

**BEFORE THE  
PUBLIC UTILITIES COMMISSION  
OF THE STATE OF SOUTH DAKOTA**

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<b>IN RE:</b>	)	
	)	<b>Docket No. EL23-_____</b>
<b>NORTHWESTERN CORPORATION</b>	)	
<b>d/b/a NorthWestern Energy</b>	)	

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**DIRECT TESTIMONY OF**

**ADRIEN M. MCKENZIE**

**On Behalf of NorthWestern Energy**

**June 15, 2023**

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## GLOSSARY OF ACRONYMS

CAPM	Capital Asset Pricing Model
Commission	South Dakota Public Service Commission
CPI	Consumer Price Index
DCF	Discounted Cash Flow
DPS	dividends per share
ECAPM	Empirical Capital Asset Pricing Model
EPS	earnings per share
FERC	Federal Energy Regulatory Commission
FINCAP, Inc.	Financial Concepts and Applications, Inc.
FOMC	Federal Open Market Committee
GDP	Gross Domestic Product
IBES	Institutional Brokers' Estimate System (now Refinitiv)
MDPSC	Maryland Public Service Commission
Moody's	Moody's Investors Service
MW	Megawatts
NASDAQ	The Nasdaq Stock Market LLC
NorthWestern or Company	NorthWestern Corporation d/b/a NorthWestern Energy
PCE	Personal Consumption Expenditure Price Index
ROE	return on equity
RRA	S&P Global Market Intelligence, RRA Regulatory Focus
S&P	S&P Global Ratings
SPP	Southwest Power Pool, Inc.
Value Line	The Value Line Investment Survey
Zacks	Zacks Investment Research, Inc.

## I. INTRODUCTION

1 **Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A1. Adrien M. McKenzie, 3907 Red River, Austin, Texas, 78751.

3 **Q2. IN WHAT CAPACITY ARE YOU EMPLOYED?**

4 A2. I am President of FINCAP, Inc., a firm providing financial, economic, and policy  
5 consulting services to business and government.

6 **Q3. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND  
7 QUALIFICATIONS.**

8 A3. A description of my background and qualifications, including a resume containing the  
9 details of my experience, is attached as Exhibit AMM-1.

### A. Overview

10  
11 **Q4. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS CASE?**

12 A4. The purpose of my direct testimony is to present to the Commission my independent  
13 assessment of the just and reasonable ROE for the jurisdictional utility operations of  
14 NorthWestern. In addition, I also examine the reasonableness of NorthWestern's  
15 requested capital structure, considering both the specific risks faced by the Company  
16 and other industry guidelines.

17 **Q5. PLEASE SUMMARIZE THE INFORMATION AND MATERIALS YOU RELY  
18 ON TO SUPPORT THE OPINIONS AND CONCLUSIONS CONTAINED IN  
19 YOUR TESTIMONY.**

20 A5. To prepare my testimony, I use information from a variety of sources that would  
21 normally be relied upon by a person in my capacity. I am familiar with the organization,  
22 finances, and operations of NorthWestern from my involvement in prior proceedings  
23 before the Commission, the Montana Public Service Commission, and FERC. In  
24 connection with this filing, I consider and rely upon corporate disclosures, publicly  
25 available financial reports, prior regulatory filings, and other published information

1 relating to NorthWestern. I also review information relating generally to current capital  
2 market conditions and specifically to investor perceptions, requirements, and  
3 expectations for utilities. These sources, coupled with my experience in the fields of  
4 finance and utility regulation, have given me a working knowledge of the issues relevant  
5 to investors' required return for NorthWestern, and they form the basis of my analyses  
6 and conclusions.

7 **Q6. HOW IS YOUR TESTIMONY ORGANIZED?**

8 A6. First, I summarize my conclusions and recommendations, giving special attention to the  
9 importance of financial strength and the implications of regulatory mechanisms and  
10 other risk factors. I also comment on the reasonableness of the Company's proposed  
11 capital structure.

12 Next, I briefly review NorthWestern's operations and finances. I then discuss  
13 current conditions in the capital markets and their implications in evaluating a just and  
14 reasonable return for the Company. Next, I explain the development of the proxy group  
15 of electric utilities used as the basis for my quantitative analyses. With this as a  
16 background, I discuss well-accepted quantitative analyses to estimate the current cost  
17 of equity for the proxy group of utilities. These include the DCF model, the CAPM, the  
18 ECAPM, an equity risk premium approach based on allowed equity returns, and  
19 reference to expected earned rates of return for utilities, which are all methods that are  
20 commonly relied on in regulatory proceedings. In addition, I discuss the issue of stock  
21 flotation expenses and the implications of these legitimate costs on the estimation of a  
22 reasonable ROE for the Company.

23 Based on the results of my analyses , I evaluate a fair ROE for NorthWestern.  
24 My evaluation takes into account the specific risks for the Company's utility operations  
25 in South Dakota and NorthWestern's requirements for financial strength. Finally,  
26 consistent with the fact that utilities must compete for capital with firms outside their

1 own industry, I corroborate my utility quantitative analyses by applying the DCF model  
2 to a group of low risk non-utility firms.

### 3 **B. Summary and Conclusions**

#### 4 **Q7. WHAT IS YOUR RECOMMENDED ROE FOR NORTHWESTERN?**

5 A7. I apply the DCF, CAPM, ECAPM, risk premium, and expected earnings analyses to a  
6 proxy group of electric utilities, with the results being summarized on Exhibit AMM-2.  
7 As shown there, I recommend a cost of equity range for the Company's electric  
8 operations of 10.1% to 11.1%, or 10.2% to 11.2% after adjusting for the impact of  
9 common equity flotation costs. It is my conclusion that the 10.7% midpoint of this  
10 range represents a just and reasonable ROE that is adequate to compensate  
11 NorthWestern's investors, while maintaining the Company's financial integrity and  
12 ability to attract capital on reasonable terms.

## 13 **II. RETURN ON EQUITY FOR NORTHWESTERN**

#### 14 **Q8. WHAT IS THE PURPOSE OF THIS SECTION?**

15 A8. This section presents my conclusions regarding the fair ROE applicable to  
16 NorthWestern's jurisdictional electric utility operations. I also describe the relationship  
17 between ROE and preservation of a utility's financial integrity and the ability to attract  
18 capital. Finally, I discuss the reasonableness of the Company's capital structure request  
19 in this case.

### 20 **A. Importance of Financial Strength**

#### 21 **Q9. WHAT IS THE ROLE OF THE ROE IN SETTING A UTILITY'S RATES?**

22 A9. The ROE is the cost of attracting and retaining common equity investment in the utility's  
23 physical plant and assets. This investment is necessary to finance the asset base needed  
24 to provide utility service. Investors commit capital only if they expect to earn a return  
25 on their investment commensurate with returns available from alternative investments  
with comparable risks. Moreover, a just and reasonable ROE is integral in meeting

1 sound regulatory economics and the standards set forth by the U.S. Supreme Court. The  
2 *Bluefield* case set the standard against which just and reasonable rates are measured:

3 A public utility is entitled to such rates as will permit it to earn a return  
4 on the value of the property which it employs for the convenience of the  
5 public equal to that generally being made at the same time and in the  
6 same general part of the country on investments in other business  
7 undertakings which are attended by corresponding risks and  
8 uncertainties. . . . The return should be reasonable, sufficient to assure  
9 confidence in the financial soundness of the utility, and should be  
10 adequate, under efficient and economical management, to maintain and  
11 support its credit and enable it to raise money necessary for the proper  
12 discharge of its public duties.<sup>1</sup>

13 The *Hope* case expanded on the guidelines as to a reasonable ROE, reemphasizing its  
14 findings in *Bluefield* and establishing that the rate-setting process must produce an end-  
15 result that allows the utility a reasonable opportunity to cover its capital costs. The  
16 Court stated:

17 From the investor or company point of view it is important that there be  
18 enough revenue not only for operating expenses but also for the capital  
19 costs of the business. These include service on the debt and dividends  
20 on the stock. . . . By that standard, the return to the equity owner should  
21 be commensurate with returns on investments in other enterprises having  
22 corresponding risks. That return, moreover, should be sufficient to  
23 assure confidence in the financial integrity of the enterprise, so as to  
24 maintain credit and attract capital.<sup>2</sup>

25 In summary, the Supreme Court's findings in *Hope* and *Bluefield* established  
26 that a just and reasonable ROE must be sufficient to 1) fairly compensate the utility's  
27 investors, 2) enable the utility to offer a return adequate to attract new capital on  
28 reasonable terms, and 3) maintain the utility's financial integrity. These standards  
29 should allow the utility to fulfill its obligation to provide reliable service while meeting  
30 the needs of customers through necessary system replacement and expansion, but the

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<sup>1</sup> *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).

<sup>2</sup> *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

1 Supreme Court’s requirements can only be met if the utility has a reasonable opportunity  
2 to actually earn its allowed ROE.

3 While the *Hope* and *Bluefield* decisions did not establish a particular method to  
4 be followed in fixing rates (or in determining the allowed ROE),<sup>3</sup> these and subsequent  
5 cases enshrined the importance of an end result that meets the opportunity cost standard  
6 of finance. Under this doctrine, the required return is established by investors in the  
7 capital markets based on expected returns available from comparable risk investments.  
8 Coupled with modern financial theory, which has led to the development of formal risk-  
9 return models (e.g., DCF and CAPM), practical application of the *Bluefield* and *Hope*  
10 standards involves the independent, case-by-case consideration of capital market data  
11 in order to evaluate an ROE that will produce a balanced and fair end result for investors  
12 and customers.

13 **Q10. THROUGHOUT YOUR TESTIMONY YOU REFER REPEATEDLY TO THE**  
14 **CONCEPTS OF “FINANCIAL STRENGTH,” “FINANCIAL INTEGRITY,”**  
15 **AND “FINANCIAL FLEXIBILITY.” WOULD YOU BRIEFLY DESCRIBE**  
16 **WHAT YOU MEAN BY THESE TERMS?**

17 A10. These terms are generally synonymous and refer to the utility’s ability to attract and  
18 retain the capital that is necessary to provide service at reasonable cost, consistent with  
19 the Supreme Court standards. NorthWestern’s plans call for a continuation of capital  
20 investments to preserve and enhance service reliability for its customers. The Company  
21 must generate adequate cash flow from operations to fund these requirements and  
22 maintain access to capital from external sources.

23 Rating agencies and potential debt investors tend to place significant emphasis  
24 on maintaining strong financial metrics and credit ratings that support access to debt

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<sup>3</sup> *Id.* at 602 (finding, “the Commission was not bound to the use of any single formula or combination of formulae in determining rates.” and, “[I]t is not theory but the impact of the rate order which counts.”)



1 capital markets under reasonable terms. This emphasis on financial metrics and credit  
2 ratings is shared by equity investors who also focus on cash flows, capital structure, and  
3 liquidity, much like debt investors. Investors understand the important role that a  
4 supportive regulatory environment plays in establishing a sound financial profile that  
5 will permit the utility access to debt and equity capital markets on reasonable terms in  
6 both favorable financial markets and during times of potential disruption and crisis.

7 **Q11. WHAT PART DOES REGULATION PLAY IN ENSURING THAT**  
8 **NORTHWESTERN HAS ACCESS TO CAPITAL UNDER REASONABLE**  
9 **TERMS AND ON A SUSTAINABLE BASIS?**

10 A11. Regulatory signals are a major driver of investors' risk assessment for utilities. Investors  
11 recognize that constructive regulation is a key ingredient in supporting utility credit  
12 ratings and financial integrity. Security analysts study commission orders and  
13 regulatory policy statements to advise investors about where to put their money. As  
14 Moody's noted, "the regulatory environment is the most important driver of our outlook  
15 because it sets the pace for cost recovery."<sup>4</sup> Similarly, S&P observed that, "Regulatory  
16 advantage is the most heavily weighted factor when S&P Global Ratings analyzes a  
17 regulated utility's business risk profile."<sup>5</sup> Value Line summarizes these sentiments:

18 As we often point out, the most important factor in any utility's success,  
19 whether it provides electricity, gas, or water, is the regulatory climate in  
20 which it operates. Harsh regulatory conditions can make it nearly  
21 impossible for the best run utilities to earn a reasonable return on their  
22 investment.<sup>6</sup>

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<sup>4</sup> Moody's Investors Service, *Regulation Will Keep Cash Flow Stable As Major Tax Break Ends*, Industry Outlook (Feb. 19, 2014).

<sup>5</sup> S&P Global Ratings, *Assessing U.S. Investors-Owned Utility Regulatory Environments*, RatingsExpress (Aug. 10, 2016).

<sup>6</sup> Value Line Investment Survey, *Water Utility Industry* (Jan. 13, 2017) at p. 1780.

1 In addition, the ROE set by regulators impacts investor confidence in not only the  
2 jurisdictional utility, but also in the ultimate parent company that is the entity that  
3 actually issues common stock.

4 **Q12. DO CUSTOMERS BENEFIT BY ENHANCING THE UTILITY'S FINANCIAL**  
5 **FLEXIBILITY?**

6 A12. Yes. Providing an ROE that is sufficient to maintain the Company's ability to attract  
7 capital under reasonable terms, even in times of financial and market stress, is not only  
8 consistent with the economic requirements embodied in the U.S. Supreme Court's *Hope*  
9 and *Bluefield* decisions, but it is also in customers' best interests. Customers enjoy the  
10 benefits that come from ensuring that the utility has the financial wherewithal to take  
11 whatever actions are required to ensure safe and reliable service.

12 **B. Conclusions and Recommendations**

13 **Q13. WHAT ARE YOUR FINDINGS REGARDING A FAIR ROE FOR**  
14 **NORTHWESTERN?**

15 A13. Considering the economic requirements necessary to support continuous access to  
16 capital under reasonable terms and the results of my analysis, I recommend a 10.7%  
17 ROE for NorthWestern's utility operations, which is consistent with the case-specific  
18 evidence presented in my testimony. The bases for my conclusion are summarized  
19 below:

- 20 • In order to reflect the risks and prospects associated with  
21 NorthWestern's utility business, my analyses focused on a proxy  
22 group of twenty-two utility firms.
- 23 • Because investors' required return on equity is unobservable and no  
24 single method should be viewed in isolation, I applied the DCF,  
25 CAPM, ECAPM, and risk premium methods to estimate a just and  
26 reasonable ROE for NorthWestern, as well as referencing the  
27 expected earnings approach.
- 28 • As summarized on Exhibit AMM-2, considering the average values  
29 resulting from these analyses, and giving less weight to extremes at

1 the high and low ends of the range, I conclude that the cost of equity  
2 falls in the 10.1% to 11.1% range.

- 3 • My evaluation of a fair ROE also incorporated an upward adjustment  
4 of 10 basis points to account for flotation costs, which are a  
5 legitimate cost incurred to raise equity capital supporting  
6 NorthWestern's investment in utility infrastructure. Incorporating  
7 this flotation cost adjustment resulted in my recommended ROE  
8 range of 10.2% to 11.2%.
- 9 • My ROE recommendation for NorthWestern's electric operations is  
10 the midpoint of this range, or 10.7%.

11 **Q14. WHAT DID THE DCF RESULTS FOR YOUR SELECT GROUP OF NON-**  
12 **UTILITY FIRMS INDICATE WITH RESPECT TO YOUR EVALUATION?**

13 A14. As shown on page 3 of Exhibit AMM-12, average DCF estimates for a low-risk group  
14 of firms in the competitive sector of the economy ranged from 10.4% to 10.9% before  
15 consideration of flotation costs. While I did not base my recommendations on these  
16 results, they confirm that an ROE for NorthWestern of 10.7% falls in a reasonable range  
17 to maintain the Company's financial integrity, provide a return commensurate with  
18 investments of comparable risk, and support the ability to attract capital.

19 **C. Capital Structure**

20 **Q15. IS AN EVALUATION OF THE CAPITAL STRUCTURE MAINTAINED BY A**  
21 **UTILITY RELEVANT IN ASSESSING ITS RETURN ON EQUITY?**

22 A15. Yes. Other things being equal, a higher debt ratio and lower common equity ratio,  
23 translates into increased financial risk for all investors. A greater amount of debt means  
24 more investors have a senior claim on available cash flow, thereby reducing the certainty  
25 that each will receive their contractual payments. This increases the risks to which  
26 lenders are exposed, and they require correspondingly higher rates of interest. From  
27 common shareholders' standpoint, a higher debt ratio means that there are  
28 proportionately more investors ahead of them, thereby increasing the uncertainty as to  
29 the amount of cash flow that will remain.

1 **Q16. WHAT COMMON EQUITY RATIO IS IMPLICIT IN NORTHWESTERN'S**  
2 **CAPITAL STRUCTURE?**

3 A16. NorthWestern's capital structure is presented in the Direct Testimony of Crystal Lail.  
4 As summarized in her testimony, the Company is requesting a capital structure  
5 composed of 49.5% long-term debt and 50.5% common equity.

6 **Q17. HOW DOES THIS COMPARE TO THE AVERAGE EQUITY RATIOS**  
7 **MAINTAINED BY THE UTILITIES IN THE UTILITY GROUP?**

8 A17. Exhibit AMM-4 presents the sources of long-term capital (long-term debt and common  
9 equity) used by the publicly traded firms in the Utility Group. As shown on page 1 of  
10 this Exhibit, at year-end 2022, common equity ratios for the Utility Group ranged  
11 between 33.0% and 63.5% and averaged 43.7%.

12 **Q18. HOW DO THESE HISTORICAL CAPITALIZATION RATIOS COMPARE**  
13 **WITH INVESTORS' FORWARD-LOOKING EXPECTATIONS?**

14 A18. Also shown on page 1 of Exhibit AMM-4, Value Line expects an average common  
15 equity ratio of 45.0% for the Utility Group over its three-to-five-year forecast horizon.  
16 Projected equity ratios for the individual firms in the Utility Group range from 32.0%  
17 to 59.5%.

18 **Q19. WHAT CAPITALIZATION RATIOS ARE MAINTAINED BY COMPARABLE**  
19 **UTILITY OPERATING COMPANIES?**

20 A19. Pages 2 and 3 of Exhibit AMM-4 display capital structure data for the group of utility  
21 operating companies owned by the firms in the Utility Group. As shown there, common  
22 equity ratios for these utilities ranged from 40.1% to 60.9% and averaged 51.8%.

1 **Q20. DO ONGOING ECONOMIC AND CAPITAL MARKET UNCERTAINTIES**  
2 **ALSO INFLUENCE THE APPROPRIATE CAPITAL STRUCTURE FOR**  
3 **NORTHWESTERN?**

4 A20. Yes. Financial flexibility plays a crucial role in ensuring the wherewithal of a utility to  
5 meet funding needs. Utilities with higher financial leverage may be foreclosed from or  
6 have limited access to additional borrowing, especially during times of financial market  
7 stress. As Moody's observed:

8 Utilities are among the largest debt issuers in the corporate universe and  
9 typically require consistent access to capital markets to assure adequate  
10 sources of funding and to maintain financial flexibility. During times of  
11 distress and when capital markets are exceedingly volatile and tight,  
12 liquidity becomes critically important because access to capital markets  
13 may be difficult.<sup>7</sup>

14 S&P recently reiterated these concerns, noting that:

15 Because of the industry's high capital spending and consistent dividends,  
16 negative discretionary cashflow is regularly more than \$100 billion  
17 annually. To fund this large deficit, the industry requires consistent  
18 access to the capital markets. Rising interest rates, decreasing equity  
19 prices, and inflation could hamper consistent access to the capital  
20 markets, potentially pressuring credit quality.<sup>8</sup>

21 As a result, the Company's capital structure must maintain adequate equity to preserve  
22 the flexibility necessary to maintain continuous access to capital even during times of  
23 unfavorable energy or financial market conditions.

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<sup>7</sup> Moody's Investors Service, *FAQ on credit implications of the coronavirus outbreak*, Sector Comment (Mar. 26, 2020).

<sup>8</sup> S&P Global Ratings. *North American Regulated Utilities, The industry's outlook remains negative*, Industry Top Trends (Jan. 23, 2023).

1 **Q21. WHAT OTHER FACTORS DO INVESTORS CONSIDER IN THEIR**  
2 **ASSESSMENT OF A COMPANY’S CAPITAL STRUCTURE?**

3 A21. Utilities, including NorthWestern, are facing significant capital investment plans.  
4 Coupled with the potential for turmoil in capital markets, this warrants a stronger  
5 balance sheet to deal with an uncertain environment. As S&P recently noted:

6 Under our base case, we expect that by 2024 the industry's capital  
7 spending will exceed \$180 billion. Because of the industry's continued  
8 robust capital spending, we expect that industry will continue to generate  
9 negative discretionary cash flow. This requires that the industry has  
10 consistent access to the capital markets to finance capital spending and  
11 dividends requirements.<sup>9</sup>

12 In addition, the investment community also considers the impact of other  
13 considerations, such as leases, purchased power agreements, and postretirement benefit  
14 and asset retirement obligations in its evaluation of a utility’s financial standing.

15 The rating agencies have recognized that NorthWestern’s significant capital  
16 expenditures, coupled with the impact of ongoing regulatory lag, place significant  
17 downward pressure on its credit metrics. As Fitch observed, the Company’s “large  
18 capex program continues to pressure leverage metrics with little to no headroom for  
19 deterioration at current levels.”<sup>10</sup> Moody’s noted that the Company’s commitment to a  
20 balanced capital structure “will help to improve NorthWestern’s financials metrics and  
21 bring stability to its credit profile.”<sup>11</sup> A conservative financial profile, in the form of a  
22 reasonable common equity ratio, is consistent with the need to accommodate these  
23 uncertainties and maintain the continuous access to capital under reasonable terms that

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<sup>9</sup> S&P Global Ratings, *For The First Time Ever, The Median Investor-Owned Utility Ratings Falls To The ‘BBB’ Category*, RatingsDirect (Jan. 20, 2022).

<sup>10</sup> Fitch Ratings, Inc., *NorthWestern Corporation*, Rating Report (May 19, 2022).

<sup>11</sup> Moody’s Investors Service, *Moody’s affirms NorthWestern Corp. ratings; outlook changed to stable from negative*, Rating Action (May 11, 2022).

1 is required to fund operations and necessary system investment, even during times of  
2 adverse capital market conditions.

3 **Q22. WHAT DOES THIS EVIDENCE SUGGEST WITH RESPECT TO**  
4 **NORTHWESTERN'S PROPOSED CAPITAL STRUCTURE?**

5 A22. NorthWestern's ratemaking capital structure falls within the range of capital structure  
6 ratios maintained by the proxy group and is consistent with industry benchmarks for  
7 other electric utility operating companies. While industry averages provide one  
8 benchmark for comparison, each firm must select its capitalization based on the risks  
9 and prospects it faces, as well as its specific needs to access the capital markets.  
10 NorthWestern's proposed capital structure reflects the Company's ongoing efforts to  
11 maintain its credit standing and support access to capital on reasonable terms. The  
12 reasonableness of the Company's capital structure is reinforced by the ongoing  
13 uncertainties associated with the utility industry and the importance of supporting  
14 continued system investment, even during times of adverse industry or market  
15 conditions. Based on this evidence, I conclude that the Company's ratemaking capital  
16 structure represents a reasonable mix of capital sources from which to calculate  
17 NorthWestern's overall rate of return.

**III. FUNDAMENTAL ANALYSES**

18 **Q23. WHAT IS THE PURPOSE OF THIS SECTION?**

19 A23. This section briefly reviews the operations and finances of NorthWestern. As a  
20 predicate to my quantitative analyses, I also examine conditions impacting today's  
21 capital markets and the general economy. An understanding of the fundamental factors  
22 driving the risks and prospects of utilities is essential in developing an informed opinion  
23 of investors' expectations and requirements that are the basis of a fair ROE.

1 **A. NorthWestern Energy**

2 **Q24. BRIEFLY DESCRIBE NORTHWESTERN AND ITS SOUTH DAKOTA**  
3 **UTILITY OPERATIONS.**

4 A24. NorthWestern provides electricity and natural gas to approximately 764,200 customers  
5 in Montana, South Dakota, and Nebraska.<sup>12</sup> Around 18.3% of NorthWestern's rate base  
6 and earnings are related to its South Dakota utility operations.

7 The regulated electric utility business in South Dakota serves more than 64,700  
8 customers and includes generation, transmission, and distribution. In 2022, residential,  
9 commercial, and other sales accounted for 38%, 60%, and 2%, respectively, of the  
10 Company's South Dakota retail electric utility revenue. Retail electric load  
11 requirements are supplied by owned and contracted resources and market purchases.  
12 The nameplate capacity of Company-owned and contracted generating capacity include  
13 approximately 80 MW of wind, 211 MW of coal, and 138 MW of natural gas resources.  
14 The Company's electric transmission and distribution network consists of  
15 approximately 3,650 miles of overhead and underground lines. Estimated 2022 year-  
16 end rate base attributable to NorthWestern's South Dakota electric operations is  
17 approximately \$800 million,<sup>13</sup> with total annual revenues of approximately \$178 million  
18 from residential and commercial customers. NorthWestern is a member of SPP, a  
19 FERC-approved transmission organization, and provides regional transmission service  
20 pursuant to the SPP Open Access Transmission Tariff.

21 The regulated natural gas utility business in South Dakota includes transmission  
22 and distribution. Natural gas is distributed to approximately 49,200 customers in 80

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<sup>12</sup> Unless otherwise noted, the information in this section comes from the NorthWestern Corporation, SEC Form 10-K, for the fiscal year ended December 31, 2022.

<sup>13</sup> NorthWestern Corporation, *Siebert Williams West Coast Utilities Conference* (Mar. 15-16, 2023) at 6.



1 South Dakota communities over a system of approximately 1,724 miles of underground  
2 distribution pipelines. The natural gas transmission system consists of approximately  
3 55 miles of transmission pipeline. Estimated 2022 year-end rate base attributable to  
4 NorthWestern’s South Dakota natural gas operations is approximately \$98 million,<sup>14</sup>  
5 with total annual revenues of approximately \$68 million from residential and  
6 commercial customers.

7 **Q25. WHERE DOES NORTHWESTERN OBTAIN THE CAPITAL USED TO**  
8 **FINANCE ITS INVESTMENT IN UTILITY PLANT?**

9 A25. Common equity capital supporting the South Dakota electric and natural gas utility  
10 operations is provided through retained earnings and from the sale of common stock,  
11 with NorthWestern being listed on NASDAQ. The Company also issues long-term debt  
12 and has been assigned an issuer credit rating of “BBB” by S&P and a long-term rating  
13 of “Baa2” by Moody’s. Meanwhile, Fitch downgraded the Company’s long-term issuer  
14 default rating from “BBB+” to “BBB” on March 24, 2022.<sup>15</sup>

15 **Q26. DOES NORTHWESTERN ANTICIPATE THE NEED FOR CAPITAL GOING**  
16 **FORWARD?**

17 A26. Yes. The Company must undertake investments to meet growing peak demand needs  
18 and provide for necessary maintenance and replacements of its utility systems as it  
19 continues to provide safe and reliable service to its customers. Company-wide utility  
20 capital additions are expected to total approximately \$2.4 billion through 2027.<sup>16</sup> These

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<sup>14</sup> *Id.*

<sup>15</sup> Fitch Ratings Ltd., *Fitch downgrades NorthWestern Corp. to ‘BBB’; Outlook Stable*, Rating Action Commentary (Mar. 24, 2022).

<sup>16</sup> NorthWestern Corporation, SEC Form 10-K for the fiscal year ended December 31, 2022, at 45. Of this amount, approximately \$255 million relates to NorthWestern’s electric utility system in South Dakota, while \$72 million relates to gas utility systems in South Dakota and Nebraska.

1 planned capital additions are significant, given NorthWestern’s total estimated rate base  
2 of \$4.5 billion.<sup>17</sup> Continued support for NorthWestern’s financial integrity and  
3 flexibility will be instrumental in attracting the capital necessary to fund these projects  
4 in an effective manner.

### 5 **B. Outlook for Capital Costs**

#### 6 **Q27. PLEASE SUMMARIZE CURRENT ECONOMIC CONDITIONS.**

7 A27. U.S. real GDP contracted 3.4% during 2020, but with the easing of lockdowns  
8 accompanying the COVID-19 vaccine rollout, the economic outlook improved  
9 significantly in 2021, with GDP growing at a pace of 5.7%. Regional increases in  
10 COVID-19 cases, expiration of government assistance payments, and declines in  
11 wholesale trade led GDP to decline in the first two quarters of 2022. More recently,  
12 expanding exports and higher consumer spending led real GDP to grow by 3.2% and  
13 2.9% in the third and fourth quarters of 2022, respectively.<sup>18</sup> Meanwhile, indicators of  
14 employment remained stable, with the national unemployment rate at 3.5% in March  
15 2023.<sup>19</sup>

16 The underlying risk and price pressures associated with the COVID-19  
17 pandemic were overshadowed by a dramatic increase in geopolitical risks in early 2022.  
18 These events have also been accompanied by heightened economic uncertainties as  
19 inflationary pressures due to COVID-19 supply chain disruptions were further stoked  
20 by sharp increases in global commodity prices. The substantial disruption in the energy

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<sup>17</sup> *Id.* at 20.

<sup>18</sup> <https://www.bea.gov/news/2023/gross-domestic-product-fourth-quarter-and-year-2022-advance-estimate> (last visited Feb. 6, 2023).

<sup>19</sup> <https://www.bls.gov/news.release/pdf/empst.pdf> (last visited Apr. 16, 2023).

1 economy and dramatic rise in inflation led to sharp declines in global equity markets as  
2 investors reacted to the related exposures. S&P concluded that:

3 The balance of risks is firmly on the downside—with rapid monetary  
4 tightening potentially pushing major economies into recession; growing  
5 geopolitical tensions exacerbating Europe’s energy crisis; lingering high  
6 prices pressuring costs and eroding households’ purchasing power; and  
7 China grappling with structural factors that are undermining its  
8 economic growth.<sup>20</sup>

9 Stimulative monetary and fiscal policies, coupled with economic ramifications  
10 stemming from supply-chain disruptions and rapid price rises in the energy and  
11 commodities markets, have led to increasing concern that inflation may remain  
12 significantly above the Federal Reserve’s longer-run benchmark of 2%. In June 2022,  
13 CPI inflation peaked at its highest level since November 1981. Since then, CPI inflation  
14 has gradually moderated to 5.0% in March 2023.<sup>21</sup> The so-called “core” price index,  
15 which excludes more volatile energy and food costs, rose at an annual rate of 5.6% in  
16 March 2023. Similarly, PCE inflation rose 5.0% in February 2023, or 4.6% after  
17 excluding more volatile food and energy costs.<sup>22</sup> As Federal Reserve Chair Powell has  
18 noted:

19 Although inflation has moderated recently, it remains too high. The  
20 longer the current bout of high inflation continues, the greater the chance  
21 that expectations of higher inflation will become entrenched.<sup>23</sup>

22 More recently, turmoil in the banking sector has shaken investor confidence and  
23 increased volatility in bond and equity markets. The Federal Reserve and U.S. Treasury

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<sup>20</sup> S&P Global Ratings, *Global Credit Conditions Q4 2022: Darkening Horizons*, Comments (Sept. 29, 2022).

<sup>21</sup> <https://www.bls.gov/news.release/cpi.nr0.htm> (last visited Apr. 14, 2023).

<sup>22</sup> <https://www.bea.gov/news/2023/personal-income-and-outlays-february-2023> (last visited Apr. 14, 2023).

<sup>23</sup> Federal Reserve, *Transcript of Chair Powell’s Press Conference* (Feb. 1, 2023), <https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230201.pdf> (last visited Feb. 21, 2023).

1 took quick and dramatic action to shore up banks' liquidity needs and strengthen public  
2 confidence in the banking system, but as Moody's noted, "bank stress has added  
3 uncertainty to the outlook."<sup>24</sup>

4 **Q28. HOW HAVE THESE DEVELOPMENTS IMPACTED THE FEDERAL**  
5 **RESERVE'S MONETARY POLICIES?**

6 A28. As of its policy meeting in March 2023, the FOMC has responded to concerns over  
7 accelerating inflation by raising the benchmark range for the federal funds rate by a total  
8 of 4.75% since March 2022.<sup>25</sup> In addition to these increases, Chair Powell has surmised  
9 that the significant draw-down of its balance sheet holdings that began in June 2022  
10 could be the equivalent of another one quarter percent rate hike over the course of a  
11 year.<sup>26</sup> Chair Powell noted that, "The process of getting inflation back down to 2 percent  
12 has a long way to go and is likely to be bumpy,"<sup>27</sup> with the recent banking crisis amply  
13 demonstrating these latent risks.

14 **Q29. WHAT IMPACT DO RISING INFLATION EXPECTATIONS HAVE ON THE**  
15 **RETURN THAT EQUITY INVESTORS REQUIRE FROM NORTHWESTERN?**

16 A29. Implicit in the required rate of return for long-term capital—whether debt or common  
17 equity—is compensation for expected inflation. This is highlighted in the textbook,  
18 *Financial Management, Theory and Practice*:

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<sup>24</sup> Moody's Investors Service, *Baseline US macro forecasts unchanged but outlook more uncertain*, Sector Comment (Apr. 12, 2023).

<sup>25</sup> The FOMC is a committee composed of twelve members that serves as the monetary policymaking body of the Federal Reserve System.

<sup>26</sup> Federal Reserve, *Transcript of Chair Powell's Press Conference* (May 4, 2022), <https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20220504.pdf>.

<sup>27</sup> <https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20230322.pdf>.

1           The four most fundamental factors affecting the cost of money are (1)  
2           production opportunities, (2) time preferences for consumption, (3) risk,  
3           and (4) inflation.<sup>28</sup>

4           In other words, a part of investors' required return is intended to compensate for the  
5           erosion of purchasing power due to rising price levels. This inflation premium is added  
6           to the real rate of return (pure risk-free rate plus risk premium) to determine the nominal  
7           required return. As a result, higher inflation expectations lead to an increase in the cost  
8           of equity capital.

9           **Q30. HAVE THESE DEVELOPMENTS IMPACTED THE RISKS FACED BY**  
10           **UTILITIES AND THEIR INVESTORS?**

11          A30. Yes. Concerns over weakening credit quality prompted S&P to revise its outlook for  
12          the regulated utility industry from “stable” to “negative.”<sup>29</sup> As S&P explained:

13                   Even before the current downturn and COVID-19, a confluence of  
14                   factors, including the adverse impacts of tax reform, historically high  
15                   capital spending, and associated increased debt, resulted in little cushion  
16                   in ratings for unexpected operating challenges.<sup>30</sup>

17           Meanwhile, rising inflation expectations also pose a challenge for utilities, with  
18           S&P recently noting that “the threat of inflation comes at a time when credit metrics are  
19           already under pressure relative to downside ratings thresholds.”<sup>31</sup> S&P noted that “risk

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<sup>28</sup> Eugene F. Brigham, Louis C. Gapenski, and Michael C. Ehrhardt, *Financial Management, Theory and Practice*, Ninth Edition (1999) at 126.

<sup>29</sup> S&P Global Ratings, *COVID-19: The Outlook For North American Regulated Utilities Turns Negative*, RatingsDirect (April 2, 2020).

<sup>30</sup> S&P Global Ratings, *North American Regulated Utilities Face Tough Financial Policy Tradeoffs To Avoid Ratings Pressure Amid The COVID-19 Pandemic*, RatingsDirect (May 11, 2020).

<sup>31</sup> S&P Global Ratings, *Will Rising Inflation Threaten North American Investor-Owned Regulated Utilities' Credit Quality?* (Jul. 20, 2021).

1 will continue to pressure the credit quality of the industry in 2022.”<sup>32</sup> As S&P  
2 elaborated:

3 Recently, several new credit risks have emerged, including inflation,  
4 higher interest rates, and rising commodity prices. Persistent pressure  
5 from any of these risks would likely lead to a further weakening of the  
6 industry’s credit quality in 2022.<sup>33</sup>

7 Similarly, on November 10, 2022, Moody’s revised its outlook for the regulated utilities  
8 sector to “negative” from “stable,” citing “increasingly challenging business and  
9 financial conditions stemming from higher natural gas prices, inflation and rising  
10 interest rates.”<sup>34</sup>

11 In affirming its negative outlook on the industry, S&P recently cited weak  
12 financial measures, rising energy prices and capital spending, and increased  
13 environmental risks as key challenges, noting that, “The industry outlook remains  
14 negative and has been negative since early 2020.”<sup>35</sup> Value Line echoed these sentiments  
15 for electric utilities in the Western US, concluding that:

16 The current macroeconomic environment is a challenging period for this  
17 group. The main difficulties are wage inflation, higher interest rates, and  
18 high commodity prices for raw materials and purchased power.<sup>36</sup>

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<sup>32</sup> S&P Global Ratings, *For The First Time Ever, The Median Investor-Owned Utility Ratings Falls To The ‘BBB’ Category*, RatingsDirect (Jan. 20, 2022).

<sup>33</sup> *Id.*

<sup>34</sup> Moody’s Investors Service, *Regulated Gas Utilities--US, 2023 outlook negative due to higher natural gas prices, inflation and rising interest rates*, Outlook (Nov. 10, 2022).

<sup>35</sup> S&P Global Ratings, *North American Regulated Utilities, The industry’s outlook remains negative*, Industry Top Trends (Jan. 23, 2023).

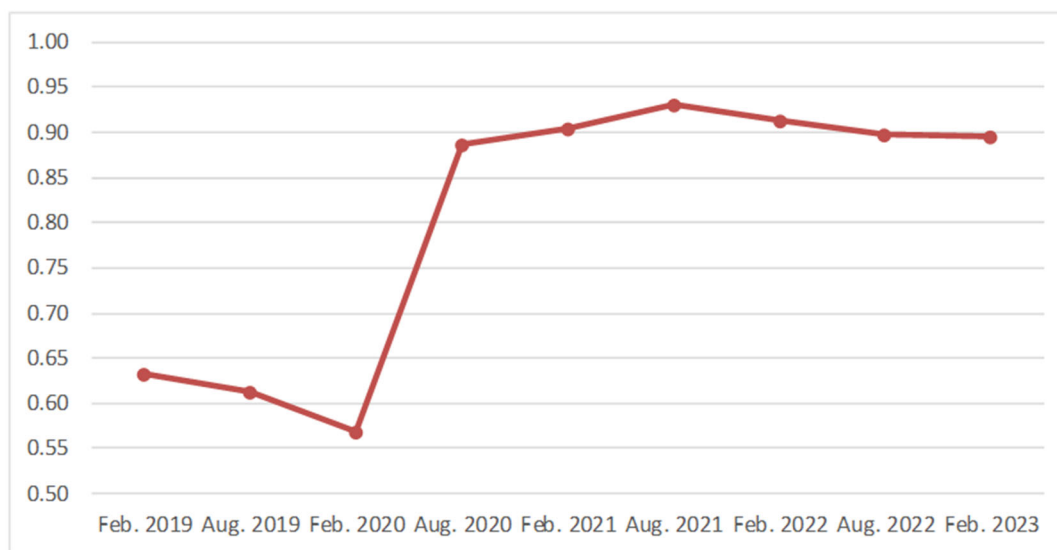
<sup>36</sup> The Value Line Investment Survey, *Electric Utility (West) Industry* (Apr. 21, 2023).

1 **Q31. DO CHANGES IN UTILITY COMPANY BETA VALUES CORROBORATE AN**  
2 **INCREASE IN INDUSTRY RISK?**

3 A31. Yes. As I explain later, beta is used by the investment community as an important guide  
4 to investors' risk perceptions. As shown subsequently in Table 3, the average beta for  
5 the Utility Group is 0.90.<sup>37</sup> Prior to the pandemic, the average beta for this same group  
6 of electric utilities was 0.57.<sup>38</sup>

7 The significant shift in pre- and post-pandemic beta values for the Utility Group  
8 is further exemplified in Figure 1 below. As illustrated there, average beta values for  
9 the Utility Group increased significantly with the beginning of the pandemic in March  
10 2020, continued to increase during 2021, and has remained elevated. This dramatic  
11 increase in a primary gauge of investors' risk perceptions is further proof of the rise in  
12 the risk of utility common stocks.

13 **FIGURE 1**  
14 **UTILITY GROUP BETA VALUES**



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<sup>37</sup> As indicated on Exhibit AMM-7, this is based on data as of March 31, 2023.

<sup>38</sup> The Value Line Investment Survey, *Summary & Index* (Feb. 14, 2020).

1 **Q32. HAVE INCREASED RISKS AND HIGHER INFLATION RESULTED IN**  
2 **HIGHER CAPITAL COSTS?**

3 A32. Yes. While the cost of equity is unobservable, yields on long-term bonds provide a  
4 widely referenced benchmark for the direction of capital costs, including required  
5 returns on common stocks. Table 2 below compares the average yields on Treasury  
6 securities and Baa-rated public utility bonds during March 2023 with those prevailing  
7 in 2021.

8 **TABLE 2**  
9 **BOND YIELD TRENDS**

<u>Series</u>	<u>March</u> <u>2023</u>	<u>2021</u>	<u>Change</u> <u>(bps)</u>
10-Year Treasury Bonds	3.66%	1.44%	222
30-Year Treasury Bonds	3.77%	2.05%	172
Baa Utility Bonds	5.68%	3.35%	233

10 As shown above, trends in bond yields document a substantial increase in the  
11 returns on long-term capital demanded by investors. With respect to utility bond  
12 yields—which are the most relevant indicator in gauging the implications for the  
13 Company’s common equity investors—average yields are now over 230 basis points  
14 above the level prevailing during 2021.

15 **Q33. WHAT IMPLICATIONS DO THESE TRENDS HAVE IN EVALUATING A FAIR**  
16 **ROE FOR NORTHWESTERN?**

17 A33. The upward move in interest rates suggests that long-term capital costs—including the  
18 cost of equity—have increased significantly. Exposure to rising interest rates, inflation,  
19 and capital expenditure requirements also reinforce the importance of buttressing  
20 NorthWestern’s credit standing. Considering the potential for financial market  
21 instability, competition with other investment alternatives, and investors’ sensitivity to



1 risk exposures in the utility industry, maintaining credit strength is a key ingredient in  
2 maintaining access to capital at reasonable cost.

3 **Q34. WOULD IT BE REASONABLE TO DISREGARD THE IMPLICATIONS OF**  
4 **CURRENT CAPITAL MARKET CONDITIONS IN ESTABLISHING A FAIR**  
5 **ROE FOR NORTHWESTERN?**

6 A34. No. They reflect the reality in which NorthWestern must attract and retain capital. The  
7 standards underlying a fair rate of return require an authorized ROE for the Company  
8 that is competitive with other investments of comparable risk and sufficient to preserve  
9 its ability to maintain access to capital on reasonable terms. These standards can only  
10 be met by considering the requirements of investors over the time period when the rates  
11 established in this proceeding will be in effect. If the upward shift in investors' risk  
12 perceptions and required rates of return for long-term capital is not incorporated in the  
13 allowed ROE, the results will fail to meet the comparable earnings standard that is  
14 fundamental in determining the cost of capital. From a more practical perspective,  
15 failing to provide investors with the opportunity to earn a rate of return commensurate  
16 with NorthWestern's risks will weaken its financial integrity, while hampering the  
17 Company's ability to attract the necessary capital.

**IV. DETERMINATION OF THE PROXY GROUP**

18 **Q35. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

19 A35. This section explains the basis for the proxy group I used to estimate the cost of equity,  
20 examines alternative objective indicators of investment risk for these firms, and  
21 compares the investment risks applicable to NorthWestern with my reference group.

1 **Q36. WHAT KEY PRINCIPLES UNDERPIN THE EVALUATION OF A PROXY**  
2 **GROUP?**

3 A36. The United States Supreme Court’s *Hope* and *Bluefield* decisions<sup>39</sup> establish a standard  
4 of comparison between a subject utility and other companies of comparable risk in  
5 determining a just and reasonable ROE. The generally accepted approach is to select a  
6 group of companies that are of similar risk to the subject utility (the “proxy group”), and  
7 then to perform various quantitative analyses based on the proxy group to estimate  
8 investors’ required returns. The results of these analyses, in turn, are used to evaluate a  
9 range of reasonableness and a final recommendation for the ROE attributable to the  
10 subject utility.

11 **A. Proxy Group Criteria**

12 **Q37. HOW DO YOU IMPLEMENT QUANTITATIVE METHODS TO ESTIMATE**  
13 **THE COST OF COMMON EQUITY FOR NORTHWESTERN?**

14 A37. Application of quantitative methods to estimate the cost of common equity requires  
15 observable capital market data, such as stock prices and beta values. Moreover, even  
16 for a firm with publicly traded stock, the cost of common equity can only be estimated.  
17 As a result, applying quantitative models using observable market data only produces  
18 an estimate that inherently includes some degree of observation error. Thus, the  
19 accepted approach to increase confidence in the results is to apply quantitative methods  
20 to a proxy group of publicly traded companies that investors regard as risk comparable.  
21 The results of the analysis on the sample of companies are relied upon to establish a  
22 range of reasonableness for the cost of equity for the specific company at issue.

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<sup>39</sup> *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923) (*Bluefield*); *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) (*Hope*).

1 **Q38. HOW DO YOU IDENTIFY THE PROXY GROUP OF UTILITIES RELIED ON**  
2 **FOR YOUR ANALYSES?**

3 A38. To reflect the risks and prospects associated with NorthWestern's jurisdictional utility  
4 operations, I began with the following criteria to identify a proxy group of utilities:

- 5 1. Included in the Electric Utility Industry groups compiled by Value Line.
- 6 2. Corporate credit ratings from Moody's and S&P within one notch of the  
7 Company's current ratings. For Moody's, this resulted in a ratings range of  
8 Baa3, Baa2, and Baa1; for S&P the range is BBB-, BBB, and BBB+.
- 9 3. Paid common dividends over the last six months and have not announced a  
10 dividend cut since that time.
- 11 4. No ongoing involvement in a major merger or acquisition that would  
12 distort quantitative results.

13 **Q39. IS THERE ANY OTHER PUBLICLY TRADED UTILITY THAT IS RELEVANT**  
14 **IN ESTABLISHING A PROXY GROUP?**

15 A39. Yes. Emera Inc.'s electric and gas utility operations are comparable to those of the other  
16 utilities in the proxy group.<sup>40</sup> Although Value Line currently includes Emera Inc. in its  
17 power industry group, rather than its utility groups, Emera Inc.'s regulated electric and  
18 gas utility operations are its dominant businesses and account for more than 95% of  
19 consolidated net income,<sup>41</sup> with its Florida utility operations accounting for 65% of  
20 consolidated net income.<sup>42</sup> Thus, investors would regard Emera Inc. as a comparable  
21 investment alternative that is relevant to an evaluation of the required rate of return for  
22 NorthWestern.

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<sup>40</sup> In addition to Emera, Inc., I also considered Algonquin Power & Utilities Company. While this company would be regarded as a comparable utility investment opportunity by investors, it did not meet my required screening criteria due to a major acquisition, which is ongoing.

<sup>41</sup> Emera Inc., *Investors Presentation* (March & April 2023).  
[https://s25.q4cdn.com/978989322/files/doc\\_presentations/2022/03/March-2022-Marketing-Presentation\\_FINAL.pdf](https://s25.q4cdn.com/978989322/files/doc_presentations/2022/03/March-2022-Marketing-Presentation_FINAL.pdf) (last visited Mar. 23, 2022).

<sup>42</sup> *Id.*

1                   These criteria result in a proxy group of twenty-two companies, which I refer to  
2 as the “Utility Group.”<sup>43</sup>

3                   **B. Relative Risks of the Utility Group and NorthWestern**

4 **Q40. HOW DO YOU EVALUATE INVESTORS’ RISK PERCEPTIONS FOR THE**  
5 **UTILITY GROUP?**

6 A40. My evaluation of relative risk considers five published benchmarks that are widely  
7 relied on by investors; namely, credit ratings from Moody’s and S&P, along with Value  
8 Line’s Safety Rank, Financial Strength Rating, and beta values. Credit ratings are  
9 assigned by independent rating agencies for the purpose of providing investors with a  
10 broad assessment of the creditworthiness of a firm. Ratings generally extend from  
11 triple-A (the highest) to D (in default). Other symbols (*e.g.*, "+" or "-") are used to show  
12 relative standing within a category. Because the rating agencies’ evaluation includes all  
13 of the factors normally considered important in assessing a firm’s relative credit  
14 standing, corporate credit ratings provide broad, objective measures of overall  
15 investment risk that are readily available to investors. Widely cited in the investment  
16 community and referenced by investors, credit ratings are also frequently used as a  
17 primary risk indicator in establishing proxy groups to estimate the cost of common  
18 equity.

19                   While credit ratings provide the most widely referenced benchmark for  
20 investment risks, other quality rankings published by investment advisory services also  
21 provide relative assessments of risks that are considered by investors in forming their  
22 expectations for common stocks. Value Line’s primary risk indicator is its Safety Rank,  
23 which ranges from “1” (Safest) to “5” (Riskiest). This overall risk measure is intended  
24 to capture the total risk of a stock and incorporates elements of stock price stability and

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<sup>43</sup> Of these twenty-two companies, sixteen are combination electric/natural gas utilities, while six are electric utilities.

1 financial strength. Given that Value Line is perhaps the most widely available source  
2 of investment advisory information, its Safety Rank provides useful guidance regarding  
3 the risk perceptions of investors.

4 The Financial Strength Rating is designed as a guide to overall financial strength  
5 and creditworthiness, with the key inputs including financial leverage, business  
6 volatility measures, and company size. Value Line's Financial Strength Ratings range  
7 from "A++" (strongest) down to "C" (weakest) in nine steps. These objectives,  
8 published indicators incorporate consideration of a broad spectrum of risks, including  
9 financial and business position, relative size, and exposure to firm-specific factors.

10 Finally, beta measures a utility's stock price volatility relative to the market as a  
11 whole and reflects the tendency of a stock's price to follow changes in the market. A  
12 stock that tends to respond less to market movements has a beta less than 1.00, while  
13 stocks that tend to move more than the market have betas greater than 1.00. Beta is the  
14 only relevant measure of investment risk under modern capital market theory and is  
15 widely cited in academics and in the investment industry as a guide to investors' risk  
16 perceptions.

17 **Q41. HOW DO THE OVERALL RISK OF YOUR PROXY GROUP COMPARE TO**  
18 **NORTHWESTERN?**

19 A41. Table 3 compares the Utility Group with the Company across the five key indices of  
20 investment risk discussed above.

21 **TABLE 3**  
22 **COMPARISON OF RISK INDICATORS**

	<u>Value Line</u>				
			<u>Safety</u>	<u>Financial</u>	
	<u>S&amp;P</u>	<u>Moody's</u>	<u>Rank</u>	<u>Strength</u>	<u>Beta</u>
Utility Group	BBB+	Baa2	2	A	0.90
NorthWestern Corp.	BBB	Baa2	2	B++	0.90

1 **Q42. WHAT DOES THIS COMPARISON INDICATE REGARDING INVESTORS’**  
2 **ASSESSMENT OF THE RELATIVE RISKS ASSOCIATED WITH YOUR**  
3 **UTILITY GROUP?**

4 A42. NorthWestern’s S&P rating is lower than the average for the Utility Group, indicating  
5 slightly greater risk, while the average Moody’s credit rating corresponding to the  
6 Utility Group is identical to that of NorthWestern. The average Value Line Safety Rank  
7 and beta values for the Utility Group are identical to those assigned to the Company.  
8 Meanwhile, the average Financial Strength rating for the Utility Group indicates lower  
9 risk compared to NorthWestern. Considered together, a comparison of these objective  
10 measures indicates that investors would likely conclude that the overall investment risks  
11 for the firms in the Utility Group are comparable to, if not slightly less risky than  
12 NorthWestern.

13 **Q43. DO YOU CONSIDER THE IMPLICATIONS OF REGULATORY**  
14 **MECHANISMS IN YOUR EVALUATION?**

15 A43. Yes. In response to increasing sensitivity over fluctuations in costs and the importance  
16 of advancing other public interest goals such as reliability, energy conservation, and  
17 safety, utilities and their regulators have sought to mitigate cost recovery uncertainty  
18 and align the interest of utilities and their customers. As a result, adjustment  
19 mechanisms, cost trackers, and future test years have become increasingly prevalent,  
20 along with alternatives to traditional ratemaking such as formula rates and multi-year  
21 rate plans. *RRA Regulatory Focus* concluded in its most recent review of adjustment  
22 clauses that:

23 More recently and with greater frequency, commissions have approved  
24 mechanisms that permit the costs associated with the construction of new  
25 generation or delivery infrastructure to be used, effectively including  
26 these items in rate base without the need for a full rate case. In some  
27 instances, these mechanisms may even provide the utilities a cash return  
28 on construction work in progress.

1 . . . [C]ertain types of adjustment clauses are more prevalent than others.  
2 For example, those that address electric fuel and gas commodity charges  
3 are in place in all jurisdictions. Also, about two-thirds of all utilities have  
4 riders in place to recover costs related to energy efficiency programs, and  
5 roughly half of the utilities have some type of decoupling mechanism in  
6 place.<sup>44</sup>

7 As shown on Exhibit AMM-4, and reflective of this trend, the companies in the  
8 Utility Group operate under a wide variety of cost adjustment mechanisms, which  
9 encompass revenue decoupling and adjustment clauses designed to address rising  
10 capital investment outside of a traditional rate case and increasing costs of  
11 environmental compliance measures, as well as riders to recover the cost of  
12 environmental compliance measures, bad debt expenses, certain taxes and fees, post-  
13 retirement employee benefit costs and transmission-related charges.

14 **Q44. WHAT REGULATORY MECHANISMS ARE APPLICABLE TO**  
15 **NORTHWESTERN'S UTILITY OPERATIONS IN SOUTH DAKOTA?**

16 A44. NorthWestern operates under an adjustment mechanism for electric fuel and purchased  
17 power costs and a purchased gas adjustment mechanism, which are universal to the  
18 companies in the Utility Group. Beyond these provisions, the Company operates under  
19 trackers for Ad Valorem taxes and electric transmission costs paid to other parties.

20 **Q45. DOES THE COMPANY'S LACK OF REGULATORY MECHANISMS SET IT**  
21 **APART FROM THE FIRMS IN THE UTILITY GROUP?**

22 A45. Yes. The mechanisms currently in place for the Company's South Dakota jurisdictional  
23 utility operations are more limited than those approved for other firms in the industry.  
24 In contrast to many of the specific operating companies associated with the firms in the  
25 Utility Group, the Commission has not approved cost tracking mechanisms to address  
26 ongoing investment in generation capacity or allowed for timely recovery of significant

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<sup>44</sup> S&P Global Market Intelligence, *Adjustment Clause: A state-by-state overview*, RRA Regulatory Focus (Jul. 18, 2022).

1 capital investment in other facilities. Nor does NorthWestern benefit from a  
2 normalization adjustment or decoupling mechanism to insulate margins from weather  
3 fluctuations or declining usage. Further, South Dakota has routinely relied on a  
4 historical test year approach, which also creates a lag in cost recovery. Regulatory  
5 adjustment mechanisms have important implications for a utility's financial health and  
6 relative risk. Thus, while existing regulatory clauses would be regarded as supportive,  
7 investors would view the risks of NorthWestern as higher than the proxy group in this  
8 important respect.

9 **Q46. ARE YOU RECOMMENDING A SPECIFIC ADDER TO THE COMPANY'S**  
10 **BASE ROE TO REFLECT ITS RELATIVE LACK OF REGULATORY**  
11 **MECHANISMS?**

12 A46. No. While this factor indicates more risk for NorthWestern relative to other utilities, I  
13 am not proposing a specific ROE adder to account for these greater uncertainties. This  
14 serves to emphasize the conservative nature of my ROE recommendation.

## V. CAPITAL MARKET ESTIMATES AND ANALYSES

15 **Q47. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

16 A47. This section presents capital market estimates of the cost of equity. First, I discuss the  
17 concept of the cost of common equity, along with the risk-return tradeoff principle  
18 fundamental to capital markets. Next, I describe the quantitative analyses I conducted  
19 to estimate the cost of common equity for the Utility Group.

### A. Economic Standards

20  
21 **Q48. WHAT FUNDAMENTAL ECONOMIC PRINCIPLE UNDERLIES THE COST**  
22 **OF EQUITY CONCEPT?**

23 A48. The concept of the cost of equity concept is based on the tenet that investors are risk  
24 averse. In capital markets where relatively risk-free assets are available (e.g., U.S.  
25 Treasury securities), investors can be induced to hold riskier assets only if they are



1 offered a premium, or additional return, above the rate of return on a risk-free asset.  
2 Because all assets compete for investor funds, riskier assets must yield a higher expected  
3 rate of return than safer assets to induce investors to invest and hold them.

4 Given this risk-return tradeoff, the required rate of return ( $k$ ) from an asset ( $i$ )  
5 can generally be expressed as:

$$6 \quad k_i = R_f + RP_i$$

7 where:  $R_f$  = Risk-free rate of return, and  
8  $RP_i$  = Risk premium required to hold riskier asset  $i$ .

9 Thus, the required rate of return for a particular asset at any time is a function of: (1) the  
10 yield on risk-free assets, and (2) the asset's relative risk, with investors demanding  
11 correspondingly larger risk premiums for bearing greater risk.

12 **Q49. IS THERE EVIDENCE THAT THE RISK-RETURN TRADEOFF PRINCIPLE**  
13 **OPERATES IN THE CAPITAL MARKETS?**

14 A49. Yes. The risk-return tradeoff can be documented in segments of the capital markets  
15 where required rates of return can be directly inferred from market data and where  
16 generally accepted measures of risk exist. Bond yields, for example, reflect investors'  
17 expected rates of return, and bond ratings measure the risk of individual bond issues.  
18 Comparing the observed yields on government securities, which are considered free of  
19 default risk, to the yields on bonds of various rating categories demonstrates that the  
20 risk-return tradeoff does, in fact, exist.

21 **Q50. DOES THE RISK-RETURN TRADEOFF OBSERVED WITH FIXED INCOME**  
22 **SECURITIES EXTEND TO COMMON STOCKS AND OTHER ASSETS?**

23 A50. It is widely accepted that the risk-return tradeoff evidenced with long-term debt extends  
24 to all assets. Documenting the risk-return tradeoff for assets other than fixed income  
25 securities, however, is complicated by two factors. First, there is no standard measure  
26 of risk applicable to all assets. Second, for most assets—including common stock—

1 required rates of return cannot be observed. Yet there is every reason to believe that  
2 investors demonstrate risk aversion in deciding whether to hold common stocks and  
3 other assets, just as when choosing among fixed-income securities.

4 **Q51. IS THIS RISK-RETURN TRADEOFF LIMITED TO DIFFERENCES**  
5 **BETWEEN FIRMS?**

6 A51. No. The risk-return tradeoff principle applies not only to investments in different firms,  
7 but also to different securities issued by the same firm. The securities issued by a utility  
8 vary considerably in risk because they have different characteristics and priorities. As  
9 noted earlier, the last investors in line are common shareholders. They share in the net  
10 earnings, if any, that remain after all other claimants have been paid. As a result, the  
11 rate of return that investors require from a utility's common stock, the most junior and  
12 riskiest of its securities, must be considerably higher than the yield offered by the  
13 utility's senior, long-term debt.

14 **Q52. WHAT ARE THE CHALLENGES IN DETERMINING A JUST AND**  
15 **REASONABLE ROE FOR A REGULATED ENTERPRISE?**

16 A52. The actual return investors require is not directly observable. Different methodologies  
17 have been developed to estimate investors' expected and required return on capital, but  
18 these theoretical tools produce a range of estimates, based on different assumptions and  
19 inputs. The DCF method, which is frequently referenced and relied on by regulators, is  
20 only one theoretical approach to gain insight into the return investors require. There are  
21 a number of other methodologies for estimating the cost of capital and the ranges  
22 produced by these approaches can vary widely.

23 **Q53. IS IT CUSTOMARY TO CONSIDER THE RESULTS OF MULTIPLE**  
24 **APPROACHES WHEN EVALUATING A JUST AND REASONABLE ROE?**

25 A53. Yes. In my experience, financial analysts and regulators routinely consider the results  
26 of alternative approaches in evaluating a fair ROE. No single method can be regarded

1 as failsafe, with all approaches having advantages and shortcomings. As FERC has  
2 noted, “[t]he determination of rate of return on equity starts from the premise that there  
3 is no single approach or methodology for determining the correct rate of return.”<sup>45</sup>  
4 Similarly, a publication of the Society of Utility and Regulatory Financial Analysts  
5 concluded that:

6 Each model requires the exercise of judgment as to the reasonableness  
7 of the underlying assumptions of the methodology and on the  
8 reasonableness of the proxies used to validate the theory. Each model  
9 has its own way of examining investor behavior, its own premises, and  
10 its own set of simplifications of reality. Each method proceeds from  
11 different fundamental premises, most of which cannot be validated  
12 empirically. Investors clearly do not subscribe to any singular method,  
13 nor does the stock price reflect the application of any one single method  
14 by investors.<sup>46</sup>

15 As this treatise succinctly observed, “no single model is so inherently precise that it can  
16 be relied on solely to the exclusion of other theoretically sound models.”<sup>47</sup> Similarly,  
17 *New Regulatory Finance* concluded that:

18 There is no single model that conclusively determines or estimates the  
19 expected return for an individual firm. Each methodology possesses its  
20 own way of examining investor behavior, its own premises, and its own  
21 set of simplifications of reality. Each method proceeds from different  
22 fundamental premises that cannot be validated empirically. Investors do  
23 not necessarily subscribe to any one method, nor does the stock price  
24 reflect the application of any one single method by the price-setting  
25 investor. There is no monopoly as to which method is used by investors.  
26 In the absence of any hard evidence as to which method outdoes the  
27 other, all relevant evidence should be used and weighted equally, in order  
28 to minimize judgmental error, measurement error, and conceptual  
29 infirmities.<sup>48</sup>

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<sup>45</sup> *Northwest Pipeline Co.*, Opinion No. 396-C, 81 FERC ¶ 61,036 at 4 (1997).

<sup>46</sup> David C. Parcell, *The Cost of Capital – A Practitioner’s Guide*, Society of Utility and Regulatory Financial Analysts (2010) at 84.

<sup>47</sup> *Id.*

<sup>48</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 429.

1           Thus, while the DCF model is a recognized approach, it is not without  
2 shortcomings and does not otherwise eliminate the need to ensure that the “end result”  
3 is fair. The Indiana Utility Regulatory Commission has recognized this principle:

4           There are three principal reasons for our unwillingness to place a great  
5 deal of weight on the results of any DCF analysis. One is. . . the failure  
6 of the DCF model to conform to reality. The second is the undeniable  
7 fact that rarely if ever do two expert witnesses agree on the terms of a  
8 DCF equation for the same utility – for example, as we shall see in more  
9 detail below, projections of future dividend cash flow and anticipated  
10 price appreciation of the stock can vary widely. And, the third reason is  
11 that the unadjusted DCF result is almost always well below what any  
12 informed financial analysis would regard as defensible, and therefore  
13 require an upward adjustment based largely on the expert witness’s  
14 judgment. In these circumstances, we find it difficult to regard the results  
15 of a DCF computation as any more than suggestive.<sup>49</sup>

16           More recently, FERC recognized the potential for any application of the DCF model to  
17 produce unreliable results.<sup>50</sup>

18           As this discussion indicates, consideration of the results of alternative  
19 approaches reduces the potential for error associated with any single quantitative  
20 method. Just as investors inform their decisions using a variety of methodologies, my  
21 evaluation of a fair ROE for the Company considered the results of multiple financial  
22 models.

23 **Q54. WHAT DOES THIS DISCUSSION IMPLY WITH RESPECT TO ESTIMATING**  
24 **THE ROE FOR A UTILITY?**

25 A54. Although the ROE cannot be observed directly, it is a function of the returns available  
26 from other investment alternatives and the risks of the investment. Because it is not  
27 readily observable, the ROE for a particular utility must be estimated by analyzing  
28 information about capital market conditions generally, assessing the relative risks of the

---

<sup>49</sup> *Ind. Michigan Power Co.*, Cause No. 38728, 116 PUR4th 1, 17-18 (IURC 8/24/1990).

<sup>50</sup> *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234 at P 41 (2014).

1 company specifically, and employing alternative quantitative methods that focus on  
2 investors' required rates of return. These methods typically attempt to infer investors'  
3 required rates of return from stock prices, interest rates, or other capital market data.

#### 4 **B. Discounted Cash Flow Analyses**

#### 5 **Q55. HOW IS THE DCF MODEL USED TO ESTIMATE THE COST OF COMMON** 6 **EQUITY?**

7 A55. DCF models assume that the price of a share of common stock is equal to the present  
8 value of the expected cash flows (i.e., future dividends and stock price) that will be  
9 received while holding the stock, discounted at investors' required rate of return. Rather  
10 than developing annual estimates of cash flows into perpetuity, the DCF model can be  
11 simplified to a "constant growth" form:<sup>51</sup>

$$12 \quad P_0 = \frac{D_1}{k_e - g}$$

13 where:  $P_0$  = Current price per share;  
14  $D_1$  = Expected dividend per share in the coming year;  
15  $k_e$  = Cost of equity; and,  
16  $g$  = Investors' long-term growth expectations.

17 The cost of common equity ( $k_e$ ) can be isolated by rearranging terms within the  
18 equation:

---

<sup>51</sup> The constant growth DCF model is dependent on a number of strict assumptions, which in practice are never met. These include a constant growth rate for both dividends and earnings; a stable dividend payout ratio; the discount rate exceeds the growth rate; a constant growth rate for book value and price; a constant earned rate of return on book value; no sales of stock at a price above or below book value; a constant price-earnings ratio; a constant discount rate (i.e., no changes in risk or interest rate levels and a flat yield curve); and all the above extend to infinity. Nevertheless, the DCF method provides a workable and practical approach to estimate investors' required return that is widely referenced in utility ratemaking.

$$k_e = \frac{D_1}{P_0} + g$$

This constant growth form of the DCF model recognizes that the rate of return to stockholders consists of two parts: 1) dividend yield ( $D_1/P_0$ ); and 2) growth ( $g$ ). In other words, investors expect to receive a portion of their total return in the form of current dividends and the remainder through price appreciation.

**Q56. WHAT STEPS ARE REQUIRED TO APPLY THE CONSTANT GROWTH DCF MODEL?**

A56. The first step in implementing the constant growth DCF model is to determine the expected dividend yield ( $D_1/P_0$ ) for the firm in question. This is usually calculated based on an estimate of dividends to be paid in the coming year divided by the current price of the stock. The second, and more controversial, step is to estimate investors' long-term growth expectations ( $g$ ) for the firm. The final step is to add the firm's dividend yield and estimated growth rate to arrive at an estimate of its cost of common equity.

**Q57. HOW DO YOU DETERMINE THE DIVIDEND YIELDS FOR THE FIRMS IN THE UTILITY GROUP?**

A57. I rely on Value Line's estimates of dividends to be paid by each of these utilities over the next twelve months as  $D_1$ . This annual dividend is then divided by a 30-day average stock price for each utility to arrive at the expected dividend yield. The expected dividends, stock prices, and resulting dividend yields for the firms in the Utility Group are presented on page 1 of Exhibit AMM-5. As shown there, dividend yields for the firms in the Utility Group range from 2.5% to 5.1% and average 3.9%.

**Q58. WHAT IS THE NEXT STEP IN APPLYING THE CONSTANT GROWTH DCF MODEL?**

A58. The next step is to evaluate long-term growth expectations, or "g", for the firm in question. In constant growth DCF theory, earnings, dividends, book value, and market

1 price are all assumed to grow in lockstep, and the growth horizon of the DCF model is  
2 infinite. But implementation of the DCF model is more than just a theoretical exercise;  
3 it is an attempt to replicate the mechanism investors used to arrive at observable stock  
4 prices. A wide variety of techniques can be used to derive growth rates, but the only  
5 “g” that matters in applying the DCF model is the value that investors expect.

6 **Q59. WHAT ARE INVESTORS MOST LIKELY TO CONSIDER IN DEVELOPING**  
7 **THEIR LONG-TERM GROWTH EXPECTATIONS?**

8 A59. Implementation of the DCF model is solely concerned with replicating the forward-  
9 looking evaluation of real-world investors. In the case of utilities, dividend growth rates  
10 are not likely to provide a meaningful guide to investors’ current growth expectations.  
11 Utility dividend policies reflect the need to accommodate business risks and investment  
12 requirements in the industry, as well as potential uncertainties in the capital markets. As  
13 a result, dividend growth in the utility industry generally lags growth in earnings as  
14 utilities conserve financial resources.

15 A measure that plays a pivotal role in determining investors’ long-term growth  
16 expectations is future trends in EPS, which provide the source for future dividends and  
17 ultimately support share prices. The importance of earnings in evaluating investors’  
18 expectations and requirements is well accepted in the investment community, and  
19 surveys of analytical techniques relied on by professional analysts indicate that growth  
20 in earnings is far more influential than trends in DPS.

21 The availability of projected EPS growth rates is also key to investors relying  
22 on this measure as compared to future trends in DPS. Apart from Value Line, investment  
23 advisory services do not generally publish comprehensive DPS growth projections, and  
24 this scarcity of dividend growth rates relative to the abundance of earnings forecasts  
25 attests to their relative influence. The fact that securities analysts focus on EPS growth,  
26 and that DPS growth rates are not routinely published, indicates that projected EPS

1 growth rates are likely to provide a superior indicator of the future long-term growth  
2 expected by investors.

3 **Q60. DO THE GROWTH RATE PROJECTIONS OF SECURITY ANALYSTS**  
4 **CONSIDER HISTORICAL TRENDS?**

5 A60. Yes. Professional security analysts study historical trends extensively in developing  
6 their projections of future earnings. Hence, to the extent there is any useful information  
7 in historical patterns, that information is incorporated into analysts' growth forecasts.

8 **Q61. WHAT GROWTHG RATES ARE SECURITY ANALYSTS CURRENTLY**  
9 **PROJECTING FOR THE FIRMS IN THE PROXY GROUP?**

10 A61. EPS growth projections for each of the firms in the Utility Group reported by Value  
11 Line, IBES, and Zacks are displayed on page 2 of Schedule AMM-5.

12 **Q62. WHAT OTHER TECHNIQUE CAN BE USED TO ESTIMATE INVESTORS'**  
13 **EXPECTATIONS OF FUTURE LONG-TERM GROWTH WHEN APPLYING**  
14 **THE CONSTANT GROWTH DCF MODEL?**

15 A62. In constant growth theory, growth in book equity will be equal to the product of the  
16 earnings retention ratio (one minus the dividend payout ratio) and the earned rate of  
17 return on book equity. Furthermore, if the earned rate of return and the payout ratio are  
18 constant over time, growth in earnings and dividends will be equal to growth in book  
19 value. Even though these conditions are never met in practice, this "sustainable growth"  
20 approach may provide a rough guide for evaluating a firm's growth prospects and is  
21 sometimes proposed in regulatory proceedings.

22 The sustainable growth rate is calculated by the formula,  $g = br + sv$ , where "b"  
23 is the expected retention ratio, "r" is the expected earned return on equity, "s" is the  
24 percent of common equity expected to be issued annually as new common stock, and  
25 "v" is the equity accretion rate. Under DCF theory, the "sv" factor is a component of  
26 the growth rate designed to capture the impact of issuing new common stock at a price



1 above, or below, book value. The sustainable, “br+sv” growth rates for each firm in the  
2 proxy group are summarized on page 2 of Exhibit AMM-5, with the underlying details  
3 being presented in Exhibit AMM-6.

4 The sustainable growth rate analysis shown in Exhibit AMM-6 incorporates an  
5 “adjustment factor” because Value Line’s reported returns are based on year-end book  
6 values. Since earnings is a flow over the year while book value is determined at a given  
7 point in time, the measurement of earnings and book value are distinct concepts. It is  
8 this fundamental difference between a flow (earnings) and point estimate (book value)  
9 that makes it necessary to adjust to mid-year in calculating the ROE. Given that book  
10 value will increase or decrease over the year, using year-end book value (as Value Line  
11 does) understates or overstates the average investment that corresponds to the flow of  
12 earnings. To address this concern, earnings must be matched with a corresponding  
13 representative measure of book value, or the resulting ROE will be distorted. The  
14 adjustment factor determined in Exhibit AMM-6, is solely a means of converting Value  
15 Line’s end-of-period values to an average return over the year, and the formula for this  
16 adjustment is supported in recognized textbooks and has been adopted by other  
17 regulators.<sup>52</sup>

18 **Q63. ARE THERE SIGNIFICANT SHORTCOMINGS ASSOCIATED WITH THE**  
19 **“BR+SV” GROWTH RATE?**

20 A63. Yes. First, in order to calculate the sustainable growth rate, it is necessary to develop  
21 estimates of investors’ expectations for four separate variables; namely, “b”, “r”, “s”,  
22 and “v.” Given the inherent difficulty in forecasting each parameter and the difficulty  
23 of estimating the expectations of investors, the potential for measurement error is  
24 significantly increased when using four variables, as opposed to referencing a direct

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<sup>52</sup> See, Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 305-306; *Bangor Hydro-Electric Co. et al.*, 122 FERC ¶ 61,265 at n.12 (2008).

1 projection for EPS growth. Second, empirical research in the finance literature indicates  
2 that sustainable growth rates are not as significantly correlated to measures of value,  
3 such as share prices, as are analysts' EPS growth forecasts.<sup>53</sup> The "sustainable growth"  
4 approach is included for completeness, but evidence indicates that analysts' forecasts  
5 provide a superior and more direct guide to investors' growth expectations.  
6 Accordingly, I give less weight to cost of equity estimates based on br+sv growth rates  
7 in evaluating the results of the DCF model.

8 **Q64. WHAT COST OF COMMON EQUITY ESTIMATES ARE IMPLIED FOR THE**  
9 **UTILITY GROUP USING THE DCF MODEL?**

10 A64. After combining the dividend yields and respective growth projections for each utility,  
11 the resulting cost of common equity estimates are shown on page 3 of Exhibit AMM-5.

12 **Q65. IN EVALUATING THE RESULTS OF THE CONSTANT GROWTH DCF**  
13 **MODEL, IS IT APPROPRIATE TO ELIMINATE ILLOGICAL ESTIMATES AT**  
14 **THE EXTREME LOW OR HIGH END OF THE RANGE?**

15 A65. Yes. It is essential that cost of equity estimates resulting from quantitative methods pass  
16 fundamental tests of reasonableness and economic logic. Accordingly, DCF estimates  
17 that are implausibly low or high should be eliminated.

18 **Q66. HAVE OTHER REGULATORS EMPLOYED SUCH TESTS?**

19 A66. Yes. FERC has noted that adjustments are justified where applications of the DCF  
20 approach and other methods produce illogical results. FERC evaluates low-end DCF  
21 results against observable yields on long-term public utility debt and has recognized that  
22 it is appropriate to eliminate estimates that do not sufficiently exceed this threshold.<sup>54</sup>

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<sup>53</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 307.

<sup>54</sup> See, e.g., *Southern California Edison Co.*, 131 FERC ¶ 61,020 at P 55 (2010).

1 FERC’s current practice is to exclude low-end cost of estimates that fall below the six-  
2 month average yield on Baa-rated utility bonds, plus 20% of the CAPM market risk  
3 premium.<sup>55</sup> In addition, FERC also excluding estimates that are “irrationally or  
4 anomalously high.”<sup>56</sup> Similarly, the Staff of the MDPSC has also eliminated DCF  
5 values where they do not offer a sufficient premium above the cost of debt to be  
6 attractive to an equity investor.<sup>57</sup>

7 **Q67. DO YOU EXCLUDE ANY ESTIMATES AT THE LOW OR HIGH END OF THE**  
8 **RANGE OF RESULTS?**

9 A67. Yes. As highlighted on page 3 of Exhibit AMM-5, I eliminate sixteen low-end DCF  
10 estimates ranging from -7.6% to 7.3%, as well as high-end DCF estimates of 19.8% and  
11 20.4%. After removing these illogical values, lower end of the DCF results is set by a  
12 cost of equity estimate of 7.4%, while the upper end is established by a cost of equity  
13 estimate of 14.9%. While a 14.9% cost of equity estimate may exceed the majority of  
14 the remaining values, low-end DCF estimates in the 7.4% to 8.1% range are assuredly  
15 far below investors’ required rate of return. Taken together and considered along with  
16 the balance of the results, the remaining values provide a reasonable basis on which to  
17 frame the range of plausible DCF estimates and evaluate investors’ required rate of  
18 return.

---

<sup>55</sup> Based on the six-month average yield at March 2023 of 5.75% and the 7.8% market risk premium shown on Exhibit AMM-7, this implies a current low-end threshold of approximately 7.3%.

<sup>56</sup> *Ass’n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, 171 FERC ¶ 61,154 at P 152 (2020).

<sup>57</sup> See, e.g., Maryland Public Service Commission, Case No. 9670, *Direct Testimony and Exhibits of Drew M. McAuliffe* (Dec. 2, 2021) at 15-16.

1 **Q68. WHAT COST OF EQUITY ESTIMATES ARE IMPLIED BY YOUR DCF**  
2 **RESULTS FOR THE UTILITY GROUP?**

3 A68. As shown on page 3 of Exhibit AMM-5 and summarized in Table 4, after eliminating  
4 illogical values, application of the constant growth DCF model resulted in the following  
5 cost of equity estimates:

6 **TABLE 4**  
7 **DCF RESULTS – UTILITY GROUP**

<u>Growth Rate</u>	<u>Average</u>	<u>Midpoint</u>
Value Line	9.4%	10.1%
IBES	10.4%	10.2%
Zacks	10.0%	11.5%
br + sv	9.1%	9.3%

8 **C. Capital Asset Pricing Model**

9 **Q69. PLEASE DESCRIBE THE CAPM.**

10 A69. The CAPM is a theory of market equilibrium that measures risk using the beta  
11 coefficient. Assuming investors are fully diversified, the relevant risk of an individual  
12 asset (e.g., common stock) is its volatility relative to the market as a whole, with beta  
13 reflecting the tendency of a stock's price to follow changes in the market. A stock that  
14 tends to respond less to market movements has a beta less than 1.0, while stocks that  
15 tend to move more than the market have betas greater than 1.0. The CAPM is  
16 mathematically expressed as:

17 
$$R_j = R_f + \beta_j(R_m - R_f)$$

18 where:  $R_j$  = required rate of return for stock j;  
19  $R_f$  = risk-free rate;  
20  $R_m$  = expected return on the market portfolio; and,  
21  $\beta_j$  = beta, or systematic risk, for stock j.

22 Under the CAPM formula above, a stock's required return is a function of the  
23 risk-free rate ( $R_f$ ), plus a risk premium that is scaled to reflect the relative volatility of a

1 firm's stock price, as measured by beta ( $\beta$ ). Like the DCF model, the CAPM is an *ex-*  
2 *ante*, or forward-looking model based on expectations of the future. As a result, to  
3 produce a meaningful estimate of investors' required rate of return, the CAPM must be  
4 applied using estimates that reflect the expectations of actual investors in the market,  
5 not with backward-looking, historical data.

6 **Q70. WHY IS THE CAPM APPROACH A RELEVANT COMPONENT WHEN**  
7 **EVALUATING THE COST OF EQUITY FOR NORTHWESTERN?**

8 A70. The CAPM approach (which also forms the foundation of the ECAPM) generally is  
9 considered to be the most widely referenced method for estimating the cost of equity  
10 among academicians and professional practitioners, with the pioneering researchers of  
11 this method receiving the Nobel Prize in 1990. Because this is the dominant model for  
12 estimating the cost of equity outside the regulatory sphere, the CAPM (and ECAPM)  
13 provides important insight into investors' required rate of return for utility stocks.

14 **Q71. HOW DO YOU APPLY THE CAPM TO ESTIMATE THE ROE?**

15 A71. Application of the CAPM to the Utility Group is based on a forward-looking estimate  
16 for investors' required rate of return from common stocks presented in Exhibit AMM-7.  
17 To capture the expectations of today's investors in current capital markets, the expected  
18 market rate of return was estimated by conducting a DCF analysis on the dividend  
19 paying firms in the S&P 500.

20 The dividend yield for each firm is obtained from Value Line, and the growth  
21 rate is equal to the average of the earnings growth projections for each firm published  
22 by IBES, Zacks, and Value Line, with each firm's dividend yield and growth rate being  
23 weighted by its proportionate share of total market value. After removing companies  
24 with growth rates that were negative or greater than 20%, the weighted average of the  
25 projections for the individual firms implies an average growth rate over the next five  
26 years of 9.5%. Combining this average growth rate with a year-ahead dividend yield of

1 2.1% results in a current cost of common equity estimate for the market as a whole ( $R_m$ )  
2 of 11.6%. Subtracting a 3.8% risk-free rate based on the average yield on 30-year  
3 Treasury bonds for the six month period ending March 2023 produced a market equity  
4 risk premium of 7.8%.

5 **Q72. WHAT IS THE SOURCE OF THE BETA VALUES YOU USED TO APPLY THE**  
6 **CAPM?**

7 A72. I relied on the beta values reported by Value Line, which in my experience is the most  
8 widely referenced source for beta in regulatory proceedings. As noted in *New*  
9 *Regulatory Finance*:

10 Value Line is the largest and most widely circulated independent  
11 investment advisory service, and influences the expectations of a large  
12 number of institutional and individual investors. ... Value Line betas are  
13 computed on a theoretically sound basis using a broadly based market  
14 index, and they are adjusted for the regression tendency of betas to  
15 converge to 1.00.<sup>58</sup>

16 **Q73. WHAT ELSE SHOULD BE CONSIDERED IN APPLYING THE CAPM?**

17 A73. Financial research indicates that the CAPM does not fully account for observed  
18 differences in rates of return attributable to firm size. Accordingly, a modification is  
19 required to account for this size effect. As explained by Morningstar:

20 One of the most remarkable discoveries of modern finance is that of a  
21 relationship between company size and return. ... The relationship  
22 between company size and return cuts across the entire size spectrum; it  
23 is not restricted to the smallest stocks. ... This size-rated phenomenon  
24 has prompted a revision to the CAPM, which includes a size premium.<sup>59</sup>

25 According to the CAPM, the expected return on a security should consist of the  
26 riskless rate, plus a premium to compensate for the systematic risk of the particular  
27 security. The degree of systematic risk is represented by the beta coefficient. The need

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<sup>58</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports (2006) at 71.

<sup>59</sup> Morningstar, *Ibbotson SBBI 2015 Classic Yearbook*, at pp. 99, 108.

1 for the size adjustment arises because differences in investors' required rates of return  
2 that are related to firm size are not fully captured by beta. To account for this,  
3 researchers have developed size premiums that need to be added to account for the level  
4 of a firm's market capitalization in determining the CAPM cost of equity.<sup>60</sup>  
5 Accordingly, my CAPM analysis also incorporates an adjustment to recognize the  
6 impact of size distinctions, as measured by the market capitalization for the firms in the  
7 Utility Group.

8 **Q74. WHAT IS THE BASIS FOR THE SIZE ADJUSTMENT?**

9 A74. The size adjustment required in applying the CAPM is based on the finding that *after*  
10 *controlling for risk differences reflected in beta*, the CAPM overstates returns to  
11 companies with larger market capitalizations and understates returns for relatively  
12 smaller firms. The size adjustments utilized in my analysis are sourced from Kroll, who  
13 now publish the well-known compilation of capital market series originally developed  
14 by Professor Roger G. Ibbotson of the Yale School of Management, and most recently  
15 published by Kroll. Calculation of the size adjustments involve the following steps:

- 16 1. Divide all stocks traded on the NYSE, NYSE MKT, and NASDAQ indices  
17 into deciles based on their market capitalization.
- 18 2. Using the average beta value for each decile, calculate the implied excess  
19 return over the risk-free rate using the CAPM.
- 20 3. Compare the calculated excess returns based on the CAPM to the actual excess  
21 returns for each decile, with the difference being the increment of return that is  
22 related to firm size, or "size adjustment."

23 *New Regulatory Finance* observed that "small market-cap stocks experience  
24 higher returns than large market-cap stocks with equivalent betas," and concluded that

---

<sup>60</sup> Originally compiled by Ibbotson Associates and published in their annual yearbook entitled, *Stocks, Bonds, Bills and Inflation*, these size premia are now developed by Kroll and presented in its *2022 Supplementary CRSP Decile Size Study Data*.

1 “the CAPM understates the risk of smaller utilities, and a cost of equity based purely on  
2 a CAPM beta will therefore produce too low an estimate.”<sup>61</sup>

3 **Q75. WHAT IS THE IMPLIED ROE FOR THE UTILITY GROUP USING THE**  
4 **CAPM APPROACH?**

5 A75. As shown on Exhibit AMM-7, after adjusting for the impact of firm size , the CAPM  
6 approach implies an average ROE for the Utility Group of 11.2%.

7 **D. Empirical Capital Asset Pricing Model**

8 **Q76. HOW DOES THE ECAPM APPROACH DIFFER FROM TRADITIONAL**  
9 **APPLICATIONS OF THE CAPM?**

10 A76. Empirical tests of the CAPM have shown that low-beta securities earn returns somewhat  
11 higher than the CAPM would predict, and high-beta securities earn less than predicted.  
12 In other words, the CAPM tends to overstate the actual sensitivity of the cost of capital  
13 to beta, with low-beta stocks tending to have higher returns and high-beta stocks tending  
14 to have lower risk returns than predicted by the CAPM. This is illustrated graphically  
15 in Figure 2:

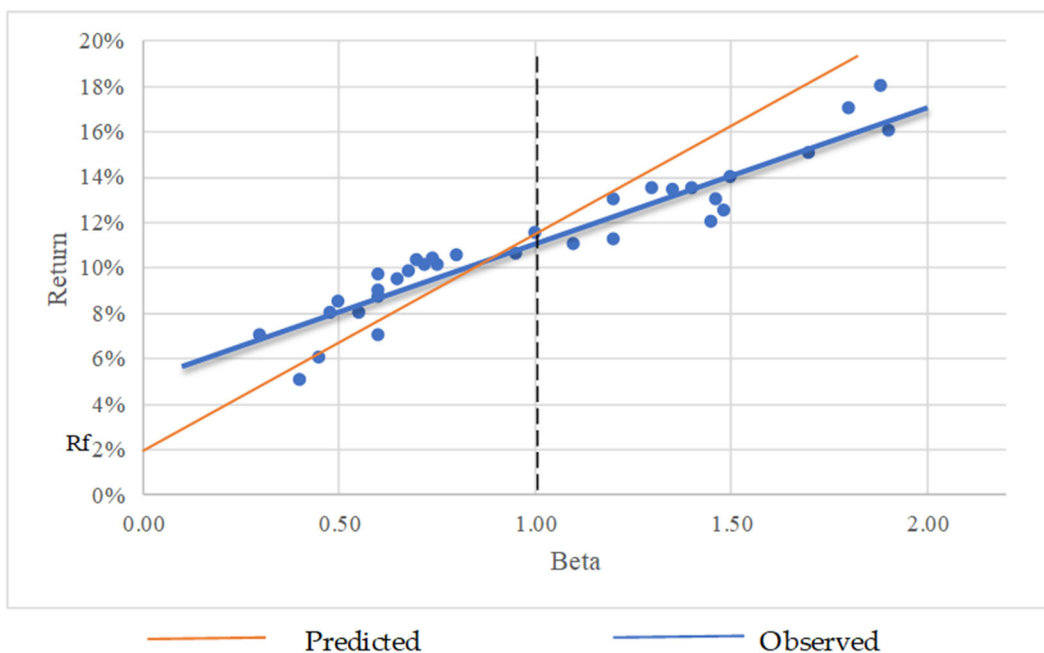
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<sup>61</sup> Roger A. Morin, *New Regulatory Finance* 187 (Pub. Utils. Reports, Inc., 2006).



1  
2

**FIGURE 2**  
**CAPM – PREDICTED VS. OBSERVED RETURNS**



3  
4  
5  
6

Because the betas of utility stocks, including those in the Utility Group, are generally less than 1.0, this implies that cost of equity estimates based on the traditional CAPM would understate the cost of equity. This empirical finding is widely reported in the finance literature, as summarized in *New Regulatory Finance*:

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12  
13

As discussed in the previous section, several finance scholars have developed refined and expanded versions of the standard CAPM by relaxing the constraints imposed on the CAPM, such as dividend yield, size, and skewness effects. These enhanced CAPMs typically produce a risk-return relationship that is flatter than the CAPM prediction in keeping with the actual observed risk-return relationship. The ECAPM makes use of these empirical relationships.<sup>62</sup>

14  
15  
16

As discussed in *New Regulatory Finance*,<sup>63</sup> based on a review of the empirical evidence, the expected return on a security is related to its risk by the ECAPM, which is represented by the following formula:

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<sup>62</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports (2006) at 189.

<sup>63</sup> *Id.* at 190.

1 
$$R_j = R_f + 0.25(R_m - R_f) + 0.75[\beta_j(R_m - R_f)]$$

2 Like the CAPM formula presented earlier, the ECAPM represents a stock's  
3 required return as a function of the risk-free rate ( $R_f$ ), plus a risk premium. In the  
4 formula above, this risk premium is composed of two parts: (1) the market risk premium  
5 ( $R_m - R_f$ ) weighted by a factor of 25%, and (2) a company-specific risk premium based  
6 on the stock's relative volatility [ $\beta_j(R_m - R_f)$ ] weighted by 75%. This ECAPM equation,  
7 and its associated weighting factors, recognizes the observed relationship between  
8 standard CAPM estimates and the cost of capital documented in the financial research,  
9 and corrects for the understated returns that would otherwise be produced for low beta  
10 stocks.

11 **Q77. HAVE OTHER REGULATORS RELIED ON THE ECAPM?**

12 A77. Yes. Staff witnesses for the MDPSC have relied on this approach in prior testimony,  
13 noting that “the ECAPM model adjusts for the tendency of the CAPM model to  
14 underestimate returns for low Beta stocks,” and concluding that, “the ECAPM gives a  
15 more realistic measure of the ROE than the CAPM model does.”<sup>64</sup> The Staff of the  
16 Colorado Public Utilities Commission has recognized that, “The ECAPM is an  
17 empirical method that attempts to enhance the CAPM analysis by flattening the risk-  
18 return relationship,”<sup>65</sup> and relied on the same ECAPM equation presented above.<sup>66</sup>

19 The New York Department of Public Service also routinely incorporates the  
20 results of the ECAPM approach, which it refers to as the “zero-beta CAPM.”<sup>67</sup> The  
21 Regulatory Commission of Alaska has also relied on the ECAPM approach, noting that:

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<sup>64</sup> *Direct Testimony and Exhibits of Julie McKenna*, Maryland PSC Case No. 9299 (Oct. 12, 2012) at 9.

<sup>65</sup> Proceeding No. 13AL-0067G, *Answer Testimony and Schedules of Scott England* (July 31, 2013) at 47.

<sup>66</sup> *Id.* at 48.

<sup>67</sup> *See, e.g.*, New York Department of Public Service, Cases 19-E-0065 19-G-0066, *Prepared Fully Redacted Testimony of Staff Finance Panel* (May 2019) at 94-95.

1 Tesoro averaged the results it obtained from CAPM and ECAPM while  
2 at the same time providing empirical testimony that the ECAPM results  
3 are more accurate than [sic] traditional CAPM results. The reasonable  
4 investor would be aware of these empirical results. Therefore, we adjust  
5 Tesoro's recommendation to reflect only the ECAPM result.<sup>68</sup>

6 The Wyoming Office of Consumer Advocate, an independent division of the Wyoming  
7 Public Service Commission, has also relied on this ECAPM formula,<sup>69</sup> as has a witness  
8 for the Office of Arkansas Attorney General.<sup>70</sup> In a 2018 decision, the Montana Public  
9 Service Commission determined that "[t]he evidence in this proceeding has convinced  
10 the Commission that the [ECAPM] should be the primary method for estimating . . . the  
11 cost of equity."<sup>71</sup>

12 **Q78. WHAT COST OF EQUITY IS INDICATED BY THE ECAPM?**

13 A78. My application of the ECAPM is based on the same forward-looking market rate of  
14 return, risk-free rates, and beta values discussed earlier in connections with the CAPM.  
15 As shown on Exhibit AMM-8, applying the forward-looking ECAPM based on the  
16 average yield on 30-year Treasury bonds for the six month period ending March 2023  
17 results in an average cost of equity estimate 11.4% after incorporating the size  
18 adjustment corresponding to the market capitalization of the individual utilities.

19 **E. Utility Risk Premium**

20 **Q79. BRIEFLY DESCRIBE THE RISK PREMIUM METHOD.**

21 A79. The risk premium method extends the risk-return tradeoff observed with bonds to  
22 estimate investors' required rate of return on common stocks. The cost of equity is  
23 estimated by first determining the additional return investors require to forgo the relative  
24 safety of bonds and to bear the greater risks associated with common stock, and by then

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<sup>68</sup> Regulatory Commission of Alaska, Order No. P-97-004(151) (Nov. 27, 2002) at 145.

<sup>69</sup> Docket No. 30011-97-GR-17, *Pre-Filed Direct Testimony of Anthony J. Ornelas* (May 1, 2018) at 52-53.

<sup>70</sup> Docket No. 17-071-U, *Direct Testimony of Marlon F. Griffing, PH.D.* (May 29, 2018) at 33-35.

<sup>71</sup> Montana Public Service Commission, Docket No. D2017.9.80, Order No. 7575c (Sep. 26, 2018) at P 114.

1 adding this equity risk premium to the current yield on bonds. Like the DCF model, the  
2 risk premium method is capital market oriented. However, unlike DCF models, which  
3 indirectly impute the cost of equity, risk premium methods directly estimate investors'  
4 required rate of return by adding an equity risk premium to observable bond yields.

5 **Q80. IS THE RISK PREMIUM APPROACH A WIDELY ACCEPTED METHOD FOR**  
6 **ESTIMATING THE COST OF EQUITY?**

7 A80. Yes. The risk premium approach is based on the fundamental risk-return principle that  
8 is central to finance, which holds that investors will require a premium in the form of a  
9 higher return to assume additional risk. This method is routinely referenced by the  
10 investment community and in academia and regulatory proceedings<sup>72</sup> and provides an  
11 important tool in estimating a just and reasonable ROE for NorthWestern.

12 **Q81. HOW DO YOU IMPLEMENT THE RISK PREMIUM METHOD?**

13 A81. Estimates of equity risk premiums for utilities are based on surveys of previously  
14 authorized ROEs. Authorized ROEs presumably reflect regulatory commissions' best  
15 estimates of the cost of equity, however determined, at the time they issued their final  
16 orders. Such ROEs should represent a balanced and impartial outcome that considers  
17 the need to maintain a utility's financial integrity and ability to attract capital. Moreover,  
18 allowed returns are an important consideration for investors and have the potential to  
19 influence other observable investment parameters, including credit ratings and  
20 borrowing costs. Thus, when considered in the context of a complete and rigorous  
21 analysis, this data provides a logical and frequently referenced basis for estimating  
22 equity risk premiums for regulated utilities.

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<sup>72</sup> See, e.g., James C. Bonbright, Albert L. Danielsen, David R. Kamerschen, *Principles of Public Utility Rates*, Pub. Util. Reports, Inc. (1988) at 322 (noting, "The risk premium approach is probably the second most popular approach to estimating the cost of equity.").

1 **Q82. HOW DO YOU CALCULATE THE EQUITY RISK PREMIUMS BASED ON**  
2 **ALLOWED RETURNS?**

3 A82. The ROEs authorized for electric utilities by regulatory commissions across the U.S.  
4 are compiled by S&P Global Market Intelligence and published in its *RRA Regulatory*  
5 *Focus* report. On page 2 of Exhibit AMM-9, the average yield on public utility bonds  
6 is subtracted from the average allowed ROE to calculate equity risk premiums for each  
7 year between 1974 and 2022.<sup>73</sup> As shown there, over this period these equity risk  
8 premiums average 3.89%, and the yields on public utility bonds average 7.83%.

9 **Q83. IS THERE ANY CAPITAL MARKET RELATIONSHIP THAT MUST BE**  
10 **CONSIDERED WHEN IMPLEMENTING THE RISK PREMIUM METHOD?**

11 A83. Yes. Equity risk premiums are not constant and tend to move inversely with interest  
12 rates. In other words, when interest rate levels are relatively high, equity risk premiums  
13 narrow, and when interest rates are relatively low, equity risk premiums widen. The  
14 implication of this inverse relationship is that the cost of equity does not move as much  
15 as, or in lockstep with interest rates. Accordingly, for a 1% increase or decrease in  
16 interest rates, the cost of equity may only rise or fall some fraction of 1%. Therefore,  
17 when implementing the risk premium method, adjustments may be required to  
18 incorporate this inverse relationship if current interest rate levels have diverged from  
19 the average interest rate level represented in the data set.

20 Current bond yields are lower than those prevailing over the risk premium study  
21 period. Given that equity risk premiums move inversely with interest rates, these lower  
22 bond yields also imply an increase in the equity risk premium. In other words, higher  
23 required equity risk premiums offset the impact of declining interest rates on the ROE.

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<sup>73</sup> My analysis encompasses the entire period for which published data is available.

1 **Q84. IS THIS INVERSE RELATIONSHIP CONFIRMED BY PUBLISHED**  
2 **FINANCIAL RESEARCH?**

3 A84. Yes. There is considerable empirical evidence that when interest rates are relatively  
4 high, equity risk premiums narrow, and when interest rates are relatively low, equity  
5 risk premiums are greater. This inverse relationship between equity risk premiums and  
6 interest rates has been widely reported in the financial literature. As summarized by  
7 *New Regulatory Finance*:

8 Published studies by Brigham, Shome, and Vinson (1985), Harris  
9 (1986), Harris and Marston (1992, 1993), Carleton, Chambers, and  
10 Lakonishok (1983), Morin (2005), and McShane (2005), and others  
11 demonstrate that, beginning in 1980, risk premiums varied inversely with  
12 the level of interest rates – rising when rates fell and declining when rates  
13 rose.<sup>74</sup>

14 Other regulators have also recognized that, while the cost of equity trends in the  
15 same direction as interest rates, these variables do not move in lockstep.<sup>75</sup> This  
16 relationship is illustrated in the figure on page 3 of Exhibit AMM-9.

17 **Q85. WHAT ROE IS IMPLIED BY THE RISK PREMIUM METHOD USING**  
18 **SURVEYS OF ALLOWED RETURNS?**

19 A85. Based on the regression output between the interest rates and equity risk premiums  
20 displayed on page 3 of Exhibit AMM-9, the equity risk premium increases by  
21 approximately 43 basis points for each percentage point drop in the yield on average  
22 public utility bonds. As illustrated on page 1 of Exhibit AMM-9 with an average yield  
23 on public utility bonds for the six month period ending March 2023 of 5.49%, this  
24 implies a current equity risk premium of 4.89%. Adding this equity risk premium to the

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<sup>74</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports (2006) at 128.

<sup>75</sup> See, e.g., California Public Utilities Commission, Decision 08-05-035 (May 29, 2008); Entergy Mississippi Formula Rate Plan FRP-7, [https://cdn.entergy-mississippi.com/userfiles/content/price/tariffs/eml\\_frp.pdf](https://cdn.entergy-mississippi.com/userfiles/content/price/tariffs/eml_frp.pdf) (last visited Apr. 25, 2023); *Martha Coakley et al. v. Bangor Hydro-Elec. Co. et al.*, 147 FERC ¶ 61,234 at P 147 (2014).

1 average yield on Baa utility bonds for the six month period ending March 2023 implies  
2 a current ROE of 10.64%.

### 3 F. Expected Earnings Approach

#### 4 **Q86. WHAT OTHER ANALYSES DO YOU CONDUCT TO ESTIMATE THE ROE?**

5 A86. I also evaluate the ROE using the expected earnings method. Reference to rates of  
6 return available from alternative investments of comparable risk can provide an  
7 important benchmark in assessing the return necessary to assure confidence in the  
8 financial integrity of a firm and its ability to attract capital. This expected earnings  
9 approach is consistent with the economic underpinnings for a just and reasonable rate  
10 of return established by the U.S. Supreme Court in *Bluefield* and *Hope*. Moreover, it  
11 avoids the complexities and limitations of capital market methods and instead focuses  
12 on the returns earned on book equity, which are readily available to investors.

#### 13 **Q87. WHAT ECONOMIC PREMISE SERVES AS THE FOUNDATION FOR THE** 14 **EXPECTED EARNINGS APPROACH?**

15 A87. The simple, but powerful concept underlying the expected earnings approach is that  
16 investors compare each investment alternative with the next best opportunity. If the  
17 utility is unable to offer a return similar to that available from other opportunities of  
18 comparable risk, investors will become unwilling to supply the capital on reasonable  
19 terms. For existing investors, denying the utility an opportunity to earn what is available  
20 from other similar risk alternatives prevents them from earning their opportunity cost of  
21 capital. While I am not a lawyer and do not offer a legal opinion, from my position as  
22 a financial economist this outcome would violate the *Hope* and *Bluefield* standards and  
23 undermine the utility's access to capital on reasonable terms.

1 **Q88. HOW IS THE EXPECTED EARNINGS APPROACH TYPICALLY**  
2 **IMPLEMENTED?**

3 A88. The traditional comparable earnings test identifies a group of companies that are  
4 believed to be comparable in risk to the utility. The actual earnings of those companies  
5 on the book value of their investment are then compared to the allowed return of the  
6 utility. While the traditional comparable earnings test is implemented using historical  
7 data taken from the accounting records, it is also common to use projections of returns  
8 on book investment, such as those published by recognized investment advisory  
9 publications (*e.g.*, Value Line). Because these returns on book value equity are  
10 analogous to the allowed return on a utility’s rate base, this measure of opportunity costs  
11 results in a direct, “apples to apples” comparison.

12 Moreover, regulators do not set the returns that investors earn in the capital  
13 markets, which are a function of dividend payments and fluctuations in common stock  
14 prices—both of which are outside their control. Regulators can only establish the  
15 allowed ROE, which is applied to the book value of a utility’s investment in rate base,  
16 as determined from its accounting records. This is analogous to the expected earnings  
17 approach, which measures the return that investors expect the utility to earn on book  
18 value. As a result, the expected earnings approach provides a meaningful guide to  
19 ensure that the allowed ROE is similar to what other utilities of comparable risk will  
20 earn on invested capital. This expected earnings test does not require theoretical models  
21 to indirectly infer investors’ perceptions from stock prices or other market data. As long  
22 as the proxy companies are similar in risk, their expected earned returns on invested  
23 capital provide a direct benchmark for investors’ opportunity costs that is independent  
24 of fluctuating stock prices, market-to-book ratios, debates over DCF growth rates, or  
25 the limitations inherent in any theoretical model of investor behavior.



1 **Q89. WHAT ROE IS INDICATED FOR NORTHWESTERN BASED ON THE**  
2 **EXPECTED EARNINGS APPROACH?**

3 A89. For the firms in the Utility Group, the year-end returns on common equity projected by  
4 Value Line over its forecast horizon are shown on Exhibit AMM-10. As I explained  
5 earlier in my discussion of the  $br+sv$  growth rates used in applying the DCF model,  
6 Value Line's returns on common equity are calculated using year-end equity balances,  
7 which understates the average return earned over the year.<sup>76</sup> Accordingly, these  
8 year-end values were converted to average returns using the same adjustment factor  
9 discussed earlier and developed on Exhibit AMM-6. As shown on Exhibit AMM-10,  
10 Value Line's projections for the Utility Group suggest an average ROE of 11.1%.

11 **G. Flotation Costs**

12 **Q90. WHAT OTHER CONSIDERATION IS RELEVANT IN SETTING THE**  
13 **RETURN ON EQUITY FOR A UTILITY?**

14 A90. The common equity used to finance the investment in utility assets is provided from  
15 either the sale of stock in the capital markets or from retained earnings not paid out as  
16 dividends. When equity is raised through the sale of common stock, there are costs  
17 associated with "floating" the new equity securities. These flotation costs include  
18 services such as legal, accounting, and printing, as well as the fees and discounts paid  
19 to compensate brokers for selling the stock to the public. Also, some argue that the  
20 "market pressure" from the additional supply of common stock and other market factors  
21 may further reduce the amount of funds a utility nets when it issues common equity.

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<sup>76</sup> For example, to compute the annual return on a passbook savings account with a beginning balance of \$1,000 and an ending balance of \$5,000, the interest income would be divided by the average balance of \$3,000. Using the \$5,000 balance at the end of the year would understate the actual return.

1 **Q91. ARE EQUITY FLOTATION COSTS PARTICULARLY RELEVANT TO**  
2 **NORTHWESTERN?**

3 A91. Yes. In order to finance a substantial capital expenditures program and maintain the  
4 Company's credit standing, NorthWestern will continue to rely on additional sales of  
5 common stock to raise new capital. As Fitch reported, "To enhance liquidity, the  
6 company raised \$200 million of equity through common stock issuances in 2021 and  
7 plans to issue \$299 million of equity in 2022 under its equity forward agreement."<sup>77</sup>  
8 Moody's noted that the Company's stable outlook was dependent in part on  
9 "management's commitment to issue around \$300 million of incremental equity by  
10 February 2023."<sup>78</sup>

11 **Q92. IS THERE AN ESTABLISHED MECHANISM FOR A UTILITY TO**  
12 **RECOGNIZE EQUITY ISSUANCE COSTS?**

13 A92. No. While debt flotation costs are recorded on the books of the utility, amortized over  
14 the life of the issue, and thus increase the effective cost of debt capital, there is no similar  
15 accounting treatment to ensure that equity flotation costs are recorded and ultimately  
16 recognized. No rate of return is authorized on flotation costs necessarily incurred to  
17 obtain a portion of the equity capital used to finance plant. In other words, equity flotation  
18 costs are not included in a utility's rate base because neither that portion of the gross  
19 proceeds from the sale of common stock used to pay flotation costs is available to invest  
20 in plant and equipment, nor are flotation costs capitalized as an intangible asset. Unless  
21 some provision is made to recognize these issuance costs, a utility's revenue requirements  
22 will not fully reflect all of the costs incurred for the use of investors' funds. Because there  
23 is no accounting convention to accumulate the flotation costs associated with equity

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<sup>77</sup> Fitch Ratings, Inc., *NorthWestern Corporation*, Rating Report (May 19, 2022).

<sup>78</sup> Moody's Investors Service, *Moody's affirms NorthWestern Corp. ratings; outlook changed to stable from negative*, Rating Action (May 11, 2022).

1 issues, they must be accounted for indirectly, with an upward adjustment to the cost of  
2 equity being the most appropriate mechanism.

3 **Q93. IS THERE ACADEMIC EVIDENCE THAT SUPPORTS A FLOTATION COST**  
4 **ADJUSTMENT?**

5 A93. Yes. The financial literature and evidence in this case provides a sound theoretical and  
6 practical basis to include consideration of flotation costs for NorthWestern. An  
7 adjustment for flotation costs associated with past sales of common stock is appropriate,  
8 even when the utility is not contemplating any new sales of common stock. The need  
9 for a flotation cost adjustment to compensate for past common stock offerings has been  
10 recognized in the financial literature. In a *Public Utilities Fortnightly* article, for  
11 example, Brigham, Aberwald, and Gapenski demonstrated that even if no further stock  
12 issues are contemplated, a flotation cost adjustment in all future years is required to keep  
13 shareholders whole, and that the flotation cost adjustment must consider total equity,  
14 including retained earnings.<sup>79</sup> Similarly, *New Regulatory Finance* contains the  
15 following discussion:

16 Another controversy is whether the flotation cost allowance should still  
17 be applied when the utility is not contemplating an imminent common  
18 stock issue. Some argue that flotation costs are real and should be  
19 recognized in calculating the fair rate of return on equity, but only at the  
20 time when the expenses are incurred. In other words, the flotation cost  
21 allowance should not continue indefinitely, but should be made in the  
22 year in which the sale of securities occurs, with no need for continuing  
23 compensation in future years. This argument implies that the company  
24 has already been compensated for these costs and/or the initial  
25 contributed capital was obtained freely, devoid of any flotation costs,  
26 which is an unlikely assumption, and certainly not applicable to most  
27 utilities. ... The flotation cost adjustment cannot be strictly forward-

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<sup>79</sup> E. F. Brigham, D. A. Aberwald, and L. C. Gapenski, *Common Equity Flotation Costs and Rate Making*, Pub. Util. Fortnightly (May 2, 1985).

1 looking unless all past flotation costs associated with past issues have  
 2 been recovered.<sup>80</sup>

3 **Q94. CAN YOU ILLUSTRATE WHY INVESTORS WILL NOT HAVE THE**  
 4 **OPPORTUNITY TO EARN THEIR REQUIRED ROE UNLESS A FLOTATION**  
 5 **COST ADJUSTMENT IS INCLUDED?**

6 A94. Yes. Assume a utility sells \$10 worth of common stock at the beginning of year 1. If  
 7 the utility incurs flotation costs of \$0.48 (5% of the net proceeds), then only \$9.52 is  
 8 available to invest in rate base. Assume that common shareholders' required rate of  
 9 return is 10.5%, the expected dividend in year 1 is \$0.50 (*i.e.*, a dividend yield of 5%),  
 10 and that growth is expected to be 5.5% annually. As developed in Table 5 below, if the  
 11 allowed rate of return on common equity is only equal to the utility's 10.5% "bare  
 12 bones" cost of equity, common stockholders will not earn their required rate of return  
 13 on their \$10 investment, since growth will only be 5.25%, instead of 5.5%:

14 **TABLE 5**  
 15 **NO FLOTATION COST ADJUSTMENT**

<u>Year</u>	<u>Common Stock</u>	<u>Retained Earnings</u>	<u>Total Equity</u>	<u>Market Price</u>	<u>M/B Ratio</u>	<u>Allowed ROE</u>	<u>EPS</u>	<u>DPS</u>	<u>Payout Ratio</u>
1	\$ 9.52	\$ -	\$ 9.52	\$10.00	1.050	10.50%	\$ 1.00	\$ 0.50	50.0%
2	\$ 9.52	\$ 0.50	\$ 10.02	\$10.52	1.050	10.50%	\$ 1.05	\$ 0.53	50.0%
3	\$ 9.52	\$ 0.53	<u>\$ 10.55</u>	<u>\$11.08</u>	1.050	10.50%	<u>\$ 1.11</u>	<u>\$ 0.55</u>	50.0%
<b>Growth</b>			<b>5.25%</b>	<b>5.25%</b>			<b>5.25%</b>	<b>5.25%</b>	

16 The reason that investors never really earn 10.5% on their investment in the above  
 17 example is that the \$0.48 in flotation costs initially incurred to raise the common stock  
 18 is not treated like debt issuance costs (*i.e.*, amortized into interest expense and therefore  
 19 increasing the embedded cost of debt), nor is it included as an asset in rate base.

20 Including a flotation cost adjustment allows investors to be fully compensated  
 21 for the impact of these costs. One commonly referenced method for calculating the

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<sup>80</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 335.

1 flotation cost adjustment is to multiply the dividend yield by a flotation cost percentage.  
 2 Thus, with a 5% dividend yield and a 5% flotation cost percentage, the flotation cost  
 3 adjustment in the above example would be approximately 25 basis points. As shown in  
 4 Table 6 below, by allowing a rate of return on common equity of 10.75% (a 10.5% cost  
 5 of equity plus a 25 basis point flotation cost adjustment), investors earn their 10.5%  
 6 required rate of return, since actual growth is now equal to 5.5%:

7 **TABLE 6**  
 8 **INCLUDING FLOTATION COST ADJUSTMENT**

<u>Year</u>	<u>Common Stock</u>	<u>Retained Earnings</u>	<u>Total Equity</u>	<u>Market Price</u>	<u>M/B Ratio</u>	<u>Allowed ROE</u>	<u>EPS</u>	<u>DPS</u>	<u>Payout Ratio</u>
1	\$ 9.52	\$ -	\$ 9.52	\$10.00	1.050	10.75%	\$ 1.02	\$ 0.50	48.9%
2	\$ 9.52	\$ 0.52	\$ 10.04	\$10.55	1.050	10.75%	\$ 1.08	\$ 0.53	48.9%
3	\$ 9.52	\$ 0.55	<u>\$ 10.60</u>	<u>\$11.13</u>	1.050	10.75%	<u>\$ 1.14</u>	<u>\$ 0.56</u>	48.9%
<b>Growth</b>			<b>5.50%</b>	<b>5.50%</b>			<b>5.50%</b>	<b>5.50%</b>	

9 The only way for investors to be fully compensated for issuance costs is to include an  
 10 ongoing adjustment to account for past flotation costs when setting the return on  
 11 common equity. This is the case regardless of whether the utility is expected to issue  
 12 additional shares of common stock in the future.

13 **Q95. WHAT IS THE MAGNITUDE OF THE ADJUSTMENT TO THE “BARE**  
 14 **BONES” COST OF EQUITY TO ACCOUNT FOR ISSUANCE COSTS?**

15 A95. The most common method used to account for flotation costs in regulatory proceedings  
 16 is to apply an average flotation-cost percentage to a utility’s dividend yield. In Exhibit  
 17 AMM-11, I present a survey of recent open-market common stock issues for each  
 18 company in Value Line’s electric and gas utility industries. For all companies in the  
 19 electric and gas industries, flotation costs averaged 2.7%. This data includes  
 20 NorthWestern’s 2021 public offering where it incurred issuance costs equal to  
 21 approximately 3.3% of the gross proceeds. Applying the average 2.7% expense

1 percentage to the Utility Group dividend yield of 3.9% produces a flotation cost  
2 adjustment on the order of 10 basis points.

3 **Q96. HAVE OTHER REGULATORS RECOGNIZED FLOTATION COSTS IN**  
4 **EVALUATING A FAIR AND REASONABLE ROE?**

5 A96. Yes. For example, in Docket No. UE-991606 the Washington Utilities and  
6 Transportation Commission concluded that a flotation cost adjustment of 25 basis points  
7 should be included in the allowed return on equity.<sup>81</sup> In Case No. INT-G-16-02 the staff  
8 of the Idaho Public Utilities Commission noted that applying a flotation cost percentage  
9 to the dividend yield “is referred to as the ‘conventional’ approach. Its use in regulatory  
10 proceedings is widespread, and the formula is outlined in several corporate finance  
11 textbooks.”<sup>82</sup>

12 More recently, the Wyoming Office of Consumer Advocate, an independent  
13 division of the Wyoming Public Service Commission, recommended a 10 basis point  
14 flotation cost adjustment.<sup>83</sup> Similarly, the South Dakota Public Utilities Commission  
15 has recognized the impact of issuance costs, concluding that, “recovery of reasonable  
16 flotation costs is appropriate.”<sup>84</sup> Another example of a regulator that approves common  
17 stock issuance costs is the Mississippi Public Service Commission, which routinely  
18 includes a flotation cost adjustment in its Rate Stabilization Adjustment Rider formula.<sup>85</sup>  
19 The Public Utilities Regulatory Authority of Connecticut<sup>86</sup> the Minnesota Public

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<sup>81</sup> *Third Supplemental Order*, Washington Utilities and Transportation Commission Docket No. UE-991606, *et al.* (September 2000) at 95.

<sup>82</sup> Case No. INT-G-16-02, *Direct Testimony of Mark Rogers* (Dec. 16, 2016) at 18.

<sup>83</sup> Docket No. 30011-97-GR-17, *Pre-Filed Direct Testimony of Anthony J. Ornelas* (May 1, 2018) at 52-53.

<sup>84</sup> *Northern States Power Co.*, EL11-019, Final Decision and Order at P 22 (2012).

<sup>85</sup> *See, e.g.*, Entergy Mississippi Formula Rate Plan FRP-7, [https://cdn.entergy-mississippi.com/userfiles/content/price/tariffs/eml\\_frp.pdf](https://cdn.entergy-mississippi.com/userfiles/content/price/tariffs/eml_frp.pdf) (last visited Apr. 25, 2023)

<sup>86</sup> *See, e.g.*, Docket No. 14-05-06, Decision (Dec. 17, 2014) at 133-134.

1 Utilities Commission,<sup>87</sup> and the Virginia State Corporation Commission<sup>88</sup> have also  
2 recognized that flotation costs are a legitimate expense worthy of consideration in  
3 setting a fair and reasonable ROE.

## VI. NON-UTILITY BENCHMARK

### 4 **Q97. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

5 A97. This section presents the results of my DCF analysis applied to a group of low-risk firms  
6 in the competitive sector, which I refer to as the “Non-Utility Group.” This analysis  
7 was not relied on to arrive at my recommended ROE range of reasonableness; however,  
8 it is my opinion that this is a relevant consideration in evaluating just and reasonable  
9 ROEs for the Company’s utility operations.

### 10 **Q98. DO UTILITIES HAVE TO COMPETE WITH NON-REGULATED FIRMS FOR** 11 **CAPITAL?**

12 A98. Yes. The cost of capital is an opportunity cost based on the returns that investors could  
13 realize by putting their money in other alternatives. Clearly, the total capital invested in  
14 utility stocks is only the tip of the iceberg of total common stock investment, and there  
15 is a plethora of other enterprises available to investors beyond those in the utility  
16 industry. Utilities must compete for capital, not just against firms in their own industry,  
17 but with other investment opportunities of comparable risk. Indeed, modern portfolio  
18 theory is built on the assumption that rational investors will hold a diverse portfolio of  
19 stocks, not just companies in a single industry.

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<sup>87</sup> See, e.g., Docket No. E001/GR-10-276, Findings of Fact, Conclusions, and Order at 9.

<sup>88</sup> Roanoke Gas Company, Case No. PUR-2018-00013, *Final Order*, (Jan. 24, 2020) at 6.

1 **Q99. IS IT CONSISTENT WITH THE *BLUEFIELD* AND *HOPE* CASES TO**  
2 **CONSIDER INVESTORS' COST OF EQUITY FOR NON-UTILITY**  
3 **COMPANIES?**

4 A99. Yes. The cost of equity capital in the competitive sector of the economy forms the very  
5 underpinning for utility ROEs because regulation purports to serve as a substitute for  
6 the actions of competitive markets. The United States Supreme Court has recognized  
7 that it is the degree of risk, not the nature of the business, which is relevant in evaluating  
8 an allowed ROE for a utility. The *Bluefield* case refers to “business undertakings  
9 attended with comparable risks and uncertainties.” It does not restrict consideration to  
10 other utilities. Similarly, the *Hope* case states:

11 By that standard the return to the equity owner should be commensurate  
12 with returns on investments in other enterprises having corresponding  
13 risks.<sup>89</sup>

14 As in the *Bluefield* decision, there is nothing to restrict “other enterprises” solely to the  
15 utility industry.

16 **Q100. DOES CONSIDERATION OF THE RESULTS FOR THE NON-UTILITY**  
17 **GROUP IMPROVE THE RELIABILITY OF DCF RESULTS?**

18 A100. Yes. The estimates of growth from the DCF model depend on analysts' forecasts. It is  
19 possible for utility growth rates to be distorted by short-term trends in the industry, or  
20 by the industry falling into favor or disfavor by analysts. Such distortions could result  
21 in biased DCF estimates for utilities. Because the Non-Utility Group includes low risk  
22 companies from more than one industry, it helps to insulate against any possible  
23 distortion that may be present in results for a particular sector.

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<sup>89</sup> *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 391 (1944).



1 **Q101. WHAT CRITERIA DO YOU APPLY TO DEVELOP THE NON-UTILITY**  
2 **GROUP?**

3 A101. My comparable risk proxy group was composed of those United States companies  
4 followed by Value Line that:

- 5 1) pay common dividends;
- 6 2) have a Safety Rank of “1”;
- 7 3) have a Financial Strength Rating of “A” or greater;
- 8 4) have a beta value of 0.95 or less; and
- 9 5) have investment grade credit ratings from Moody’s and S&P.

10 **Q102. HOW DO THE OVERALL RISKS OF YOUR NON-UTILITY GROUP**  
11 **COMPARE TO THE PROXY GROUP OF ELECTRIC UTILITIES?**

12 A102. Table 7 compares the Non-Utility Group to the Electric Group and NorthWestern across  
13 the five key indices of investment risk discussed earlier.

14 **TABLE 7**  
15 **COMPARISON OF RISK INDICATORS**

	<u>Value Line</u>				
			<u>Safety</u>	<u>Financial</u>	
	<u>S&amp;P</u>	<u>Moody's</u>	<u>Rank</u>	<u>Strength</u>	<u>Beta</u>
Non-Utility Group	A-	A2	1	A+	0.80
Utility Group	BBB+	Baa2	2	A	0.90
NorthWestern Corp.	BBB	Baa2	2	B++	0.90

16 As shown above, considered together the risk indicators for the Non-Utility Group  
17 generally suggest less risk than for the Utility Group and NorthWestern.

18 The companies that make up the Non-Utility Group, which are shown in Exhibit  
19 AMM-12, represent the pinnacle of corporate America. These firms, which include  
20 household names such as Coca-Cola, McDonald’s, Procter & Gamble, and Walmart,  
21 have long corporate histories, well-established track records, and conservative risk

1 profiles. Many of these companies pay dividends on a par with utilities, with the  
2 average dividend yield for the group exceeding 2%. Moreover, because of their  
3 significance and name recognition, these companies receive intense scrutiny by the  
4 investment community, which increases confidence that published growth estimates are  
5 representative of the consensus expectations reflected in common stock prices.

6 **Q103. WHAT ARE THE RESULTS OF YOUR DCF ANALYSIS FOR THE NON-**  
7 **UTILITY GROUP?**

8 A103. I applied the DCF model to the Non-Utility Group using the same analysts' EPS growth  
9 projections described earlier for the Utility Group. The results of my DCF analysis for  
10 the Non-Utility Group are presented in Exhibit AMM-12. As summarized in Table 8,  
11 below, after eliminating illogical values, application of the constant growth DCF model  
12 resulted in the following cost of equity estimates:

13 **TABLE 8**  
14 **DCF RESULTS – NON-UTILITY GROUP**

<u>Growth Rate</u>	<u>Average</u>	<u>Midpoint</u>
Value Line	10.9%	11.9%
IBES	10.4%	10.7%
Zacks	10.9%	12.1%

15 As discussed earlier, reference to the Non-Utility Group is consistent with  
16 established regulatory principles. Required returns for utilities should be in line with  
17 those of non-utility firms of comparable risk operating under the constraints of free  
18 competition. Because the actual cost of equity is unobservable, and DCF results  
19 inherently incorporate a degree of error, cost of equity estimates for the Non-Utility  
20 Group provide an important benchmark in evaluating a just and reasonable ROE for  
21 NorthWestern.

22 **Q104. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

23 A104. Yes, it does.