Vertically Integrated	1/29/2021	Settled	9.40	50.00	
New York	Orange & Rockland Utilts Inc.	C-21-E-0074	Electric	Distribution	1/29/2021	Settled	9.20	48.00	
Florida	Tampa Electric Company	D-20210034-EI	Electric	Vertically Integrated	2/1/2021	Settled	9.95	45.07	
Pennsylvania	UGI Utilities Inc.	D-R-2021-3023618	Electric	Distribution	2/8/2021	Settled	NA	NA	
Texas	Southwestern Public Svc Co.	D-51802	Electric	Vertically Integrated	2/8/2021	Settled	NA	NA	
Michigan	Consumers Energy Co.	C-U-20963	Electric	Vertically Integrated	3/1/2021	Fully Litigated	9.90	41.84	
Wisconsin	Wisconsin Electric Power Co.	D-5-AF-107 (WEP-Elec)	Electric	Vertically Integrated	3/30/2021	NA	NA	NA	
Wisconsin	Wisconsin Public Service Corp.	D-5-AF-107 (Elec)	Electric	Vertically Integrated	3/30/2021	NA	NA	NA	
Missouri	Union Electric Co.	C-ER-2021-0240	Electric	Vertically Integrated	3/31/2021	Settled	NA	NA	
Pennsylvania	PECO Energy Co	D-R-2021-3024601	Electric	Distribution	3/31/2021	Settled	NA	NA	
Virginia	Virginia Electric & Power Co.	C-PUR-2021-00058	Electric	Vertically Integrated	3/31/2021	Settled	9.35	51.92	
New Hampshire	Unitil Energy Systems Inc.	D-DE-21-030	Electric	Distribution	4/2/2021	Settled	9.20	52.00	
Pennsylvania	Duquesne Light Co.	D-R-2021-3024750	Electric	Distribution	4/16/2021	Settled	NA	NA	
Oklahoma	Public Service Co. of OK	Ca-PUD202100055	Electric	Vertically Integrated	4/30/2021	Settled	9.40	NA	
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-124 (Elec)	Electric	Vertically Integrated	5/3/2021	Settled	9.80	55.00	
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-123 (Elec)	Electric	Vertically Integrated	5/5/2021	Settled	10.00	52.50	
New Jersey	Rockland Electric Company	D-ER21050823	Electric	Distribution	5/21/2021	Settled	9.60	48.51	
Idaho	PacifiCorp	C-PAC-E-21-07	Electric	Vertically Integrated	5/27/2021	Settled	NA	NA	
California	Liberty Utilities (CalPeco Ele	A-21-05-017	Electric	Vertically Integrated	5/28/2021	Fully Litigated	10.00	52.50	
Kansas	The Empire District Electric C	D-21-EPDE-444-RTS	Electric	Vertically Integrated	5/28/2021	Settled	NA	NA	
Missouri	The Empire District Electric C	C-ER-2021-0312	Electric	Vertically Integrated	5/28/2021	Settled	NA	NA	
Texas	El Paso Electric Co.	D-52195	Electric	Vertically Integrated	6/1/2021	Settled	9.35	51.00	
Vermont	Green Mountain Power Corp.	21-1963-TF	Electric	Vertically Integrated	6/1/2021	Fully Litigated	8.57	50.42	
Massachusetts	Massachusetts Electric Co.	DPU 21-74	Electric	Distribution	6/15/2021	Fully Litigated	NA	NA	
California	Pacific Gas and Electric Co.	A-21-06-021 (Elec)	Electric	Vertically Integrated	6/30/2021	Fully Litigated	NA	NA	
Indiana	Indiana Michigan Power Co.	Ca-45576	Electric	Vertically Integrated	7/1/2021	Settled	9.70	40.70	
Colorado	Public Service Co. of CO	D-21AL-0317E	Electric	Vertically Integrated	7/2/2021	Settled	9.30	55.69	
Wisconsin	Northern States Power Co.	D-4220-UR-125 (Elec)	Electric	Vertically Integrated	7/2/2021	Settled	10.00	52.50	
Arkansas*	Entergy Arkansas LLC	D-16-036-FR (2021 review)	Electric	Vertically Integrated	7/7/2021	Settled	9.65	37.75	
Oregon	Portland General Electric Co.	D-UE-394	Electric	Vertically Integrated	7/9/2021	Settled	9.50	50.00	
Arkansas*	Southwestern Electric Power Co	D-21-070-U	Electric	Vertically Integrated	7/23/2021	Fully Litigated	9.50	44.54	

California	Pacific Gas and Electric Co.	A-21-08-015	Electric	Vertically Integrated	8/23/2021	Fully Litigated	10.25	52.00
California	San Diego Gas & Electric Co.	A-21-08-014 (Elec)	Electric	Vertically Integrated	8/23/2021	Fully Litigated	10.20	52.00
California	Southern California Edison Co.	A-21-08-013	Electric	Vertically Integrated	8/23/2021	Fully Litigated	10.30	52.00
Virginia	Kentucky Utilities Co.	C-PUR-2021-00171	Electric	Vertically Integrated	8/31/2021	Settled	NA	NA
Maryland	Delmarva Power & Light Co.	C-9670	Electric	Distribution	9/1/2021	Settled	NA	NA
Massachusetts	NSTAR Electric Co.	DPU 21-106	Electric	Distribution	9/15/2021	Fully Litigated	NA	NA
Arkansas*	Oklahoma Gas and Electric Co.	D-18-046-FR (2021 update)	Electric	Vertically Integrated	10/1/2021	Settled	NA	37.95
Ohio	Duke Energy Ohio Inc.	C-21-0887-EL-AIR	Electric	Distribution	10/1/2021	Settled	9.50	50.50
Minnesota	Northern States Power Co.	D-E-002/GR-21-630	Electric	Vertically Integrated	10/25/2021	Fully Litigated	9.25	52.50
Minnesota	Minnesota Power Entrprs Inc.	D-E-015/GR-21-335	Electric	Vertically Integrated	11/1/2021	Fully Litigated	9.65	52.50
Tennessee	Kingsport Power Company	D-21-00107	Electric	Vertically Integrated	11/17/2021	Settled	9.50	48.90
Oklahoma	Oklahoma Gas and Electric Co.	Ca-PUD202100164	Electric	Vertically Integrated	12/30/2021	Settled	9.50	53.37
Mean							9.63	50.37
Median							9.50	51.92
Range							8.57-10.60	41.84-55.69
							n = 31	n = 27

*-Arkansas capital structures include extra elements. The cases are not included in the mean, median or range calculations.

2022								
Rate Case Service								
State	Company	Docket	Type	Case Type	Date	Decision Type	Return on Equity (%)	Common Equity to Total Capital (%)
Missouri	Eversource Missouri West	C-ER-2022-0130	Electric	Vertically Integrated	1/7/2022	Settled	NA	NA
Massachusetts	NSTAR Electric Co.	DPU 22-22	Electric	Distribution	1/14/2022	Fully Litigated	9.80	53.21
Michigan	DTE Electric Co.	C-U-20836	Electric	Vertically Integrated	1/18/2022	Fully Litigated	9.90	39.62
Vermont	Green Mountain Power Corp.	C-22-0175-TF	Electric	Vertically Integrated	1/18/2022	Fully Litigated	8.57	49.98
Washington	Avista Corp.	D-UE-220053	Electric	Vertically Integrated	1/21/2022	Settled	NA	NA
New York	Consolidated Edison Company	C-22-E-0064	Electric	Distribution	1/28/2022	Settled	9.25	48.00
Washington	Puget Sound Energy Inc.	D-UE-220066	Electric	Vertically Integrated	1/31/2022	Settled	9.40	49.00
Oklahoma	The Empire District Electric Co.	Ca-PUD202100163	Electric	Vertically Integrated	2/28/2022	Settled	9.30	NA
Oregon	PacificCorp	D-UE-399	Electric	Vertically Integrated	3/1/2022	Settled	9.50	50.00
California	Pacific Gas and Electric Co.	A-22-04-008	Electric	Vertically Integrated	4/20/2022	Fully Litigated	10.00	52.00
California	San Diego Gas & Electric Co.	A-22-04-012	Electric	Vertically Integrated	4/20/2022	Fully Litigated	9.95	52.00
California	Southern California Edison Co.	A-22-04-009	Electric	Vertically Integrated	4/20/2022	Fully Litigated	10.05	52.00
Michigan	Consumers Energy Co.	C-U-21224	Electric	Vertically Integrated	4/25/2022	Settled	9.90	NA
Wisconsin	Wisconsin Electric Power Co.	D-5-UR-110 (WEP-Elec)	Electric	Vertically Integrated	4/28/2022	Fully Litigated	9.80	58.22
Wisconsin	Wisconsin Public Service Corp.	D-6690-UR-127 (Elec)	Electric	Vertically Integrated	4/28/2022	Fully Litigated	9.80	53.40
Texas	Oncor Electric Delivery Co.	D-53601	Electric	Distribution	5/13/2022	Fully Litigated	9.70	42.50
North Dakota	MDU Resources Group	C-PU-22-194	Electric	Vertically Integrated	5/16/2022	Settled	9.75	50.81
Maryland	Delmarva Power & Light Co.	C-9681	Electric	Distribution	5/19/2022	Settled	9.60	50.50
New York	NY State Electric & Gas Corp.	C-22-E-0317	Electric	Distribution	5/26/2022	Settled	9.20	48.00
New York	Rochester Gas & Electric Corp.	C-22-E-0319	Electric	Distribution	5/26/2022	Settled	9.20	48.00
Wyoming	Cheyenne Light Fuel Power Co.	D-20003-214-ER-22	Electric	Vertically Integrated	6/1/2022	Settled	9.75	52.00
Nevada	Sierra Pacific Power Co.	D-22-06014	Electric	Vertically Integrated	6/6/2022	Fully Litigated	9.56	52.40
Arizona	Tucson Electric Power Co.	D-E-01933A-22-0107	Electric	Vertically Integrated	6/17/2022	Fully Litigated	9.55	54.32
Massachusetts	Massachusetts Electric Co.	DPU 22-73	Electric	Distribution	6/17/2022	Fully Litigated	NA	NA
Georgia	Georgia Power Co.	D-44280	Electric	Vertically Integrated	6/24/2022	Settled	10.50	56.00
South Dakota	Northern States Power Co.	D-EL22-017	Electric	Vertically Integrated	6/30/2022	Settled	NA	NA
Texas	Entergy Texas Inc.	D-53719	Electric	Vertically Integrated	7/1/2022	Settled	9.57	51.21
Arkansas*	Entergy Arkansas LLC	D-16-036-FR (2022 review)	Electric	Vertically Integrated	7/7/2022	Settled	NA	37.77
Alaska	Alaska Electric Light Power	D-U-22-078	Electric	Vertically Integrated	7/18/2022	Fully Litigated	11.45	60.70
Missouri	Union Electric Co.	C-ER-2022-0337	Electric	Vertically Integrated	8/1/2022	Settled	NA	NA
Montana	NorthWestern Energy Group	D-2022-7-78 (elec)	Electric	Vertically Integrated	8/8/2022	Settled	9.65	48.02
Maine	Central Maine Power Co.	D-2022-00152	Electric	Distribution	8/11/2022	Settled	9.35	50.00
Florida	Duke Energy Florida LLC	D-20220143-EI	Electric	Vertically Integrated	8/12/2022	Settled	10.10	NA
Florida***	Florida Power & Light Co.	20210015 - ROE trigger	Electric	Vertically Integrated	8/23/2022	Settled	10.80	NA
South Carolina	Duke Energy Progress LLC	D-2022-254-E	Electric	Vertically Integrated	9/1/2022	Settled	9.60	52.43
Michigan	Upper Peninsula Power Co.	C-U-21286	Electric	Vertically Integrated	9/8/2022	Settled	9.90	NA

Connecticut	The United Illuminating Co.	D-22-08-08	Electric	Distribution	9/9/2022	Fully Litigated	8.63	50.00
Indiana	Northern IN Public Svc Co. LLC	Ca-45772	Electric	Vertically Integrated	9/19/2022	Settled	9.80	51.63
Arkansas*	Oklahoma Gas and Electric Co.	D-18-046-FR (2022 update)	Electric	Vertically Integrated	10/3/2022	Settled	NA	38.57
Maine	Versant Power	D-2022-00255	Electric	Distribution	10/3/2022	Settled	9.35	49.00
North Carolina	Duke Energy Progress LLC	D-E-2 Sub 1300	Electric	Vertically Integrated	10/6/2022	Fully Litigated	9.80	53.00
Montana	MDU Resources Group	D-2022-11-099	Electric	Vertically Integrated	11/2/2022	Settled	9.65	50.30
New Mexico	Southwestern Public Svc Co.	C-22-00286-UT	Electric	Vertically Integrated	11/18/2022	Settled	9.50	54.70
Oklahoma	Public Service Co. of OK	Ca-PUD2022-000093	Electric	Vertically Integrated	11/22/2022	Settled	9.30	52.00
Colorado	Public Service Co. of CO	D-22AL-0530E	Electric	Vertically Integrated	11/30/2022	Settled	9.30	55.69
Kentucky	Duke Energy Kentucky Inc.	C-2022-00372	Electric	Vertically Integrated	12/1/2022	Fully Litigated	9.75	52.15
Mean							9.60	50.97
Median							9.60	51.63
Range							8.57-10.50	39.62-55.69
							n = 36	n = 33

*-Arkansas capital structures include extra elements. The cases are not included in the mean, median or range calculations.

**-Alaska Electric Light Power operates in an unusual environment. It is not included in the mean, median or range calculations.

***-Florida Power and Light Co.'s ROE includes an adjustment that is not determined in a base rate case.

The cases are not included in the mean, median or range calculations.

2023

Rate Case Service				Common Equity to				
State	Company	Docket	Type	Case Type	Date	Decision Type	Return on Equity (%)	Total Capital (%)
North Carolina	Duke Energy Carolinas LLC	D-E-7 Sub 1276	Electric	Vertically Integrated	1/19/2023	Fully Litigated	10.10	53.00
Pennsylvania	UGI Utilities Inc.	D-R-2022-3037368	Electric	Distribution	1/27/2023	Settled	NA	NA
Idaho	Avista Corp.	C-AVU-E-23-01	Electric	Vertically Integrated	2/1/2023	Settled	9.40	50.00
Texas	Electric Transmission Texas	D-54608	Electric	Transmission	2/1/2023	Settled	NA	NA
Michigan	DTE Electric Co.	C-U-21297	Electric	Vertically Integrated	2/7/2023	Fully Litigated	9.90	NA
California	PacifiCorp	A-22-05-006	Electric	Vertically Integrated	2/8/2023	Fully Litigated	10.00	52.25
Arkansas*	The Empire District Electric Co.	D-22-085-U	Electric	Vertically Integrated	2/13/2023	Settled	9.70	NA
New Jersey	Atlantic City Electric Co.	D-ER23020091	Electric	Distribution	2/15/2023	Settled	9.60	50.20
Oregon	Portland General Electric Co.	D-UE-416	Electric	Vertically Integrated	2/15/2023	Settled	9.50	50.00
Maryland	Baltimore Gas and Electric Co.	C-9692 (EL)	Electric	Distribution	2/17/2023	Fully Litigated	9.50	52.00
Wyoming	PacifiCorp	D-20000-633-ER-23	Electric	Vertically Integrated	3/1/2023	Fully Litigated	9.35	48.99
Maryland	The Potomac Edison Co.	C-9695	Electric	Distribution	3/22/2023	Fully Litigated	9.50	53.00
Virginia	Appalachian Power Co.	C-PUR-2023-00002	Electric	Vertically Integrated	3/31/2023	Settled	NA	NA
Kansas	Evergy Kansas Central Inc.	D-23-EKCE-775-RTS (EKC/E	Electric	Vertically Integrated	4/25/2023	Settled	NA	NA
Kansas	Evergy Metro Inc	D-23-EKCE-775-RTS (EM)	Electric	Vertically Integrated	4/25/2023	Settled	NA	NA
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-125 (Elec)	Electric	Vertically Integrated	4/28/2023	Fully Litigated	9.70	56.06
Wisconsin	Northern States Power Co.	D-4220-UR-126 (Elec)	Electric	Vertically Integrated	4/28/2023	Fully Litigated	9.80	52.50
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-124 (Elec)	Electric	Vertically Integrated	4/28/2023	Fully Litigated	9.80	53.70
Idaho	Idaho Power Co.	C-IPC-E-23-11	Electric	Vertically Integrated	6/1/2023	Settled	9.60	NA
Vermont	Green Mountain Power Corp.	C-23-1852-TF	Electric	Vertically Integrated	6/1/2023	Fully Litigated	9.58	49.88
Nevada	Nevada Power Co.	D-23-06007	Electric	Vertically Integrated	6/5/2023	Fully Litigated	9.52	52.72
Massachusetts	Massachusetts Electric Co.	DPU 23-55	Electric	Distribution	6/15/2023	Fully Litigated	NA	NA
Arkansas*	Entergy Arkansas LLC	D-16-036-FR (2023 review)	Electric	Vertically Integrated	7/7/2023	Settled	NA	38.65
Massachusetts	NSTAR Electric Co.	DPU 23-92	Electric	Distribution	9/15/2023	Fully Litigated	NA	NA
Kentucky	Duke Energy Kentucky, Inc.	C-2022-00372	Electric	Vertically Integrated	10/12/2023	Fully Litigated	9.75	52.15
New York	New York State Electric & Gas Corp	C-22-E-0317	Electric	Distribution	10/12/2023	Settled	9.20	48.00
New York	Rochester Gas and Electric Corp.	C-22-E-0319	Electric	Distribution	10/12/2023	Settled	9.20	48.00
Virginia	Virginia Electric and Power Co.	C-PUR-2023-00022 (Rider CCR	Electric	Limited-Issue Rider	10/16/2023	Fully Litigated	9.35	52.29
Maryland	The Potomac Edison Company	C-9695	Electric	Distribution	10/18/2023	Fully Litigated	9.50	53.00
Indiana	AES Indiana	Ca-45264-TDSIC-7	Electric	Limited-Issue Rider	10/18/2023	Fully Litigated	NA	NA
New Mexico	Southwestern Public Service Co.	C-22-00286-UT	Electric	Vertically Integrated	10/19/2023	Settled	9.50	54.70
Montana	NorthWestern Energy Group, Inc.	D-2022-7-78 (elec)	Electric	Vertically Integrated	10/25/2023	Settled	9.65	48.02
Indiana	Duke Energy Indiana, LLC	Ca-44720-TDSIC-12	Electric	Limited-Issue Rider	10/31/2023	Fully Litigated	NA	NA
Oklahoma	Public Service Company of Oklaho	Ca-PUD2022-000093	Electric	Vertically Integrated	11/3/2023	Settled	9.30	52.00
Wisconsin	Madison Gas and Electric Compan	D-3270-UR-125 (Elec)	Electric	Vertically Integrated	11/3/2023	Fully Litigated	9.70	56.06

Wisconsin	Northern States Power Company	D-4220-UR-126 (Elec)	Electric	Vertically Integrated	11/9/2023	Fully Litigated	9.80	52.50
Wisconsin	Wisconsin Power and Light Co.	D-6680-UR-124 (Elec)	Electric	Vertically Integrated	11/9/2023	Fully Litigated	9.80	53.70
California	Pacific Gas and Electric Company	A-21-06-021 (Elec)	Electric	Vertically Integrated	11/16/2023	Fully Litigated	NA	NA
California	Pacific Gas and Electric Company	A-21-06-021 (Track 2)	Electric	Limited-Issue Rider	11/16/2023	Settled	NA	NA
New Jersey	Atlantic City Electric Company	D-ER23020091	Electric	Distribution	11/17/2023	Settled	9.60	50.20
Kansas	Evergy Kansas Central, Inc.	D-23-EKCE-775-RTS (EKC/EKS)	Electric	Vertically Integrated	11/21/2023	Settled	NA	NA
Kansas	Evergy Metro, Inc.	D-23-EKCE-775-RTS (EM)	Electric	Vertically Integrated	11/21/2023	Settled	NA	NA
Wyoming	PacifiCorp	D-20000-633-ER-23	Electric	Vertically Integrated	11/28/2023	Fully Litigated	9.35	48.99
Indiana	Southern Indiana Gas and Electric	Ca-44910-TDSIC-13	Electric	Limited-Issue Rider	11/29/2023	Fully Litigated	NA	NA
California	Southern California Edison Co.	A-19-08-013 (Track 4)	Electric	Limited-Issue Rider	11/30/2023	Settled	NA	NA
Virginia	Appalachian Power Company	C-PUR-2023-00002	Electric	Vertically Integrated	11/30/2023	Settled	NA	NA
Michigan	DTE Electric Company	C-U-21297	Electric	Vertically Integrated	12/1/2023	Fully Litigated	9.90	NA
Arkansas*	Entergy Arkansas, LLC	D-16-036-FR (2023 review)	Electric	Vertically Integrated	12/4/2023	Settled	NA	38.65
Arkansas*	The Empire District Electric Co.	D-22-085-U	Electric	Vertically Integrated	12/7/2023	Settled	9.70	NA
California	PacifiCorp	A-22-05-006	Electric	Vertically Integrated	12/14/2023	Fully Litigated	10.00	52.25
Maryland	Baltimore Gas and Electric Compa	C-9692 (EL)	Electric	Distribution	12/14/2023	Fully Litigated	9.50	52.00
Illinois	Commonwealth Edison Company	D-23-0055	Electric	Distribution	12/14/2023	Fully Litigated	8.91	50.00
Illinois	Ameren Illinois Company	D-23-0082	Electric	Distribution	12/14/2023	Fully Litigated	8.72	50.00
North Carolina	Duke Energy Carolinas, LLC	D-E-7 Sub 1276	Electric	Vertically Integrated	12/15/2023	Fully Litigated	10.10	53.00
Oregon	Portland General Electric Compan	D-UE-416	Electric	Vertically Integrated	12/18/2023	Settled	9.50	50.00
California**	Pacific Gas and Electric Company	Advice 4813-G/7046-E	Electric	Vertically Integrated	12/22/2023	Fully Litigated	10.70	52.00
California**	San Diego Gas & Electric Company	Advice Letter 4300-E / 3239-G	Electric	Vertically Integrated	12/22/2023	Fully Litigated	10.65	52.00
California**	Southern California Edison Co.	Advice Letter 5120-E (U 338-E	Electric	Vertically Integrated	12/22/2023	Fully Litigated	10.75	52.00
Nevada	Nevada Power Company	D-23-06007	Electric	Vertically Integrated	12/26/2023	Fully Litigated	9.52	52.72
Massachusetts	NSTAR Electric Company	DPU 23-92	Electric	Distribution	12/26/2023	Fully Litigated	NA	NA
Idaho	Idaho Power Company	C-IPC-E-23-11	Electric	Vertically Integrated	12/28/2023	Settled	9.60	NA
							Mean	9.58
							Median	9.58
							Range	8.72-10.10
							n = 38	n = 33

*-Arkansas capital structures include extra elements. The cases are not included in the mean, median or range calculations.

**-.The ROEs in these California dockets reflect adjustments that are not made a base rate case. The cases are not included in the mean, median or range calculations.

2024								
State	Company	Docket	Rate Case Service	Case Type	Date	Decision Type	Return on Equity (%)	Common Equity to
South Dakota	NorthWestern Energy Group	D-EL23-016	Electric	Vertically Integrated	1/9/2024	Settled	NA	NA
West Virginia	Appalachian Power Co.	C-23-0377-E-ENEC	Electric	Limited-Issue Rider	1/9/2024	Fully Litigated	NA	NA
Kentucky	Kentucky Power Co.	C-2023-00159	Electric	Vertically Integrated	1/19/2024	Settled	9.75	41.25
Arizona	UNS Electric Inc.	D-E-04204A-22-0251	Electric	Vertically Integrated	1/30/2024	Fully Litigated	9.75	53.72
New Jersey	Jersey Cntrl Power & Light Co.	D-ER23030144	Electric	Distribution	2/14/2024	Settled	9.60	51.90
Virginia	Virginia Electric & Power Co.	C-PUR-2023-00101	Electric	Vertically Integrated	2/28/2024	Settled	9.70	NA
Michigan	Consumers Energy Co.	C-U-21389	Electric	Vertically Integrated	3/1/2024	Fully Litigated	9.90	41.13
Arizona	Arizona Public Service Co.	D-E-01345A-22-0144	Electric	Vertically Integrated	3/5/2024	Fully Litigated	9.55	51.93
Arkansas*	Oklahoma Gas and Electric Co.	D-18-046-FR (2023 update)	Electric	Vertically Integrated	3/7/2024	Settled	NA	38.39
Washington	PacifiCorp	D-UE-230172	Electric	Vertically Integrated	3/19/2024	Settled	NA	NA
West Virginia	Monongahela Power Co.	C-23-0460-E-42T	Electric	Vertically Integrated	3/26/2024	Settled	9.80	NA
Texas	Southwestern Public Svc Co.	D-54634	Electric	Vertically Integrated	4/11/2024	Settled	NA	NA
Indiana	AES Indiana	Ca-45911	Electric	Vertically Integrated	4/17/2024	Settled	9.90	44.36
Delaware	Delmarva Power & Light Co.	D-22-0897	Electric	Distribution	4/18/2024	Settled	9.60	50.50

Indiana	Indiana Michigan Power Co.	Ca-45933	Electric	Vertically Integrated	5/8/2024	Settled	9.85	NA
Maryland	Potomac Electric Power Co.	C-9702	Electric	Distribution	6/10/2024	Fully Litigated	9.50	50.50
Louisiana	Cleco Power LLC	D-U-36923	Electric	Vertically Integrated	6/19/2024	Settled	NA	NA
South Carolina	Duke Energy Carolinas LLC	D-2023-388-E	Electric	Vertically Integrated	6/20/2024	Settled	9.94	51.21
Massachusetts	Fitchburg Gas & Electric Light	DPU 23-80	Electric	Distribution	6/28/2024	Fully Litigated	9.40	52.26
Michigan	Indiana Michigan Power Co.	C-U-21461	Electric	Vertically Integrated	7/2/2024	Fully Litigated	9.86	40.20
New York	Central Hudson Gas & Electric	C-23-E-0418	Electric	Distribution	7/18/2024	Fully Litigated	9.50	48.00
South Carolina	Dominion Energy South Carolina	D-2024-34-E	Electric	Vertically Integrated	8/8/2024	Settled	9.94	52.51
South Dakota	MDU Resources Group	D-EL23-020	Electric	Vertically Integrated	8/13/2024	Settled	NA	NA
Florida	Duke Energy Florida LLC	D-20240025-EI	Electric	Vertically Integrated	8/21/2024	Settled	10.30	45.57

*-Arkansas capital structures include extra elements. The cases are not included in the mean, median or range calculations.

Mean	9.76	48.22
Median	9.75	50.50
Range	9.40-10.30	41.13-53.72
	n = 17	n = 14

Total 2021-2024

Mean	9.62	50.06
Median	9.60	51.21

ROE and ROR Analysis for Otter Tail Power
Summary of ROE Analyses and Recommended ROE

Docket No. PU-23-342
Exhibit MFG-20
Schedule 1 Corrected

Analysis

Constant-Growth DCF	Mean	10.37%	Exhibit ____ (MFG-17) Schedule 1		
	Median	10.31%	Corrected		
Multistage DCF	Mean	9.70%	Exhibit ____ (MFG-17) Schedule 6		
	Median	9.62%	Corrected		
CAPM Kroll	Mean	8.96%	Exhibit ____ (MFG-18), Schedule 5		
	Median	9.04%			
CAPM Value Line	Mean	13.88%	Exhibit ____ (MFG-18), Schedule 7		
	Median	14.06%			
<hr/>					
Average of the DCF models and Kroll CAPM		Mean	9.68%	Excluded	
		Median	9.66%		
Recently awarded ROEs		2021	2022	2023	2024
	Mean	9.63	9.60	9.58	9.76
	Median	9.50	9.60	9.58	9.75
	Range	8.57-10.60	8.57-10.50	8.72-10.10	9.40-10.30
	Cases	n = 31	n = 36	n = 38	n = 17
Exhibit ____ (MFG-19)					

Recommended ROE for Otter Tail Power 9.68%

Corrected ROE

ROE and ROR Analysis for Otter Tail Power
Summary of ROE Analyses and Recommended ROE

Docket No. PU-23-342
Exhibit MFG-20
Schedule 1

Analysis

Constant-Growth DCF	Mean	10.16%	Exhibit ____ (MFG-17) Schedule 1
	Median	9.96%	
Multistage DCF	Mean	8.88%	Exhibit ____ (MFG-17) Schedule 5
	Median	8.82%	
CAPM Kroll	Mean	8.96%	Exhibit ____ (MFG-18), Schedule 5
	Median	9.04%	
CAPM Value Line	Mean	13.88%	Exhibit ____ (MFG-18), Schedule 7
	Median	14.06%	

Average of all DCF models and Kroll CAPM	Mean	9.33%
	Median	9.27%
Average w/o Multistage DCF and Value Line CAPM	Mean	9.56%
	Median	9.50%

	2021	2022	2023	2024	
Recently awarded ROEs	Mean	9.63	9.60	9.58	9.76
	Median	9.50	9.60	9.58	9.75
	Range	8.57-10.60	8.57-10.50	8.72-10.10	9.40-10.30
	Cases	n = 31	n = 36	n = 38	n = 17

Recommended ROE for Otter Tail Power 9.56%

ROE and ROR Analysis for OTP
Capital Structure Analysis

Docket No. PU-23-342
Exhibit MFG-20, Schedule 2
Page 1 of 3

S&P Global
Market Intelligence
S&P Market Intelligence website, downloaded August 16, 2024

Average Long-Term Debt for each quarter (\$000)								
Company Name	2024Q2	2024Q1	2023Q4	2023Q3	2023Q2	2023Q1	2022Q4	Average 2022Q3- 2024Q2
Alliant Energy Corporation	8,712,000	8,471,000	8,423,500	8,307,500	8,159,000	7,972,000	7,691,000	8,126,438
Ameren Corporation	15,723,500	15,144,000	14,475,000	14,078,500	14,254,500	13,933,000	13,631,000	14,315,063
American Electric Power Company, Inc.	39,816,950	38,729,300	37,771,050	37,262,850	37,035,300	35,905,150	34,610,950	36,873,875
Duke Energy Corporation	76,629,000	74,631,500	72,809,500	71,502,500	70,356,500	68,353,500	66,906,500	70,851,750
Edison International	33,919,000	32,540,000	31,031,000	30,495,500	30,357,000	29,164,500	27,047,500	30,095,625
Entergy Corporation	25,305,266	23,768,560	23,943,512	24,490,512	24,392,972	24,138,768	24,224,608	24,589,919
Eversource Energy	11,806,500	11,406,250	10,225,850	9,697,350	10,097,150	10,051,850	9,601,850	10,260,469
IDACORP, Inc.	25,728,623	24,671,344	23,260,874	22,307,708	21,556,171	20,594,031	20,239,523	22,310,929
NorthWestern Energy Group, Inc.	2,776,044	2,775,875	2,800,970	2,654,251	2,482,702	2,338,598	2,132,774	2,504,345
OGE Energy Corp.	2,672,493	2,730,800	2,620,473	2,558,117	2,456,984	2,415,870	2,450,880	2,547,527
Pinnacle West Capital Corporation	4,541,850	4,316,450	4,355,350	4,339,350	4,166,550	3,788,800	3,565,850	4,077,763
Portland General Electric Company	9,169,367	8,759,075	9,059,911	9,377,432	9,271,496	8,768,836	8,183,656	8,819,883
The Southern Company	4,637,000	4,424,000	4,143,500	3,927,500	3,778,000	3,738,000	3,640,000	3,983,813
Xcel Energy Inc.	60,922,500	59,585,000	57,920,000	56,906,500	54,962,000	52,739,000	51,932,000	55,901,375
Otter Tail Corp.	28,087,500	26,725,000	25,957,500	25,472,500	24,472,000	23,907,000	24,142,500	25,388,688

Average Short-Term Debt for each quarter (\$000)								
Company Name	2024Q2	2024Q1	2023Q4	2023Q3	2023Q2	2023Q1	2022Q4	Average 2022Q3- 2024Q2
Alliant Energy Corporation	999,500	1,214,500	1,098,000	880,000	884,000	988,000	1,049,500	1,025,000
Ameren Corporation	1,753,500	1,701,000	1,787,000	1,934,000	1,513,500	1,379,000	1,393,000	1,620,250
American Electric Power Company, Inc.	4,448,000	5,272,700	5,561,900	6,493,100	7,004,050	6,706,500	5,483,450	5,677,356
Duke Energy Corporation	6,219,500	6,852,500	7,232,000	7,626,000	7,562,500	7,535,000	7,432,000	7,176,250
Edison International	3,159,000	3,442,000	4,008,500	4,244,000	4,322,000	4,707,000	5,431,000	4,320,063
Entergy Corporation	3,270,000	3,702,632	3,094,925	2,916,297	3,041,047	3,165,855	3,088,859	3,114,800
Eversource Energy	2,045,200	2,045,650	2,790,050	3,135,150	2,530,350	2,202,700	2,309,500	2,456,925
IDACORP, Inc.	2,892,258	2,912,417	3,229,126	3,153,041	2,757,690	2,836,255	2,436,759	2,743,609
NorthWestern Energy Group, Inc.	49,800	49,800	24,900	0	62,500	62,500	39,680	45,795
OGE Energy Corp.	165,894	53,344	103,232	103,119	175,300	197,580	147,565	127,660
Pinnacle West Capital Corporation	637,900	667,150	455,300	414,750	709,050	999,950	999,900	762,069
Portland General Electric Company	1,688,142	1,644,993	1,158,481	739,747	669,208	560,058	559,841	958,145
The Southern Company	103,500	176,000	134,500	90,000	124,000	186,000	172,500	128,438
Xcel Energy Inc.	4,460,000	4,783,000	4,978,000	5,444,000	6,510,500	7,103,500	5,960,500	5,443,938
Otter Tail Corp.	1,564,500	1,405,000	1,424,500	1,553,500	2,014,500	2,194,500	1,603,500	1,596,563

ROE and ROR Analysis for OTP
Capital Structure Analysis

Docket No. PU-23-342
Exhibit MFG-20, Schedule 2
Page 2 of 3

Average Common Equity for each quarter (\$000)

Company Name	2024Q2	2024Q1	2023Q4	2023Q3	2023Q2	2023Q1	2022Q4	2022Q3	Average 2022Q3- 2024Q2
Alliant Energy Corporation	6,804,000	6,797,000	6,751,500	6,589,000	6,390,000	6,302,000	6,270,500	6,201,000	6,513,125
Ameren Corporation	11,491,000	11,396,000	11,196,000	10,870,000	10,652,000	10,557,500	10,354,500	10,040,500	10,819,688
American Electric Power Company, Inc.	25,969,250	25,525,000	25,278,200	24,605,550	23,819,800	23,815,800	24,085,800	24,167,100	24,658,313
Duke Energy Corporation	47,629,000	47,331,500	47,059,000	46,669,500	46,796,500	47,291,000	47,933,500	48,032,500	47,330,313
Edison International	13,648,500	13,673,000	13,760,000	13,753,500	13,742,500	13,656,500	13,529,000	13,606,000	13,671,125
Entergy Corporation	14,513,035	14,540,494	14,157,058	13,464,267	13,147,650	13,012,610	12,531,668	11,903,715	13,408,812
Eversource Energy	9,671,350	9,651,100	9,706,050	9,641,950	9,511,950	9,486,350	9,546,350	9,458,150	9,584,156
IDACORP, Inc.	14,681,151	14,358,740	14,929,917	15,620,020	15,651,735	15,611,265	15,376,166	15,168,194	15,174,648
NorthWestern Energy Group, Inc.	3,055,730	2,911,357	2,914,229	2,887,326	2,838,409	2,815,147	2,792,769	2,742,553	2,869,690
OGE Energy Corp.	2,810,138	2,799,166	2,762,864	2,713,569	2,689,862	2,679,092	2,601,256	2,500,925	2,694,609
Pinnacle West Capital Corporation	4,461,500	4,478,450	4,526,150	4,459,900	4,374,550	4,391,700	4,427,050	4,348,800	4,433,513
Portland General Electric Company	6,205,084	6,188,347	6,276,175	6,170,805	6,007,920	6,048,782	6,146,605	6,076,421	6,140,017
The Southern Company	3,471,500	3,389,000	3,307,000	3,247,500	3,156,000	2,945,500	2,769,500	2,749,000	3,129,375
Xcel Energy Inc.	32,184,500	31,682,000	31,255,500	30,869,500	30,600,000	30,468,000	30,823,500	29,985,000	30,983,500
	17,897,500	17,728,500	17,462,500	17,111,500	16,866,000	16,746,500	16,529,500	16,177,500	17,064,938
Otter Tail Corp.	1,531,558	1,470,235	1,422,968	1,365,684	1,296,108	1,240,547	1,200,670	1,150,283	1,334,757

ROE and ROR Analysis for OTP
Capital Structure Analysis

Docket No. PU-23-342
Exhibit MFG-20, Schedule 2
Page 3 of 3

Company Name	Average 2022Q3- 2024Q2	Long-Term Debt %	Short-Term Debt %	Common Equity %	Total %
Alliant Energy Corporation	15,664,563	51.88%	6.54%	41.58%	100.00%
Ameren Corporation	26,755,000	53.50%	6.06%	40.44%	100.00%
American Electric Power Company, Inc.	67,209,544	54.86%	8.45%	36.69%	100.00%
Duke Energy Corporation	125,358,313	56.52%	5.72%	37.76%	100.00%
Edison International	48,086,813	62.59%	8.98%	28.43%	100.00%
Entergy Corporation	40,880,376	59.58%	7.62%	32.80%	100.00%
Eversource Energy	22,301,550	46.01%	11.02%	42.98%	100.00%
IDACORP, Inc.	40,229,186	55.46%	6.82%	37.72%	100.00%
NorthWestern Energy Group, Inc.	5,419,830	46.21%	0.84%	52.95%	100.00%
OGE Energy Corp.	5,369,796	47.44%	2.38%	50.18%	100.00%
Pinnacle West Capital Corporation	9,273,344	43.97%	8.22%	47.81%	100.00%
Portland General Electric Company	15,918,045	55.41%	6.02%	38.57%	100.00%
The Southern Company	7,241,625	55.01%	1.77%	43.21%	100.00%
Xcel Energy Inc.	92,328,813	60.55%	5.90%	33.56%	100.00%
	44,050,188	57.64%	3.62%	38.74%	100.00%
Otter Tail Corporation	2,219,779	38.27%	1.60%	60.13%	100.00%
<hr/>					
All Comparison Group companies included	Average	53.77%	6.00%	40.23%	100.00%
	Median	55.01%	6.06%	38.74%	99.81%
<hr/>					
Companies with long-term debt ratios greater than 60 percent excluded	Average	52.58%	5.78%	41.65%	100.00%
	Median	54.18%	6.04%	41.01%	101.23%
<hr/>					
Otter Tail Power Request		43.52%	2.98%	53.50%	100.00%
Recommended for Otter Tail Power		45.02%	2.98%	52.00%	100.00%

**ROE and ROR Analysis for Otter Tail Power
Recommended ROE and ROR
Weighted Average Cost of Capital
Based on Inputs from MFG-20, Schedules 1-2**

**Docket No. PU-23-342
Exhibit MFG-20
Schedule 3 Corrected**

Rate of Return NDPSC Staff			
	Ratio	Cost	WACC
Long-Term Debt	45.02%	4.65%	2.09%
Short-Term Debt	2.98%	5.25%	0.16%
Common Equity	52.00%	9.68%	5.03%
Overall Rate of Return	100.00%		7.28%

Corrected ROE

Corrected ROR

The recommended common equity cost of 9.68 percent is taken from Exhibit MFG-20, Schedule 1 Corrected. The capital structure incorporates information from Exhibit MFG-20, Schedule 2. The costs of long-term debt and short-term debt are taken from the Direct Testimony of Todd R. Wahlund, page 2.

Requested Rate of Return Otter Tail Power			
	Ratio	Cost	WACC
Long-Term Debt	43.52%	4.65%	2.02%
Short-Term Debt	2.98%	5.25%	0.16%
Common Equity	53.50%	10.60%	5.67%
Overall Rate of Return	100.00%		7.85%

The recommended common equity cost of 10.60 percent is taken from the Direct Testimony of Ann E. Bulkley, Exhibit AEB-1, Page 3. The capital structure, costs of long-term debt and short-term debt are taken from the Direct Testimony of Todd R. Wahlund, page 2.

**ROE and ROR Analysis for Otter Tail Power
Recommended ROE and ROR
Weighted Average Cost of Capital
Based on Inputs from MFG-20, Schedules 1-2**

**Docket No. PU-23-342
Exhibit MFG-20
Schedule 3**

Rate of Return NDPSC Staff			
	Ratio	Cost	WACC
Long-Term Debt	45.02%	4.65%	2.09%
Short-Term Debt	2.98%	5.25%	0.16%
Common Equity	52.00%	9.56%	4.97%
Overall Rate of Return	100.00%		7.22%

The recommended common equity cost of 9.56 percent is taken from Exhibit MFG-20, Schedule 1. The capital structure incorporates information from Exhibit MFG-20, Schedule 2. The costs of long-term debt and short-term debt are taken from the Direct Testimony of Todd R. Wahlund, page 2.

Requested Rate of Return Otter Tail Power			
	Ratio	Cost	WACC
Long-Term Debt	43.52%	4.65%	2.02%
Short-Term Debt	2.98%	5.25%	0.16%
Common Equity	53.50%	10.60%	5.67%
Overall Rate of Return	100.00%		7.85%

The recommended common equity cost of 10.60 percent is taken from the Direct Testimony of Ann E. Bulkley, Exhibit AEB-1, Page 3. The capital structure, costs of long-term debt and short-term debt are taken from the Direct Testimony of Todd R. Wahlund, page 2.

OTTER TAIL POWER COMPANY

Case No: PU-23-342

ATTN: Jessica Fyhrie
Manager, Regulatory Proceedings
215 South Cascade Street
PO Box 496
Fergus Falls MN 56538-0496
jfyhrie@otpc.com

Requested From: North Dakota Public Service Commission
Requested By: Jessica Fyhrie, Manager Regulatory Proceedings - 218-739-8395
Date of Request: 10/09/2024
Response Due Date: 10/23/2024

If you feel your responses are trade secret or privileged, please indicate this on your response.

OTP Information Request No.: ND-OTP-400

Reference: Griffing Direct, p. 37-44, Exhibit MFG-1

For each of the regulatory projects identified in Exhibit MFG-1:

- a) Identify whether Dr. Griffing prepared a CAPM Analysis;
- b) For each project identified in subpart a) where Dr. Griffing prepared a CAPM analysis, identify the methodology or methodologies that Dr. Griffing relied on to estimate the market risk premium (e.g., published source (Kroll), S&P 500 market return estimated using the Constant Growth DCF model and projected EPS growth rates minus the risk-free rate, others)
- c) For each project identified in subpart b) where Dr. Griffing relied on the calculation of the S&P 500 market return using the Constant Growth DCF model please identify the data sources (I/B/E/S, Value Line, others) used for the estimate of the projected EPS growth rates.
- d) Please explain why Dr. Griffing utilized the Kroll 2024 market risk premium for one of the CAPM scenarios included in his October 4, 2024 testimony in this proceeding but the market risk premium estimated as the S&P 500 return calculated using the Constant Growth DCF model and projected I/B/E/S EPS estimates minus the risk-free rate for one of the CAPM scenarios included in his May 13, 2024 testimony in this proceeding.

RESPONSE:

For each of the regulatory projects identified in Exhibit MFG-1:

- a) Identify whether Dr. Griffing prepared a CAPM Analysis;

Dr. Griffing prepared two CAPM analyses.

Response by Marlon Griffing, Ph.D

Title Senior Consultant, PCMG and Associates_____

Department _____

Telephone 651-236-7970_____

Date of Response October 30, 2024_____

- b) For each project identified in subpart a) where Dr. Griffing prepared a CAPM analysis, identify the methodology or methodologies that Dr. Griffing relied on to estimate the market risk premium (e.g., published source (Kroll), S&P 500 market return estimated using the Constant Growth DCF model and projected EPS growth rates minus the risk-free rate, others)

The risk-free rate referred to below is taken from published U.S. Treasury yield rates. See Exhibit MFG-18, Schedule 1.

Dr. Griffing prepared a CAPM analysis where he relied on the published Kroll market risk premium as an input. See Exhibits MFG-18, Schedule 4 and MFG-18, Schedule 5.

Dr. Griffing prepared a CAPM analysis where he applied earnings per share growth rates and dividends for the Standard and Poor's 500 reported by Value Line to find a market return. See Exhibit MFG-18, Schedule 6. The risk-free rate was subtracted from this market return to calculate a market risk premium. See Exhibit MFG-18, Schedule 7 (was mislabeled as Schedule 4 when filed; corrected version is supplied).

- c) For each project identified in subpart b) where Dr. Griffing relied on the calculation of the S&P 500 market return using the Constant Growth DCF model please identify the data sources (I/B/E/S, Value Line, others) used for the estimate of the projected EPS growth rates.

See the response to part b.

- d) Please explain why Dr. Griffing utilized the Kroll 2024 market risk premium for one of the CAPM scenarios included in his October 4, 2024 testimony in this proceeding but the market risk premium estimated as the S&P 500 return calculated using the Constant Growth DCF model and projected I/B/E/S EPS estimates minus the risk-free rate for one of the CAPM scenarios included in his May 13, 2024 testimony in this proceeding.

PCMG and Associates owned a proprietary app that could find all the I/B/E/S projected earnings per share (EPS) estimates for the I/B/E/S S&P 500 companies from the Yahoo! Finance website, a publicly available source. The process took a matter of a few minutes. Dr. Griffing would take the I/B/E/S EPS results supplied by the app, combine them with divided yield information from Value Line, and find a market return for the I/B/E/S S&P 500 companies. He calculated a market risk premium by subtracting the risk-free rate from that market return.

Over the summer of 2024 Dr. Griffing found that the app for finding I/B/E/S S&P 500 companies EPS values no longer worked. The preparer of the app was unable to fix the app, meaning that instead of having a set of I/B/E/S EPS values produced in a matter of minutes, Dr. Griffing would have had to find S&P 500 EPS values one by one. Rather than carry out this extremely time-consuming task, Dr. Griffing turned to the publicly available Kroll market risk premium for a CAPM analysis in his October 4, 2024 Final Testimony.

Response by Marlon Griffing, Ph.D

Title Senior Consultant, PCMG and Associates_____

Department_____

Telephone 651-236-7970_____

Date of Response October 30, 2024_____

SUPPLEMENTAL RESPONSE:

- a) Identify whether Dr. Griffing prepared a CAPM Analysis;

It is Dr. Griffing's recollection that he prepared a CAPM analysis for every cost of capital docket listed in MFG-1.

- b) For each project identified in subpart a) where Dr. Griffing prepared a CAPM analysis, identify the methodology or methodologies that Dr. Griffing relied on to estimate the market risk premium (e.g., published source (Kroll), S&P 500 market return estimated using the Constant Growth DCF model and projected EPS growth rates minus the risk-free rate, others)

Dr. Griffing has used several sources to estimate the market risk premium in the cost of capital dockets in MFG-1. These sources include the *Stocks, Bonds, and Bills Yearbook* ("Ibbotson"), *Value Line Summary and Index*, Value Line S&P 500 estimated EPS growth rates and dividend yields, I/B/E/S S&P 500 estimated EPS growth rates, and Kroll market risk premium. There may be other sources that Dr. Griffing does not recall.

Where applicable, Dr. Griffing has used a long-run bond return from Ibbotson or a bond yield from published U.S. Treasury yield rates as the risk-free rate to subtract from the market return to find the market risk premium.

- d) Please explain why Dr. Griffing utilized the Kroll 2024 market risk premium for one of the CAPM scenarios included in his October 4, 2024 testimony in this proceeding but the market risk premium estimated as the S&P 500 return calculated using the Constant Growth DCF model and projected I/B/E/S EPS estimates minus the risk-free rate for one of the CAPM scenarios included in his May 13, 2024 testimony in this proceeding.

In addition to the Final Direct Testimony filed in this Otter Tail Power cost of capital docket, Dr. Griffing confirmed that he applied the Kroll market risk premium in CAPM analyses in Summit Arkansas Gas, MDU Gas North Dakota, NSP Gas North Dakota, and FirstEnergy Pennsylvania Electric cost of capital dockets.

Response by Marlon Griffing, Ph.D

Title Senior Consultant, PCMG and Associates _____

Department _____

Telephone 651-236-7970 _____

Date of Response October 30, 2024 _____