

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

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<b>IN RE:</b>	)	
	)	
<b>NORTHWESTERN ENERGY PUBLIC SERVICE CORPORATION</b>	)	<b>Docket No. NG24-_____</b>
	)	

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**DIRECT TESTIMONY OF**

**ADRIEN M. MCKENZIE, CFA**

**On behalf of**

**NORTHWESTERN ENERGY PUBLIC SERVICE CORPORATION**

**June 21, 2024**

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## GLOSSARY

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
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
NAIC	National Association of Insurance Companies
NASDAQ	The Nasdaq Stock Market LLC
NorthWestern or Company	NorthWestern Energy Public Service Company
NWE	NorthWestern Energy Group, Inc.
PCE	Personal Consumption Expenditure Price Index
ROE	return on equity
RRA	S&P Global Market Intelligence, RRA Regulatory Focus (formerly Regulatory Research Associates, Inc.)
S&P	S&P Global Ratings
Value Line	The Value Line Investment Survey
WNA	Weather Normalization Adjustment
Zacks	Zacks Investment Research, Inc.

## I. INTRODUCTION

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

2 A1. My name is Adrien M. McKenzie. I am President of Financial Concepts and  
3 Applications, Inc. (d/b/a FINCAP, Inc.), a firm providing financial, economic, and  
4 policy consulting services to business and government. My business address is 3907  
5 Red River, Austin, Texas, 78751.

6 **Q2. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**  
7 **QUALIFICATIONS.**

8 A2. A description of my background and qualifications, including a resume containing the  
9 details of my experience, is attached as Exhibit AMM-1.

10 **A. Overview**

11 **Q3. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS CASE?**

12 A3. The purpose of my direct testimony is to present to the Commission my independent  
13 assessment of the just and reasonable ROE for the South Dakota jurisdictional gas utility  
14 operations of NorthWestern. In addition, I also examine the reasonableness of  
15 NorthWestern's capital structure, considering the specific risks faced by the Company  
16 and other industry guidelines.

17 **Q4. PLEASE SUMMARIZE THE INFORMATION AND MATERIALS YOU RELY**  
18 **ON TO SUPPORT THE OPINIONS AND CONCLUSIONS CONTAINED IN**  
19 **YOUR TESTIMONY.**

20 A4. 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 participation in prior regulatory  
23 proceedings on behalf of the Company. In connection with the present filing, I consider  
24 and rely upon discussions with corporate management, publicly available financial  
25 reports and prior regulatory filings relating to NorthWestern and its parent, NWE. I also

1 review information relating generally to current capital market conditions and  
2 specifically to investor perceptions, requirements, and expectations for NorthWestern's  
3 gas utility operations. 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 **Q5. HOW IS YOUR TESTIMONY ORGANIZED?**

8 A5. 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. I then explain the development of the proxy group  
15 of utilities used as the basis for my quantitative analyses, including the implications of  
16 the Company's regulatory mechanisms and other risk factors. With this as a  
17 background, I discuss well-accepted quantitative analyses to estimate the current cost  
18 of equity. These include the DCF model, the CAPM, the ECAPM, an equity risk  
19 premium approach based on allowed equity returns, and reference to expected earned  
20 rates of return for utilities, which are all methods that are commonly relied on in  
21 regulatory proceedings.

22 Based on the results of my analyses, I determine a fair ROE for NorthWestern.  
23 My evaluation considers the specific risks for the Company's gas utility operations in  
24 South Dakota and NorthWestern's requirements for financial strength. Further,  
25 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 **Q6. WHAT ROE DO YOU RECOMMEND FOR NORTHWESTERN'S NATURAL** 5 **GAS UTILITY OPERATIONS?**

6 A6. I apply the DCF, CAPM, ECAPM, risk premium, and expected earnings analyses to a  
7 proxy group of publicly traded natural gas utilities, with the results being summarized  
8 on Exhibit AMM-2. As shown there, based on the results of my analysis, I determine a  
9 cost of equity range for the gas utility proxy group of 10.2% to 11.2%. I recommend an  
10 ROE at the midpoint of this range, or 10.7% for NorthWestern's jurisdictional natural  
11 gas utility operations. As demonstrated in my testimony, the Company's investment  
12 risks are higher than those of the proxy companies used to estimate the cost of equity.  
13 Accordingly, it is my conclusion that 10.7% is a conservative estimate of the cost of  
14 equity that is required to compensate the Company's investors, while maintaining  
15 NorthWestern's financial integrity and ability to attract capital on reasonable terms.

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

#### 17 **Q7. WHAT IS THE PURPOSE OF THIS SECTION?**

18 A7. This section presents an overview of the relationship between ROE and preservation of  
19 a utility's financial integrity and the ability to attract capital under reasonable terms and  
20 presents my conclusions regarding the just and reasonable ROE applicable to  
21 NorthWestern's natural gas utility operations. Finally, I discuss the reasonableness of  
22 the Company's capital structure request in this case.

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

#### 24 **Q8. WHAT IS THE ROLE OF THE ROE IN SETTING A UTILITY'S RATES?**

25 A8. The ROE is the cost of attracting and retaining common equity investment in the utility's  
physical plant and assets. This investment is necessary to finance the asset base needed

1 to provide utility service. Investors commit capital only if they expect to earn a return  
2 on their investment commensurate with returns available from alternative investments  
3 with comparable risks. Moreover, a just and reasonable ROE is integral in meeting  
4 sound regulatory economics and the standards set forth by the U.S. Supreme Court. The  
5 *Bluefield* case set the standard against which just and reasonable rates are measured:

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

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

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

28 In summary, the Supreme Court's findings in *Hope* and *Bluefield* established  
29 that a just and reasonable ROE must be sufficient to 1) fairly compensate the utility's  
30 investors, 2) enable the utility to offer a return adequate to attract new capital on

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

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

1 reasonable terms, and 3) maintain the utility’s financial integrity. These standards  
2 should allow the utility to fulfill its obligation to provide reliable service while meeting  
3 the needs of customers through necessary system replacement and expansion, but the  
4 Supreme Court’s requirements can only be met if the utility has a reasonable opportunity  
5 to actually earn its allowed ROE.

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

16 **Q9. THROUGHOUT YOUR TESTIMONY YOU REFER REPEATEDLY TO THE**  
17 **CONCEPTS OF “FINANCIAL STRENGTH,” “FINANCIAL INTEGRITY,”**  
18 **AND “FINANCIAL FLEXIBILITY.” WOULD YOU BRIEFLY DESCRIBE**  
19 **WHAT YOU MEAN BY THESE TERMS?**

20 A9. These terms are generally synonymous and refer to the utility’s ability to attract and  
21 retain the capital that is necessary to provide service at reasonable cost, consistent with  
22 the Supreme Court standards. NorthWestern’s plans call for a continuation of capital  
23 investments to preserve and enhance service reliability for its customers. The Company

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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 must generate adequate cash flow from operations to fund these requirements and  
2 maintain access to capital from external sources.

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

11 **Q10. WHAT PART DOES REGULATION PLAY IN ENSURING NORTHWESTERN**  
12 **HAS ACCESS TO CAPITAL UNDER REASONABLE TERMS AND ON A**  
13 **SUSTAINABLE BASIS?**

14 A10. Regulatory signals are a major driver of investors' risk assessment for utilities. Investors  
15 recognize that constructive regulation is a key ingredient in supporting utility credit  
16 ratings and financial integrity. Security analysts study commission orders and  
17 regulatory policy statements to advise investors about where to put their money. As  
18 Moody's noted, "the regulatory environment is the most important driver of our outlook  
19 because it sets the pace for cost recovery."<sup>4</sup> Similarly, S&P observed that, "Regulatory  
20 advantage is the most heavily weighted factor when S&P Global Ratings analyzes a  
21 regulated utility's business risk profile."<sup>5</sup> Value Line summarizes these sentiments:

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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).

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

6 **Q11. DO CUSTOMERS BENEFIT BY ENHANCING THE UTILITY'S FINANCIAL**  
7 **FLEXIBILITY?**

8 A11. Yes. Providing an ROE that is sufficient to maintain the Company's ability to attract  
9 capital under reasonable terms, even in times of financial and market stress, is not only  
10 consistent with the economic requirements embodied in the U.S. Supreme Court's *Hope*  
11 and *Bluefield* decisions, but it is also in customers' best interests. Customers enjoy the  
12 benefits that come from ensuring that the utility has the financial wherewithal to take  
13 whatever actions are required to ensure safe and reliable service.

14 **B. Conclusions and Recommendations**

15 **Q12. WHAT ARE YOUR FINDINGS REGARDING A FAIR ROE FOR**  
16 **NORTHWESTERN?**

17 A12. Considering the economic requirements necessary to support continuous access to  
18 capital under reasonable terms and the results of my analysis, I recommend a 10.7%  
19 ROE for NorthWestern's South Dakota jurisdictional natural gas utility operations,  
20 which is consistent with the case-specific evidence presented in my testimony. The  
21 bases for my conclusion are summarized below:

- 22 • In order to reflect the risks and prospects associated with  
23 NorthWestern's utility business, my analyses focused on a proxy  
24 group of seven publicly traded gas utility firms.
- 25 • Because investors' required return on equity is unobservable and no  
26 single method should be viewed in isolation, I applied the DCF,  
27 CAPM, ECAPM, and risk premium methods to estimate a just and  
28 reasonable ROE for NorthWestern, as well as referencing the  
29 expected earnings approach.

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

- 1                   • As summarized on Exhibit AMM-2, based on the average values  
2                   resulting from these analyses, and giving less weight to extremes at  
3                   the high and low ends of the range, I conclude that the cost of equity  
4                   falls in the 10.2% to 11.2% range.
- 5                   • My ROE recommendation for NorthWestern’s gas utility operations  
6                   is the midpoint of this ROE range, or 10.7%.

7   **Q13. WHAT OTHER EVIDENCE DO YOU CONSIDER IN EVALUATING A FAIR**  
8   **ROE FOR NORTHWESTERN?**

9   A13. My conclusion that an ROE of 10.7% is fair and reasonable and should be approved is  
10 reinforced by the following findings:

- 11                   • The reasonableness of a 10.7% ROE for NorthWestern is supported by the  
12                   Company’s higher investment risks relative to the proxy group of gas  
13                   utilities.
- 14                   • The Company currently operates with a narrower range of regulatory  
15                   adjustment mechanisms than exist for the utilities in the Gas Group, which  
16                   makes NorthWestern’s utility operations relatively more susceptible to  
17                   attrition.
- 18                   • Investors recognize that constructive regulation is a key ingredient in  
19                   supporting utility credit standing and financial integrity, and providing  
20                   NorthWestern with the opportunity to earn a return that adequately reflects  
21                   its risks is an essential ingredient to support the Company’s financial  
22                   position, which ultimately benefits customers by ensuring reliable service at  
23                   lower long-run costs.
- 24                   • Continued support for NorthWestern’s financial integrity, including the  
25                   opportunity to earn a reasonable ROE, is imperative to ensure that the  
26                   Company has the capability to maintain and build its credit standing while  
27                   confronting potential challenges associated with funding infrastructure  
28                   development necessary to meet the needs of its customers.

29                   These findings indicate that a 10.7% ROE for NorthWestern is reasonable and should  
30                   be approved.

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

33   A14. As shown on page 3 of Exhibit AMM-13, average DCF estimates for a low-risk group  
34                   of firms in the competitive sector of the economy ranged from 10.4% to 10.9%. While  
35                   I did not base my recommendations on these results, they confirm that an ROE for

1 NorthWestern of 10.7% falls in a reasonable range to maintain the Company’s financial  
2 integrity, provide a return commensurate with investments of comparable risk, and  
3 support the ability to attract capital.

4 **Q15. WHAT DOES YOUR EVIDENCE SUGGEST WITH RESPECT TO**  
5 **NORTHWESTER’S PROPOSED CAPITAL STRUCTURE?**

6 A15. NorthWestern’s capital structure is consistent with industry benchmarks and reflects the  
7 need to address the funding of ongoing capital expenditures and support the Company’s  
8 financial integrity and access to capital on reasonable terms. Based on this evidence, I  
9 conclude that the Company’s capital structure represents a reasonable mix of capital  
10 sources from which to calculate the overall rate of return.

**III. FUNDAMENTAL ANALYSES**

11 **Q16. WHAT IS THE PURPOSE OF THIS SECTION?**

12 A16. As a foundation for my opinions and subsequent quantitative analyses, this section  
13 briefly reviews the operations and finances of NorthWestern and examines conditions  
14 impacting today’s capital markets and the general economy. An understanding of the  
15 fundamental factors driving the risks and prospects of utilities is essential in developing  
16 an informed opinion of investors’ expectations and requirements that are the basis of a  
17 fair ROE.

18 **C. NorthWestern Energy**

19 **Q17. BRIEFLY DESCRIBE NORTHWESTERN AND ITS SOUTH DAKOTA**  
20 **NATURAL GAS UTILITY OPERATIONS.**

21 A17. A subsidiary of NWE, NorthWestern provides electric and natural gas utility service to  
22 approximately 157,000 customers in South Dakota and Nebraska.<sup>7</sup> Natural gas is  
23 distributed to approximately 49,800 customers in sixty-three South Dakota communities

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<sup>7</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, 2023.

1 over a system of approximately 1,800 miles of underground distribution and  
2 transmission pipelines. In addition, the Company transports natural gas for nine gas-  
3 marketing firms and three large end-user accounts. Estimated rate base attributable to  
4 NorthWestern's South Dakota natural gas operations is approximately \$96 million, with  
5 total annual revenues of approximately \$63 million.<sup>8</sup>

6 **Q18. WHERE DOES NORTHWESTERN OBTAIN THE CAPITAL USED TO**  
7 **FINANCE ITS INVESTMENT IN UTILITY PLANT?**

8 A18. Common equity capital supporting the South Dakota natural gas utility operations is  
9 provided through retained earnings and from NWE, whose common stock is publicly  
10 traded on NASDAQ. NorthWestern also issues long-term debt in its own name and has  
11 been assigned a long-term rating of Baa2 from Moody's and an issuer rating of BBB by  
12 S&P. Meanwhile, Fitch has affirmed the Company's long-term issuer default rating of  
13 BBB.

14 **Q19. DOES NORTHWESTERN ANTICIPATE THE NEED FOR CAPITAL GOING**  
15 **FORWARD?**

16 A19. Yes. The Company must undertake investments to meet growing demand and provide  
17 for necessary maintenance and replacements of its utility systems as it continues to  
18 provide safe and reliable service to its customers. Capital additions for NorthWestern's  
19 gas utility systems are expected to total more than \$83 million for the years 2024  
20 through 2028. Continued support for NorthWestern's financial integrity and flexibility  
21 will be instrumental in attracting the capital necessary to fund these projects in an  
22 effective manner.

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<sup>8</sup> NorthWestern Energy, *BofA Power, Utilities & Clean Energy Conference* (Mar. 5, 2024).

#### D. Outlook for Capital Costs

##### Q20. PLEASE SUMMARIZE CURRENT ECONOMIC CONDITIONS.

A20. U.S. real GDP contracted 2.2% during 2020, but with the easing of COVID-19 lockdowns, the economic outlook improved significantly in 2021, with GDP growing at a pace of 5.8%, though growth was more subdued in 2022 at 1.9%.<sup>9</sup> More recently, increases in spending by consumers and the federal government led real GDP to grow by 2.5% in 2023.<sup>10</sup> Meanwhile, indicators of employment remain relatively stable, with the national unemployment rate falling slightly to 3.8% in March 2024.<sup>11</sup>

The underlying risk and price pressures associated with the COVID-19 pandemic were overshadowed by a dramatic increase in geopolitical threats following Russia's invasion of Ukraine in February 2022. More recently, these risks have been compounded by heightened uncertainties prompted by the resurgence of conflict in the Middle East. Apart from disrupting global trade, the potential for escalating military confrontation threatens to constrain crude oil supplies and lead to supply-side price shocks that could reignite inflation.

Stimulative monetary and fiscal policies, supply-chain disruptions and rapid price rises in the energy and commodities markets, led to increasing concern that inflation would remain significantly above the Federal Reserve's longer-run benchmark of 2%. In June 2022, CPI inflation peaked at its highest level since November 1981. Since then, CPI inflation has generally moderated, but remained elevated at 3.5% in March 2024.<sup>12</sup> The so-called "core" price index, which excludes more volatile energy

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<sup>9</sup> <https://fred.stlouisfed.org/series/A191RL1A225NBEA> (last visited Apr. 25, 2024).

<sup>10</sup> *Id.*

<sup>11</sup> <https://www.bls.gov/news.release/empsit.nr0.htm> (last visited Apr. 25, 2024).

<sup>12</sup> <https://www.bls.gov/news.release/cpi.nr0.htm> (last visited Apr. 25, 2024).

1 and food costs, rose at an annual rate of 3.8% in March 2024.<sup>13</sup> PCE inflation rose 2.5%  
2 in February 2024, or 2.8% after excluding more volatile food and energy costs.<sup>14</sup> As  
3 Federal Reserve Chair Powell recently noted, “inflation is still too high, ongoing  
4 progress in bringing it down is not assured, and the path forward is uncertain.”<sup>15</sup>

5 Investor confidence has also been tested by turmoil in the banking sector, which  
6 led to increased volatility in bond and equity markets. The Federal Reserve and U.S.  
7 Treasury took quick and dramatic action to shore up banks’ liquidity needs and  
8 strengthen public confidence in the banking system, but as Moody’s noted, “bank stress  
9 has added uncertainty to the outlook.”<sup>16</sup>

10 **Q21. WHAT IMPACT DO INFLATION EXPECTATIONS HAVE ON THE RETURN**  
11 **THAT EQUITY INVESTORS REQUIRE FROM NORTHWESTERN?**

12 A21. Implicit in the required rate of return for long-term capital—whether debt or common  
13 equity—is compensation for expected inflation. This is highlighted in the textbook,  
14 *Financial Management, Theory and Practice*:

15 The four most fundamental factors affecting the cost of money are (1)  
16 production opportunities, (2) time preferences for consumption, (3) risk,  
17 and (4) inflation.<sup>17</sup>

18 In other words, a part of investor’s required return is intended to compensate for the  
19 erosion of purchasing power due to rising price levels. This inflation premium is added  
20 to the real rate of return (pure risk-free rate plus risk premium) to determine the nominal

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<sup>13</sup> *Id.*

<sup>14</sup> <https://www.bea.gov/news/2024/personal-income-and-outlays-february-2024> (last visited Apr. 25, 2024).

<sup>15</sup> Federal Reserve, *Transcript of Chair Powell’s Press Conference* (Mar. 20, 2024), <https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20240320.pdf>.

<sup>16</sup> Moody’s Investors Service, *Baseline US macro forecasts unchanged but outlook more uncertain*, Sector Comment (Apr. 12, 2023).

<sup>17</sup> Eugene F. Brigham, Louis C. Gapenski, and Michael C. Ehrhardt, *Financial Management, Theory and Practice*, Ninth Edition (1999) at 126.

1 required return. As a result, higher inflation expectations lead to an increase in the cost  
2 of equity capital.

3 **Q22. HAVE THESE DEVELOPMENTS IMPACTED THE RISKS FACED BY**  
4 **UTILITIES AND THEIR INVESTORS?**

5 A22. Yes. S&P recently revised its outlook for the utility sector to “negative,” noting that:

6 Credit quality for North American investor-owned regulated utilities has  
7 weakened over the past four years, with downgrades outpacing upgrades  
8 by more than three times. We expect downgrades to again surpass  
9 upgrades in 2024 for the fifth consecutive year.<sup>18</sup>

10 S&P cited rising physical risks, as well as weakening financial measures due to rising  
11 capital spending and cash flow deficits, and observed that “much of the industry  
12 operates with minimal financial cushion from their downgrade threshold.”<sup>19</sup>

13 Meanwhile, Fitch noted that its deteriorating outlook for utilities “reflects  
14 continuing macroeconomic headwinds and elevated capex that are putting pressure on  
15 credit metrics in the high-cost funding environment.”<sup>20</sup> Value Line echoed these  
16 sentiments for utilities, concluding that:

17 **A Challenging Macroeconomic Backdrop Remains**

18 Inflationary pressure, rising interest rates, and high energy and raw  
19 material prices will likely remain a significant burden for most utilities.  
20 Inflationary headwinds are raising operating and maintenance costs, as  
21 well as fuel prices. Meanwhile, the rising interest rate environment is  
22 leading income-oriented investors to the bond market, as well as  
23 increasing borrowing costs, which is especially significant for utilities as  
24 they usually have low returns on total capital and rely heavily on debt  
25 borrowings. We think many of these companies will continue to struggle

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<sup>18</sup> S&P Global Ratings, *Rising Risks: Outlook For North American Investor-Owned Regulated Utilities Weakens*, Comments (Feb. 14, 2024).

<sup>19</sup> *Id.*

<sup>20</sup> Fitch Ratings, Inc., *North American Utilities, Power & Gas Outlook 2024* (Dec. 6, 2023).



1 with the higher costs related to the challenging macroeconomic climate  
2 in the near term.<sup>21</sup>

3 **Q23. DO TRENDS IN BOND YIELDS INDICATE THAT THE COST OF EQUITY**  
4 **HAS INCREASED?**

5 A23. Yes. While the cost of equity is unobservable, the yields on long-term bonds provide a  
6 widely referenced benchmark for the direction of capital costs, including required  
7 returns on common stocks. Table 1 below compares the average yields on Treasury  
8 securities and Baa-rated public utility bonds in March 2024 with those required during  
9 2021.

10 **TABLE 1**  
11 **BOND YIELD TRENDS**

<b>Series</b>	<b>March 2024</b>	<b>2021</b>	<b>Change (bps)</b>
10-Year Treasury Bonds	4.21%	1.44%	277
30-Year Treasury Bonds	4.36%	2.05%	231
Baa Utility Bonds	5.79%	3.35%	244

Source: <https://fred.stlouisfed.org/series/GS30>; Moody's Credit Trends.

12 As shown above, trends in bond yields document a substantial increase in the returns on  
13 long-term capital demanded by investors.

14 **Q24. WHAT IMPLICATIONS DO THESE TRENDS HAVE IN EVALUATING A FAIR**  
15 **ROE FOR NORTHWESTERN?**

16 A24. The upward move in interest rates demonstrates that long-term capital costs—including  
17 the cost of equity—have increased significantly. Exposure to higher interest rates,  
18 inflation, and capital expenditure requirements also reinforce the importance of  
19 buttressing NorthWestern's credit standing. Considering the potential for financial

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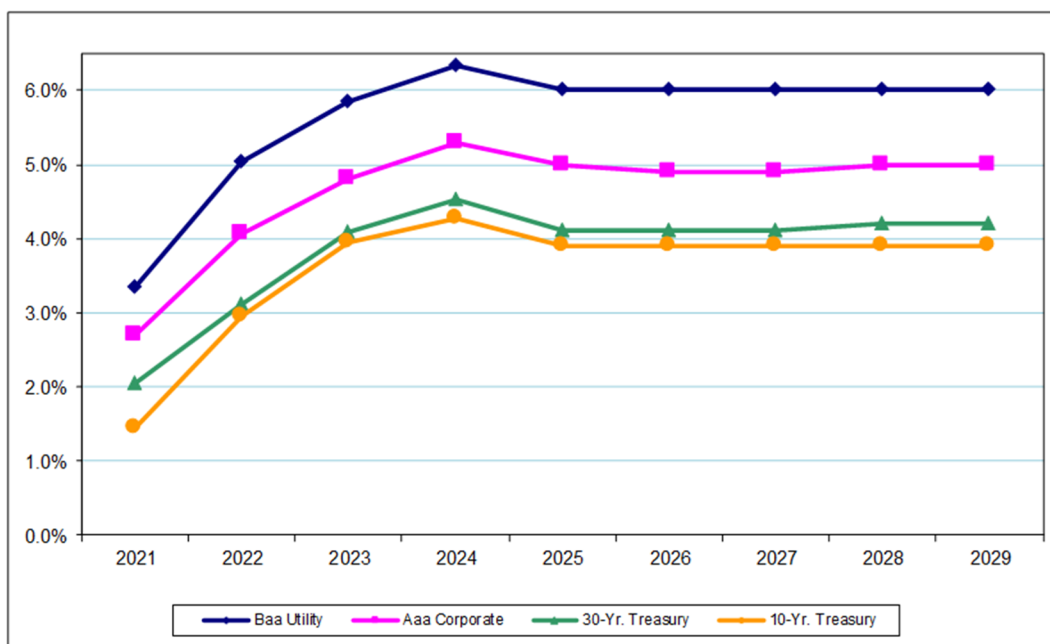
<sup>21</sup> The Value Line Investment Survey, *Electric Utility (Central) Industry* (Sep. 8, 2023) (emphasis original).

1 market instability, competition with other investment alternatives, and investors’  
2 sensitivity to risk exposures in the utility industry, greater credit strength is a key  
3 ingredient in maintaining access to capital at reasonable cost.

4 **Q25. DO INVESTORS ANTICIPATE THAT THESE HIGHER BOND YIELDS WILL**  
5 **BE SUSTAINED?**

6 A25. Yes. As illustrated in Figure 1 below, the most recent long-term consensus projections  
7 from top economists published by Blue Chip document that long-term bond yields are  
8 expected to remain elevated when compared to recent historical levels.

9 **FIGURE 1**  
10 **PROJECTED INTEREST RATES**



Source: Wolters Kluwer, Blue Chip Financial Forecasts (Dec. 1, 2023); Moody's Investors Service; <https://fred.stlouisfed.org/>.

11 This evidence shows that long-term capital costs—including the ROE—have increased  
12 substantially, and that investors expect these higher capital costs to be sustained at least  
13 through 2029.

1 **Q26. WOULD IT BE REASONABLE TO DISREGARD THE IMPLICATIONS OF**  
2 **CURRENT CAPITAL MARKET CONDITIONS IN ESTABLISHING A FAIR**  
3 **ROE FOR NORTHWESTERN?**

4 A26. No. Current capital market conditions reflect the reality of the situation in which  
5 NorthWestern must attract and retain capital. The standards underlying a fair rate of  
6 return require an authorized ROE for the Company that is competitive with other  
7 investments of comparable risk and sufficient to preserve its ability to maintain access  
8 to capital on reasonable terms. These standards can only be met by considering the  
9 requirements of investors over the time period when the rates established in this  
10 proceeding will be in effect. If the upward shift in investors' risk perceptions and  
11 required rates of return for long-term capital is not incorporated in the allowed ROE,  
12 the results will fail to meet the comparable earnings standard that is fundamental in  
13 determining the cost of capital. From a more practical perspective, failing to provide  
14 investors with the opportunity to earn a rate of return commensurate with  
15 NorthWestern's risks will weaken its financial integrity, while hampering the  
16 Company's ability to attract the capital necessary to provide safe and reliable service at  
17 the lowest reasonable cost.

**IV. DETERMINATION OF THE PROXY GROUP**

18 **Q27. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

19 A27. This section explains the basis of the proxy group of publicly traded companies I use to  
20 estimate the cost of equity, examines alternative objective indicators of investment risk  
21 for these firms, and compares the investment risks applicable to NorthWestern with my  
22 reference group.

1 **Q28. WHAT KEY PRINCIPLES UNDERPIN THE EVALUATION OF A PROXY**  
2 **GROUP?**

3 A28. The United States Supreme Court's *Hope* and *Bluefield* decisions establish a standard  
4 of comparison between a subject utility and other companies based on comparable risk.  
5 The generally accepted approach is to select a group of companies that are of similar  
6 risk to the subject utility, and then to perform various quantitative analyses based on this  
7 proxy group to estimate investors' required returns. The results of these analyses are  
8 then used to evaluate a range of reasonableness and a final recommendation for the ROE  
9 attributable to the subject utility.

10 **A. Determination of the Proxy Group**

11 **Q29. HOW DO YOU IMPLEMENT QUANTITATIVE METHODS TO ESTIMATE**  
12 **THE COST OF COMMON EQUITY FOR NORTHWESTERN?**

13 A29. Application of quantitative methods to estimate the cost of common equity requires  
14 observable capital market data, such as stock prices and beta values. Moreover, even  
15 for a firm with publicly traded stock, the cost of common equity can only be estimated.  
16 As a result, applying quantitative models using observable market data only produces  
17 an estimate that inherently includes some degree of observation error. Thus, the  
18 accepted approach to increase confidence in the results is to apply quantitative methods  
19 to a proxy group of publicly traded companies that investors regard as risk comparable.  
20 The results of the analysis on the sample of companies are relied upon to establish a  
21 range of reasonableness for the cost of equity for the specific company at issue.

22 **Q30. HOW DO YOU IDENTIFY THE PROXY GROUP OF GAS UTILITIES RELIED**  
23 **ON FOR YOUR ANALYSES?**

24 A30. To reflect the risks and prospects associated with NorthWestern's natural gas utility  
25 operations, I examine quantitative estimates of investors' required ROE for a group of  
26 seven natural gas utilities. To identify this group, I begin with those companies included

1 in the Natural Gas Utility industry group compiled by Value Line. Value Line is one of  
2 the most widely available sources of investment advisory information, and its industry  
3 groups provide an objective source to identify publicly traded firms that investors would  
4 regard to be similar in operations.

5 **Q31. WHAT OTHER FACTORS DO YOU CONSIDER IN EVALUATING YOUR**  
6 **PROXY GROUP?**

7 A31. From the list of gas utilities compiled by Value Line, I eliminate Southwest Gas due to  
8 the planned initial public offering for an infrastructure services subsidiary, which  
9 accounted for over 52% of Southwest Gas' total revenues in 2023 and 22% of total  
10 assets. As a result of its significance, the restructuring complicates the evaluation of  
11 investors' expectations concerning the ongoing gas utility operations of Southwest Gas.  
12 Value Line concluded that common stock of Southwest Gas has been "trading with high  
13 volatility amid recent corporate restructuring activities,"<sup>22</sup> and noted that, "Our forecasts  
14 do not account for pending deals until they are completed."<sup>23</sup> The stock price volatility  
15 related to the restructuring and the disconnect between growth expectations for the  
16 current and future business operations support excluding Southwest Gas from the proxy  
17 group.

18 I also exclude UGI because it is primarily engaged in international sales and  
19 marketing of liquid propane gas, as well as energy marketing in the United States and  
20 Europe, midstream infrastructure, storage, natural gas gathering and processing, and  
21 natural gas production. During 2023, UGI's regulated gas and electric utility operations  
22 combined accounted for just 20% of total revenues. Accordingly, UGI's primary

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<sup>22</sup> The Value Line Investment Survey, *Southwest Gas* (Aug. 25, 2023).

<sup>23</sup> The Value Line Investment Survey, *Southwest Gas* (Feb. 23, 2024).

1 business activities are not directly comparable to the Company’s gas distribution  
2 operations, and I excluded UGI from the proxy group on this basis.

3 I then confirmed that all of the proxy group firms have investment-grade credit  
4 ratings.<sup>24</sup> While Chesapeake Utilities does not have published credit ratings from  
5 Moody’s or S&P, it has privately placed bonds that were rated “2.B” by NAIC.<sup>25</sup> Under  
6 NAIC guidelines, a 2.B rating is equivalent to a rating of Baa2 or BBB on the Moody’s  
7 and S&P rating scales, respectively.<sup>26</sup> Finally, I verified that the remaining firms have  
8 not cut dividend payments during the past six months and have not announced a  
9 dividend cut since that time. As shown in Table 2 below, application of these criteria  
10 results in a proxy group composed of seven companies, which I refer to as the “Gas  
11 Group:”

12 **TABLE 2**  
13 **GAS GROUP**

14 Atmos Energy Corp.  
15 Chesapeake Utilities  
16 New Jersey Resources  
17 NiSource Inc.  
18 Northwest Natural  
19 ONE Gas, Inc.  
20 Spire Inc.

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<sup>24</sup> Credit rating firms, such as Moody’s and S&P, use designations consisting of upper- and lower-case letters 'A' and 'B' to identify a bond's credit quality rating. 'Aaa', 'Aa', 'A', and 'Baa' ratings are considered investment grade. Credit ratings for bonds below these designations ('Ba', 'B', 'Caa', etc.) are considered speculative grade, and are commonly referred to as "junk bonds." The term “investment grade” refers to bonds with ratings in the ‘Baa’ category (‘BBB’ by S&P) and above.

<sup>25</sup> See, Quarterly Statement of the Metropolitan Life Insurance Company (Jun. 30, 2023) at 257.

[https://s201.q4cdn.com/280976757/files/doc\\_downloads/2023/MLIC-Q2-2023-Final-Statement.pdf](https://s201.q4cdn.com/280976757/files/doc_downloads/2023/MLIC-Q2-2023-Final-Statement.pdf) (last visited Mar. 17, 2024).

<sup>26</sup> NAIC, *Purposes & Procedures Manual of the NAIC Investment Analysis Office* (December 2023). [https://content.naic.org/sites/default/files/ppm-oss-2023\\_0.pdf](https://content.naic.org/sites/default/files/ppm-oss-2023_0.pdf) (last visited Mar. 17, 2024).

1 **B. Relative Risks of the Gas Group and NorthWestern**

2 **Q32. HOW DO YOU EVALUATE THE INVESTMENT RISKS OF THE GAS**  
3 **GROUP?**

4 A32. My evaluation of relative risk considers five objective, published benchmarks that are  
5 widely relied on by investors—credit ratings from Moody’s and S&P, along with Value  
6 Line’s Safety Rank, Financial Strength Rating, and beta values. Credit ratings are  
7 assigned by independent rating agencies for the purpose of providing investors with a  
8 broad assessment of the creditworthiness of a firm. Ratings generally extend from  
9 triple-A (the highest) to D (in default). Other symbols (*e.g.*, “+” or “-”) are used to show  
10 relative standing within a category. Because the rating agencies’ evaluation includes all  
11 of the factors normally considered important in assessing a firm’s relative credit  
12 standing, corporate credit ratings provide a broad, objective measure of overall  
13 investment risk that is readily available to investors. Widely cited in the investment  
14 community and referenced by investors, credit ratings are also frequently used as a  
15 primary risk indicator in establishing proxy groups to estimate the cost of common  
16 equity.

17 While credit ratings provide the most widely referenced benchmark for  
18 investment risks, Value Line is one of the most widely available source of investment  
19 advisory information and its quality rankings provide an important and objective  
20 assessment of investors’ risk perceptions for common stocks. Value Line’s primary risk  
21 indicator is its Safety Rank, which ranges from “1” (Safest) to “5” (Riskiest). This  
22 overall risk measure is intended to capture the total risk of a stock and incorporates  
23 elements of stock price stability and financial strength. Meanwhile, the Financial  
24 Strength Rating is designed as a guide to overall financial strength and creditworthiness,  
25 with the key inputs including financial leverage, business volatility measures, and  
26 company size. Value Line’s Financial Strength Ratings range from “A++” (strongest)

1 down to “C” (weakest) in nine steps. These objective, published indicators incorporate  
2 consideration of a broad spectrum of risks, including financial and business position,  
3 relative size, and exposure to firm-specific factors.

4 Finally, beta measures a utility’s stock price volatility relative to the market as a  
5 whole and reflects the tendency of a stock’s price to follow changes in the market. A  
6 stock that tends to respond less to market movements has a beta less than 1.00, while  
7 stocks that tend to move more than the market have betas greater than 1.00. Beta is the  
8 only relevant measure of investment risk under modern capital market theory and is  
9 widely cited in academics and in the investment industry as a guide to investors’ risk  
10 perceptions. Moreover, in my experience Value Line is the most widely referenced  
11 source for beta in regulatory proceedings. As noted in *New Regulatory Finance*:

12 Value Line is the largest and most widely circulated independent  
13 investment advisory service, and influences the expectations of a large  
14 number of institutional and individual investors. . . . Value Line betas are  
15 computed on a theoretically sound basis using a broadly based market  
16 index, and they are adjusted for the regression tendency of betas to  
17 converge to 1.00.<sup>27</sup>

18 **Q33. HOW DO THE OVERALL RISK OF THE GAS GROUP COMPARE TO**  
19 **NORTHWESTERN?**

20 A33. Table 3 compares the Gas Group to the Company across the five key indices of  
21 investment risk discussed above. Because NorthWestern has no publicly traded  
22 common stock, the Value Line risk measures shown reflect those published for its  
23 parent, NWE.

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<sup>27</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports (2006) at 71.



**TABLE 3  
COMPARISON OF RISK INDICATORS**

<u>Proxy Group</u>	<u>Credit Ratings</u>		<u>Value Line</u>		
	<u>S&amp;P</u>	<u>Moody's</u>	<u>Safety Rank</u>	<u>Financial Strength</u>	<u>Beta</u>
Gas Group	A-	A3	2	A	0.86
NorthWestern	BBB	Baa2	3	B+	0.95

The single-A ratings corresponding to the Gas Group place their credit risks solidly within the investment grade range. NorthWestern’s triple-B ratings are two notches lower and indicate greater risk. The average Value Line Safety Rank, Financial Strength indicator, and beta values corresponding to NorthWestern also uniformly indicate greater risk. Considered together, a comparison of these objective measures indicates that the overall investment risks corresponding to NorthWestern are greater than those of the Gas Group.

**Q34. WOULD INVESTORS ALSO CONSIDER THE IMPLICATIONS OF REGULATORY MECHANISMS IN EVALUATING THE COMPANY’S RELATIVE RISKS?**

A34. Yes. In response to the increasing sensitivity over fluctuations in costs and the importance of advancing other public interest goals such as reliability, energy conservation, and safety, utilities and their regulators have sought to mitigate cost recovery uncertainty and align the interest of utilities and their customers. As a result, adjustment mechanisms, cost trackers, and future test years have become increasingly prevalent, along with alternatives to traditional ratemaking such as formula rates and multi-year rate plans. RRA concluded in its most recent review of adjustment clauses that:

More recently and with greater frequency, commissions have approved mechanisms that permit the costs associated with the construction of new generation or delivery infrastructure to be used, effectively including these items in rate base without the need for a full rate case. In some

1 instances, these mechanisms may even provide the utilities a cash return  
2 on construction work in progress.

3 . . . [C]ertain types of adjustment clauses are more prevalent than others.  
4 For example, those that address electric fuel and gas commodity charges  
5 are in place in all jurisdictions. Also, about two-thirds of all utilities have  
6 riders in place to recover costs related to energy efficiency programs, and  
7 roughly half of the utilities have some type of decoupling mechanism in  
8 place.<sup>28</sup>

9 As shown on Exhibit AMM-3, and reflective of this trend, the companies in the  
10 Gas Group operate under a wide variety of regulatory provisions, including future test  
11 years, multi-year rate plans, revenue decoupling mechanisms, and WNAs. The proxy  
12 utilities also benefit from adjustment clauses to include new capital investment without  
13 requiring a traditional rate case and recover costs of environmental compliance  
14 measures, as well as riders for energy conservation programs.

15 **Q35. HAVE YOU SUMMARIZED THE REGULATORY MECHANISMS**  
16 **AVAILABLE TO THE GAS GROUP?**

17 A35. Yes. As summarized on Exhibit AMM-3, these mechanisms are ubiquitous and wide  
18 ranging. For example, of the twenty-three separate utilities controlled by the companies  
19 in the Gas Group, eighteen operate under some form of decoupling mechanism that  
20 accounts for the impact of various factors affecting sales volumes and revenues. In  
21 addition, a WNA has been approved for seventeen of these utilities,<sup>29</sup> while sixteen  
22 benefit from trackers designed to address rising capital investment in utility  
23 infrastructure outside of a traditional rate case.

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<sup>28</sup> S&P Global Market Intelligence, *Adjustment Clause: A state-by-state overview*, RRA Regulatory Focus (Jul. 18, 2022).

<sup>29</sup> Weather risks are also offset by other forms of rate design, including decoupling and straight-fixed-variable pricing.

1 **Q36. WHAT REGULATORY MECHANISMS ARE APPLICABLE TO**  
2 **NORTHWESTERN'S GAS UTILITY OPERATIONS IN SOUTH DAKOTA?**

3 A36. Like all companies represented in the Gas Group, NorthWestern has a gas cost  
4 adjustment mechanism that allows it to pass the prudently-incurred cost of gas through  
5 to the customer between rate reviews. In addition, NorthWestern benefits from a tracker  
6 that allows for recovery of Ad Valorem taxes. No other regulatory mechanisms are  
7 currently in place for the Company in South Dakota.

8 **Q37. DOES THE COMPANY'S LACK OF REGULATORY MECHANISMS SET IT**  
9 **APART FROM THE FIRMS IN THE GAS GROUP?**

10 A37. Yes. In evaluating a reasonable ROE, it is important to note that the mechanisms  
11 currently in place for NorthWestern in South Dakota are more limited than those  
12 approved for other firms in the industry. Unlike many gas utilities, NorthWestern does  
13 not benefit from elasticity or decoupling mechanisms that insulate utility margins from  
14 declining usage. Nor does the Company have a WNA to account for the impacts of  
15 abnormal weather. A WNA moderates the impact of extreme weather on customers and,  
16 at the same time, dampens the volatility of a gas utility's revenues. All of the utilities  
17 in the Gas Group have some form of weather mitigant, including decoupling  
18 mechanisms, adjustment clauses, insurance, and/or rate design features that make  
19 revenues less susceptible to variations in gas consumption due to weather. As Value

20 Line noted:

21 Weather is a factor that affects the demand for natural gas, especially  
22 from small commercial businesses and consumers. Not surprisingly,  
23 earnings for utilities are susceptible to seasonal temperature patterns,  
24 with consumption normally at its peak during the winter heating months.  
25 Unseasonably warm or cold weather can cause substantial volatility in  
26 quarterly operating results. But some companies strive to counteract this  
27 exposure through temperature-adjusted rate mechanisms, which are  
28 available in many states. Therefore, investors interested in utilities with

1 more-stable profits from one year to the next are advised to look for  
2 companies that are able to hedge this risk.<sup>30</sup>

3 As a result, while the Company remains exposed to the risks associated with  
4 abnormal weather and declining usage, the reduced uncertainties associated with  
5 decoupling and weather mitigants are considered by investors and reflected in my cost  
6 of equity estimates.

### 7 C. Capital Structure

#### 8 **Q38. WHAT IS THE ROLE OF CAPITAL STRUCTURE IN SETTING A UTILITY'S** 9 **RATE OF RETURN?**

10 A38. Capital structure reflects the mix of capital—debt, preferred securities, and common  
11 equity—used to finance a utility’s assets. The proportions of the total capitalization  
12 attributable to each source of capital are typically used to weight the costs of investor-  
13 supplied capital in calculating an overall rate of return.

#### 14 **Q39. HOW DO COMPANIES DETERMINE AN APPROPRIATE CAPITAL** 15 **STRUCTURE FOR THEIR OPERATIONS?**

16 A39. There are many considerations in the capital structure decision. In general, the goal is  
17 to employ the mix of capital that minimizes the weighted average cost of capital. Given  
18 the interplay between costs of debt and equity, the impact of taxes, bankruptcy costs,  
19 and the level of business risks, determining a firm’s optimal capital structure is an  
20 imprecise exercise. In practice, capital structure decisions must be made by combining  
21 managements’ judgment, numerical analysis, and considering investors’ risk  
22 perceptions.

23 It is generally accepted that the norms established by comparable firms provide  
24 a valid benchmark to evaluate a reasonable capital structure for a utility. The capital  
25 structure maintained by other utilities should reflect their collective efforts to finance

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<sup>30</sup> The Value Line Investment Survey at 541 (Jun. 3, 2016).

1 themselves so as to minimize capital costs while preserving their financial integrity and  
2 ability to attract capital. Moreover, these industry capital structures should also  
3 incorporate the requirements of investors (both debt and equity), as well as the influence  
4 of regulators.

5 **Q40. WHAT COMMON EQUITY RATIO IS IMPLICIT IN NORTHWESTERN'S**  
6 **CAPITAL STRUCTURE?**

7 A40. NorthWestern's capital structure is presented in the direct testimony of Company  
8 witness Emilie Ng. As summarized in her testimony, the common equity ratio  
9 applicable to the Company is 53.13%.

10 **Q41. HOW DOES THIS COMPARE TO THE RANGE OF EQUITY RATIOS**  
11 **MAINTAINED BY THE GAS GROUP?**

12 A41. Exhibit AMM-4 presents the sources of long-term capital (long-term debt and common  
13 equity) used by the publicly traded firms in the group of natural gas utilities used to  
14 estimate the cost of equity. As shown on page 1 of this exhibit, over the four quarters  
15 ended December 31, 2023 the average common equity ratios for the utilities in the Gas  
16 Group ranged from 39.8% to 58.9%.

17 As shown on page 2 of Exhibit AMM-4, Value Line expects common equity  
18 ratios for the Gas Group to range between 37.5% and 60.0% over its three-to-five year  
19 forecast horizon.

20 **Q42. WHAT OTHER EVIDENCE SUPPORTS THE REASONABLENESS OF THE**  
21 **COMPANY'S REQUESTED CAPITAL STRUCTURE?**

22 A42. Reference to recent findings for gas utilities in other regulatory proceedings also  
23 supports the reasonableness of NorthWestern's 53.13% common equity ratio. The table  
24 below presents the range of common equity ratios approved for gas utilities over the  
25 past eight quarters, as reported by RRA:

1  
2

**TABLE 4**  
**GAS UTILITY ALLOWED COMMON EQUITY RATIOS**

	<u>Low</u>	--	<u>High</u>	<u>Average</u>
Q1-22	48.00%	--	51.60%	50.24%
Q2-22	48.00%	--	60.59%	52.77%
Q3-22	47.00%	--	52.20%	50.52%
Q4-22	45.00%	--	58.22%	51.75%
Q1-23	45.16%	--	59.74%	53.89%
Q2-23	50.00%	--	62.20%	56.18%
Q3-23	48.00%	--	59.63%	52.88%
Q4-23	48.00%	--	56.06%	51.27%
Average	47.40%	--	57.53%	52.44%

Source: S&P Global Market Intelligence, *Major Rate Case Decisions*, RRA Regulatory Focus (Feb. 6, 2024 and Feb. 2023). Excludes capital structures that include cost-free items.

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As demonstrated in the table above, the Company's requested 53.13% common equity ratio falls well within the range of capital structures recently approved for other gas utilities.

**Q43. DO ONGOING ECONOMIC AND CAPITAL MARKET UNCERTAINTIES ALSO INFLUENCE THE APPROPRIATE CAPITAL STRUCTURE FOR NORTHWESTERN?**

A43. Yes. Financial flexibility plays a crucial role in ensuring the wherewithal of a utility to meet funding needs, and utilities with higher financial leverage may be foreclosed or have limited access to additional borrowing, especially during times of financial market stress. As Moody's observed:

Utilities are among the largest debt issuers in the corporate universe and typically require consistent access to capital markets to assure adequate sources of funding and to maintain financial flexibility. During times of distress and when capital markets are exceedingly volatile and tight,

1 liquidity becomes critically important because access to capital markets  
2 may be difficult.<sup>31</sup>

3 More recently, Moody’s emphasized that the utility sector “is likely to continue to  
4 generate negative free cash flow and credit quality is likely to suffer unless utilities fund  
5 this negative free cash flow appropriately with a balance of debt and equity financing.”<sup>32</sup>

6 S&P confirmed the financial challenges associated with funding heightened  
7 investment in the utility sector, noting that, “[a]bout one-third of the industry is  
8 strategically managing their financial performance with only minimal financial  
9 cushion,” and warning that “when unexpected risks occur or base-case assumptions  
10 deviate from expectations, the utility’s credit quality can weaken.”<sup>33</sup> More recently,  
11 S&P added that “given the current high percentage of negative outlooks, we anticipate  
12 that 2024 will be another challenging year for the industry’s credit quality.”<sup>34</sup>

13 As a result, the Company’s capital structure must maintain adequate equity to  
14 preserve the flexibility necessary to maintain continuous access to capital even during  
15 times of unfavorable energy or financial market conditions.

16 **Q44. WHAT OTHER FACTORS DO INVESTORS CONSIDER IN THEIR**  
17 **ASSESSMENT OF A COMPANY’S CAPITAL STRUCTURE?**

18 A44. Utilities, including NorthWestern, are facing significant capital investment plans.  
19 Coupled with the potential for turmoil in capital markets, this warrants a stronger  
20 balance sheet to deal with an uncertain environment. As S&P noted:

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<sup>31</sup> Moody’s Investors Service, *FAQ on credit implications of the coronavirus outbreak*, Sector Comment (Mar. 26, 2020).

<sup>32</sup> Moody’s Investors Service, *Regulate Electric and Gas Utilities – US, Rising capital expenditures will require higher annual equity funding*, Sector In-Depth (Nov. 8, 2023).

<sup>33</sup> S&P Global Ratings, *The Outlook For North American Regulated Utilities Turns Stable* (May 18, 2023).

<sup>34</sup> S&P Global Ratings, *Rising Risks: Outlook For North American Investor-Owned Regulated Utilities Weakens*, Comments (Feb. 14, 2024).

1 Under our base case, we expect that by 2024 the industry's capital  
2 spending will exceed \$180 billion. Because of the industry's continued  
3 robust capital spending, we expect that [the] industry will continue to  
4 generate negative discretionary cash flow. This requires that the industry  
5 has consistent access to the capital markets to finance capital spending  
6 and dividends requirements.<sup>35</sup>

7 More recently, S&P noted that, “[w]ithout a commensurate focus on balance sheet  
8 preservation through equity support of discretionary negative cash flow deficits, limited  
9 financial cushion could give rise to another round of negative rating actions.”<sup>36</sup>  
10 Similarly, Moody’s noted that higher interest rates and the pressure of maintaining credit  
11 metrics while funding capital investments were leading to greater reliance on common  
12 equity.<sup>37</sup> Moody’s concluded that the utility sector “is likely to continue to generate  
13 negative free cash flow and credit quality is likely to suffer unless utilities fund this  
14 negative free cash flow appropriately with a balance of debt and equity financing.”<sup>38</sup>

15 In addition, the investment community also considers the impact of other  
16 considerations, such as leases and postretirement benefit and asset retirement  
17 obligations in its evaluation of a utility’s financial standing. Considering the  
18 Company’s relative lack of regulatory mechanisms and ongoing exposure to attrition, a  
19 conservative financial profile, in the form of a reasonable common equity ratio, is  
20 warranted to maintain the continuous access to capital under reasonable terms that is  
21 required to fund operations and necessary system investment, even during times of  
22 adverse capital market conditions.

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<sup>35</sup> S&P Global Ratings, *For The First Time Ever, The Median Investor-Owned Utility Ratings Falls To The ‘BBB’ Category*, Ratings Direct (Jan. 20, 2022).

<sup>36</sup> S&P Global Ratings, *Record CapEx Fuels Growth Along With Credit Risk For North American Investor-Owned Utilities*, Comments (Sep. 12, 2023).

<sup>37</sup> Moody’s Investors Service, *Regulated Electric and Gas Utilities – US; Rising capital expenditures will require higher annual equity funding*, Sector In-Depth (Nov. 8, 2023).

<sup>38</sup> *Id.*



1 **Q45. WHAT DOES THIS EVIDENCE SUGGEST WITH RESPECT TO**  
2 **NORTHWESTERN'S CAPITAL STRUCTURE?**

3 A45. Based on my evaluation, I conclude that NorthWestern's requested common equity ratio  
4 of approximately 53% represents a reasonable basis on which to calculate the  
5 Company's overall rate of return. While industry averages provide one benchmark for  
6 comparison, each firm must select its capitalization based on the risks and prospects it  
7 faces, as well as its specific needs to access the capital markets. NorthWestern's capital  
8 structure is consistent with the range of industry benchmarks reflected in the capital  
9 structure ratios for the Gas Group, as well as the common equity ratios authorized for  
10 other gas utilities. The Company's capital structure reflects the need to address the  
11 funding of ongoing capital expenditures and support NorthWestern's financial integrity  
12 and access to capital on reasonable terms. Based on this evidence, and considering the  
13 importance of maintaining the Company's financial strength and credit standing, I  
14 conclude that NorthWestern's capital structure represents a reasonable mix of capital  
15 sources from which to calculate the overall rate of return.

**V. CAPITAL MARKET ESTIMATES**

16 **Q46. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

17 A46. This section presents capital market estimates of the cost of equity. First, address the  
18 concept of the cost of common equity, along with the risk-return tradeoff principle  
19 fundamental to capital markets. I then describe the quantitative analyses I conducted to  
20 estimate the cost of common equity for the Gas Group.

21 **A. Economic Standards**

22 **Q47. WHAT FUNDAMENTAL ECONOMIC PRINCIPLE UNDERLIES THE COST**  
23 **OF EQUITY CONCEPT?**

24 A47. The fundamental economic principle underlying the cost of equity concept is the notion  
25 that investors are risk averse. In capital markets where relatively risk-free assets are

1 available (*e.g.*, U.S. Treasury securities), investors can be induced to hold riskier assets  
2 only if they are offered a premium, or additional return, above the rate of return on a  
3 risk-free asset. Because all assets compete for investor funds, riskier assets must yield  
4 a higher expected rate of return than safer assets to induce investors to invest and hold  
5 them.

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

$$8 \quad k_i = R_f + RP_i$$

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

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

14 **Q48. IS THERE EVIDENCE THAT THE RISK-RETURN TRADEOFF PRINCIPLE**  
15 **OPERATES IN THE CAPITAL MARKETS?**

16 A48. Yes. The risk-return tradeoff can be documented in segments of the capital markets  
17 where required rates of return can be directly inferred from market data and where  
18 generally accepted measures of risk exist. Bond yields, for example, reflect investors'  
19 expected rates of return, and bond ratings measure the risk of individual bond issues.  
20 Comparing the observed yields on government securities, which are considered free of  
21 default risk, to the yields on bonds of various rating categories demonstrates that the  
22 risk-return tradeoff does, in fact, exist.

1 **Q49. DOES THE RISK-RETURN TRADEOFF OBSERVED WITH FIXED INCOME**  
2 **SECURITIES EXTEND TO COMMON STOCKS AND OTHER ASSETS?**

3 A49. It is widely accepted that the risk-return tradeoff evidenced with long-term debt extends  
4 to all assets. Documenting the risk-return tradeoff for assets other than fixed income  
5 securities, however, is complicated by two factors. First, there is no standard measure  
6 of risk applicable to all assets. Second, for most assets—including common stock—  
7 required rates of return cannot be observed. Nevertheless, there is every reason to  
8 believe that investors demonstrate risk aversion in deciding whether to hold common  
9 stocks and other assets, just as when choosing among fixed-income securities.

10 **Q50. IS THIS RISK-RETURN TRADEOFF LIMITED TO DIFFERENCES**  
11 **BETWEEN FIRMS?**

12 A50. No. The risk-return tradeoff principle applies not only to investments in different firms,  
13 but also to different securities issued by the same firm. The securities issued by a utility  
14 vary considerably in risk because they have different characteristics and priorities. As  
15 noted earlier, the last investors in line are common shareholders. They share in the net  
16 earnings, if any, that remain after all other claimants have been paid. As a result, the  
17 rate of return that investors require from a utility's common stock, the most junior and  
18 riskiest of its securities, must be considerably higher than the yield offered by the  
19 utility's senior, long-term debt.

20 **Q51. WHAT ARE THE CHALLENGES IN DETERMINING A JUST AND**  
21 **REASONABLE ROE FOR A UTILITY?**

22 A51. The actual return investors require is not directly observable. Different methodologies  
23 have been developed to estimate investors' expected and required return on capital, but  
24 these theoretical tools produce a range of estimates, based on different assumptions and  
25 inputs. The DCF method, which is frequently referenced and relied on by regulators, is  
26 only one theoretical approach to gain insight into the return investors require. There are

1 a number of other accepted methodologies for estimating the cost of capital and the  
2 ranges produced by these approaches can vary widely.

3 **Q52. IS IT CUSTOMARY TO CONSIDER THE RESULTS OF MULTIPLE**  
4 **APPROACHES WHEN EVALUATING A JUST AND REASONABLE ROE?**

5 A52. Yes. In my experience, financial analysts and regulators routinely consider the results  
6 of alternative approaches in determining allowed ROEs. It is widely recognized that no  
7 single method can be regarded as failsafe; with all approaches having advantages and  
8 shortcomings. As FERC has noted, “[t]he determination of rate of return on equity starts  
9 from the premise that there is no single approach or methodology for determining the  
10 correct rate of return.”<sup>39</sup> Similarly, a publication of the Society of Utility and Regulatory  
11 Financial Analysts concluded that:

12 Each model requires the exercise of judgment as to the reasonableness  
13 of the underlying assumptions of the methodology and on the  
14 reasonableness of the proxies used to validate the theory. Each model  
15 has its own way of examining investor behavior, its own premises, and  
16 its own set of simplifications of reality. Each method proceeds from  
17 different fundamental premises, most of which cannot be validated  
18 empirically. Investors clearly do not subscribe to any singular method,  
19 nor does the stock price reflect the application of any one single method  
20 by investors.<sup>40</sup>

21 As this treatise succinctly observed, “no single model is so inherently precise that it can  
22 be relied on solely to the exclusion of other theoretically sound models.”<sup>41</sup> Similarly,  
23 *New Regulatory Finance* concluded that:

24 There is no single model that conclusively determines or estimates the  
25 expected return for an individual firm. Each methodology possesses its  
26 own way of examining investor behavior, its own premises, and its own  
27 set of simplifications of reality. Each method proceeds from different

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<sup>39</sup> *Northwest Pipeline Co.*, Opinion No. 396-C, 81 FERC ¶ 61,036 at 4 (1997).

<sup>40</sup> David C. Parcell, *The Cost of Capital – A Practitioner’s Guide*, Society of Utility and Regulatory Financial Analysts (2010) at 84.

<sup>41</sup> *Id.*

1 fundamental premises that cannot be validated empirically. Investors do  
2 not necessarily subscribe to any one method, nor does the stock price  
3 reflect the application of any one single method by the price-setting  
4 investor. There is no monopoly as to which method is used by investors.  
5 In the absence of any hard evidence as to which method outdoes the  
6 other, all relevant evidence should be used and weighted equally, in order  
7 to minimize judgmental error, measurement error, and conceptual  
8 infirmities.<sup>42</sup>

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

13 There are three principal reasons for our unwillingness to place a great  
14 deal of weight on the results of any DCF analysis. One is . . . the failure  
15 of the DCF model to conform to reality. The second is the undeniable  
16 fact that rarely if ever do two expert witnesses agree on the terms of a  
17 DCF equation for the same utility – for example, as we shall see in more  
18 detail below, projections of future dividend cash flow and anticipated  
19 price appreciation of the stock can vary widely. And, the third reason is  
20 that the unadjusted DCF result is almost always well below what any  
21 informed financial analysis would regard as defensible, and therefore  
22 require an upward adjustment based largely on the expert witness’s  
23 judgment. In these circumstances, we find it difficult to regard the results  
24 of a DCF computation as any more than suggestive.<sup>43</sup>

25 More recently, FERC recognized the potential for any application of the DCF model to  
26 produce unreliable results.<sup>44</sup>

27 As this discussion indicates, considering results from alternative approaches  
28 reduces the potential for error associated with any single quantitative method. Just as  
29 investors inform their decisions using a variety of methodologies, my evaluation of a  
30 fair ROE for NorthWestern considers the results of multiple financial models.

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<sup>42</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 429.

<sup>43</sup> *Ind. Michigan Power Co.*, Cause No. 38728, 116 PUR4th, 1, 17-18 (IURC 8/24/1990).

<sup>44</sup> *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234 at P 41 (2014).

1 **Q53. DOES THE FACT THAT NORTHWESTERN IS A SUBSIDIARY OF NWE IN**  
2 **ANY WAY ALTER THESE FUNDAMENTAL STANDARDS UNDERLYING A**  
3 **JUST AND REASONABLE ROE?**

4 A53. No. While the Company has no publicly traded common stock and NWE is the  
5 Company's only shareholder, this does not change the standards governing the  
6 determination of a just and reasonable ROE. Ultimately, the common equity required  
7 to support NorthWestern's utility operations must be raised in the capital markets, where  
8 investors consider the Company's ability to offer a rate of return that is competitive with  
9 other risk-comparable alternatives. NorthWestern must compete with other investment  
10 opportunities and unless there is a reasonable expectation that investors will have the  
11 opportunity to earn returns commensurate with the underlying risks, capital will be  
12 allocated elsewhere, the Company's financial integrity will be weakened, and investors  
13 will demand an even higher rate of return. NorthWestern's ability to offer a reasonable  
14 return on investment is a necessary ingredient to ensure that customers continue to enjoy  
15 economical rates and reliable service.

16 **Q54. WHAT DOES THE ABOVE DISCUSSION IMPLY WITH RESPECT TO**  
17 **ESTIMATING THE COST OF EQUITY FOR A UTILITY?**

18 A54. Although the cost of equity cannot be observed directly, it is a function of the returns  
19 available from other investment alternatives and the risks of the investment. Because it  
20 is not readily observable, the cost of equity for a particular utility must be estimated by  
21 analyzing information about capital market conditions generally, assessing the relative  
22 risks of the Company specifically, and employing alternative quantitative methods that  
23 focus on investors' required rates of return. These methods typically attempt to infer  
24 investors' required rates of return from stock prices, interest rates, or other capital  
25 market data.

## B. Discounted Cash Flow Analysis

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

A55. DCF models assume that the price of a share of common stock is equal to the present value of the expected cash flows (i.e., future dividends and stock price) that will be received while holding the stock, discounted at investors' required rate of return. Rather than developing annual estimates of cash flows into perpetuity, the DCF model can be simplified to a "constant growth" form:<sup>45</sup>

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

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

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

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

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.

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<sup>45</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.

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

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

9 **Q57. HOW DO YOU DETERMINE THE DIVIDEND YIELDS FOR THE GAS**  
10 **GROUP?**

11 A57. I rely on Value Line's estimates of dividends to be paid by each of these utilities over  
12 the next twelve months as  $D_1$ . This annual dividend was then divided by a 30-day  
13 average stock price for each utility to arrive at the expected dividend yield. The  
14 expected dividends, stock prices and resulting dividend yields for the firms in the Gas  
15 Group are presented on Exhibit AMM-5. As shown on the first page of this exhibit,  
16 dividend yields for the firms in the Gas Group ranged from 2.4% to 5.3% and averaged  
17 4.0%.

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

20 A58. The next step is to evaluate long-term growth expectations, or " $g$ ", for the firm in  
21 question. In constant growth DCF theory, earnings, dividends, book value, and market  
22 price are all assumed to grow in lockstep, and the growth horizon of the DCF model is  
23 infinite. But implementation of the DCF model is more than just a theoretical exercise;  
24 it is an attempt to replicate the mechanism investors used to arrive at observable stock  
25 prices. A wide variety of techniques can be used to derive growth rates, but the only  
26 " $g$ " that matters in applying the DCF model is the value that investors expect.



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

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

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

16 The availability of projected EPS growth rates is also key to investors relying  
17 on this measure as compared to future trends in DPS. Apart from Value Line, investment  
18 advisory services do not generally publish comprehensive DPS growth projections, and  
19 this scarcity of dividend growth rates relative to the abundance of earnings forecasts  
20 attests to their relative influence. The fact that securities analysts focus on EPS growth,  
21 and that DPS growth rates are not routinely published, indicates that projected EPS  
22 growth rates are likely to provide a superior indicator of the future long-term growth  
23 expected by investors.

1 **Q60. DO THE GROWTH RATE PROJECTIONS OF SECURITY ANALYSTS ALSO**  
2 **CONSIDER HISTORICAL TRENDS?**

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

6 **Q61. WHAT ARE SECURITY ANALYSTS CURRENTLY PROJECTING IN THE**  
7 **WAY OF GROWTH FOR THE FIRMS IN THE PROXY GROUP?**

8 A61. The EPS growth projections for each of the firms in the Gas Group reported by Value  
9 Line, IBES,<sup>46</sup> and Zacks are displayed on page 2 of Exhibit AMM-5.

10 **Q62. HOW ELSE ARE INVESTORS' EXPECTATIONS OF FUTURE LONG-TERM**  
11 **GROWTH PROSPECTS SOMETIMES ESTIMATED WHEN APPLYING THE**  
12 **CONSTANT GROWTH DCF MODEL?**

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

19 The sustainable growth rate is calculated by the formula,  $g = br + sv$ , where "b"  
20 is the expected retention ratio, "r" is the expected earned return on equity, "s" is the  
21 percent of common equity expected to be issued annually as new common stock, and  
22 "v" is the equity accretion rate. Under DCF theory, the "sv" factor is a component of  
23 the growth rate designed to capture the impact of issuing new common stock at a price  
24 above, or below, book value. The sustainable, "br+sv" growth rates for each firm in the

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<sup>46</sup> Formerly I/B/E/S International, Inc., IBES growth rates are now compiled and published by Refinitiv.

1 proxy group are summarized on page 2 of Exhibit AMM-5, with the underlying details  
2 being presented on Exhibit AMM-6.

3 The sustainable growth rate analysis shown in Exhibit AMM-6 incorporates an  
4 “adjustment factor” because Value Line’s reported returns are based on year-end book  
5 values. Since earnings is a flow over the year while book value is determined at a given  
6 point in time, the measurement of earnings and book value are distinct concepts. It is  
7 this fundamental difference between a flow (earnings) and point estimate (book value)  
8 that makes it necessary to adjust to mid-year in calculating the ROE. Given that book  
9 value will increase or decrease over the year, using year-end book value (as Value Line  
10 does) understates or overstates the average investment that corresponds to the flow of  
11 earnings. To address this concern, earnings must be matched with a corresponding  
12 representative measure of book value, or the resulting ROE will be distorted. The  
13 adjustment factor determined in Exhibit AMM-6, is solely a means of converting Value  
14 Line’s end-of-period values to an average return over the year, and the formula for this  
15 adjustment is supported in recognized textbooks and has been adopted by other  
16 regulators.<sup>47</sup>

17 **Q63. WHAT COST OF COMMON EQUITY ESTIMATES WERE IMPLIED FOR**  
18 **THE GAS GROUP USING THE DCF MODEL?**

19 A63. After combining the dividend yields and respective growth projections for each utility,  
20 the resulting cost of common equity estimates are shown on page 3 of Exhibit AMM-5.

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<sup>47</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 **Q64. IN EVALUATING THE RESULTS OF THE CONSTANT GROWTH DCF**  
2 **MODEL, IS IT APPROPRIATE TO ELIMINATE ILLOGICAL ESTIMATES?**

3 A64. Yes. It is essential that the cost of equity estimates produced by quantitative methods  
4 pass fundamental tests of reasonableness and economic logic. Accordingly, DCF  
5 estimates that are implausibly low or high should be eliminated.

6 **Q65. HOW DO YOU EVALUATE DCF ESTIMATES AT THE LOW END OF THE**  
7 **RANGE?**

8 A65. My evaluation of DCF estimates at the low end of the range is based on the fundamental  
9 risk-return tradeoff, which holds that investors will only take on more risk if they expect  
10 to earn a higher rate of return to compensate them for the greater uncertainty. Because  
11 common stocks lack the protections associated with an investment in long-term bonds,  
12 a utility's common stock imposes far greater risks on investors. As a result, the rate of  
13 return that investors require from a utility's common stock is considerably higher than  
14 the yield offered by senior, long-term debt. Consistent with this principle, DCF results  
15 that are not sufficiently higher than the yield available on less risky utility bonds must  
16 be eliminated.

17 **Q66. HAVE SIMILAR TESTS BEEN APPLIED BY OTHER REGULATORS?**

18 A66. Yes. FERC has noted that adjustments are justified where applications of the DCF  
19 approach and other methods produce illogical results. FERC evaluates low-end DCF  
20 results against observable yields on long-term public utility debt and has recognized that  
21 it is appropriate to eliminate estimates that do not sufficiently exceed this threshold.<sup>48</sup>  
22 FERC's current practice is to exclude low-end cost of estimates that fall below the six-  
23 month average yield on Baa-rated utility bonds, plus 20% of the CAPM market risk

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<sup>48</sup> See, e.g., *Southern California Edison Co.*, 131 FERC ¶ 61,020 at P 55 (2010).

1 premium.<sup>49</sup> In addition, FERC also excludes estimates that are “irrationally or  
2 anomalously high.”<sup>50</sup> Similarly, the Staff of the Maryland Public Service Commission  
3 has also eliminated DCF values where they do not offer a sufficient premium above the  
4 cost of debt to be attractive to an equity investor.<sup>51</sup>

5 **Q67. DO YOU EXCLUDE ANY ESTIMATES AT THE LOW OR HIGH END OF THE**  
6 **RANGE OF DCF RESULTS?**

7 A67. Yes. As highlighted on page 3 of Exhibit AMM-5, I remove one low-end DCF cost of  
8 equity estimate of 7.4%. After removing this illogical value, the lower end of the DCF  
9 results is set by a cost of equity estimate of 8.1%, while the upper end is established by  
10 a cost of equity estimate of 13.5%. While a 13.5% cost of equity estimate may exceed  
11 the majority of the remaining values, low-end DCF estimates in the 8.1% to 8.3% range  
12 are assuredly far below investors’ required rate of return. Taken together and considered  
13 along with the balance of the results, the remaining values provide a reasonable basis  
14 on which to frame the range of plausible DCF estimates and evaluate investors’ required  
15 rate of return.

16 **Q68. WHAT ROE ESTIMATES ARE IMPLIED BY YOUR DCF RESULTS FOR THE**  
17 **GAS GROUP?**

18 A68. As shown on page 3 of Exhibit AMM-5 and summarized in Table 5, application of the  
19 constant growth DCF model results in the following ROE estimates:

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<sup>49</sup> Based on the six-month average yield at March 2024 of 5.98% and the 7.5% market risk premium shown on Exhibit AMM-7, this implies a current low-end threshold of approximately 7.5%.

<sup>50</sup> *Ass’n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, 171 FERC ¶ 61,154 at P 152 (2020).

<sup>51</sup> See, e.g., Maryland Public Service Commission, Case No. 9702, *Direct Testimony and Exhibits of Anson R. Justi* (Dec. 15, 2023) at 33.

**TABLE 5**  
**DCF RESULTS – GAS GROUP**

<u>Growth Rate</u>	<u>Average</u>	<u>Midpoint</u>
Value Line	10.3%	10.9%
IBES	10.1%	9.8%
Zacks	9.8%	9.7%
br + sv	10.2%	10.3%

**C. Capital Asset Pricing Model**

**Q69. PLEASE DESCRIBE THE CAPM.**

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

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

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

Under the CAPM formula above, a stock’s required return is a function of the risk-free rate ( $R_f$ ), plus a risk premium that is scaled to reflect the relative volatility of a firm’s stock price, as measured by beta ( $\beta$ ). Like the DCF model, the CAPM is an *ex-ante*, or forward-looking model based on expectations of the future. As a result, to produce a meaningful estimate of investors’ required rate of return, the CAPM must be applied using estimates that reflect the expectations of actual investors in the market, not with backward-looking, historical data.

1 **Q70. WHY IS THE CAPM A RELEVANT APPROACH TO EVALUATE THE COST**  
2 **OF EQUITY FOR NORTHWESTERN?**

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

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

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

16 The dividend yield for each firm is obtained from Value Line, and the growth  
17 rate is equal to the average of the earnings growth projections from IBES, Value Line,  
18 and Zacks for each firm, with each firm's dividend yield and growth rate being weighted  
19 by its proportionate share of total market value. After removing companies with growth  
20 rates that were negative or greater than 20%, the weighted average of the projections for  
21 the individual firms implies an average growth rate over the next five years of 10.1%.  
22 Combining this average growth rate with a year-ahead dividend yield of 1.9% results in  
23 a current cost of common equity estimate for the market as a whole ( $R_m$ ) of 12.0%.  
24 Subtracting a 4.5% risk-free rate based on the average yield on 30-year Treasury bonds  
25 for the six month period ending March 2024 produced a market equity risk premium of  
26 7.5%.

1 **Q72. WHAT BETA VALUES DO YOU USE?**

2 A72. As indicated earlier in my discussion of risk measures for the Gas Group, I relied on the  
3 beta values reported by Value Line, which in my experience is the most widely  
4 referenced source for beta in regulatory proceedings.

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

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

9 One of the most remarkable discoveries of modern finance is the finding  
10 of a relationship between firm size and return. On average, small  
11 companies have higher returns than large ones. . . . The relationship  
12 between firm size and return cuts across the entire size spectrum; it is not  
13 restricted to the smallest stocks.<sup>52</sup>

14 According to the CAPM, the expected return on a security should consist of the  
15 riskless rate, plus a premium to compensate for the systematic risk of the particular  
16 security. The degree of systematic risk is represented by the beta coefficient. The need  
17 for the size adjustment arises because differences in investors' required rates of return  
18 that are related to firm size are not fully captured by beta. To account for this,  
19 researchers have developed size premiums that need to be added to account for the level  
20 of a firm's market capitalization in determining the CAPM cost of equity.<sup>53</sup>  
21 Accordingly, my CAPM analyses also incorporated an adjustment to recognize the  
22 impact of size distinctions, as measured by the market capitalization for the firms in the  
23 Gas Group.

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<sup>52</sup> Morningstar, *2015 Ibbotson S&P 500 Classic Yearbook*, at 99.

<sup>53</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 *Cost of Capital Navigator*.



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

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

- 9 1. Divide all stocks traded on the NYSE, NYSE MKT, and NASDAQ  
10 indices into deciles based on their market capitalization.  
11 2. Using the average beta value for each decile, calculate the implied  
12 excess return over the risk-free rate using the CAPM.  
13 3. Compare the calculated excess returns based on the CAPM to the  
14 actual excess returns for each decile, with the difference being the  
15 increment of return that is related to firm size, or “size adjustment.”

16 *New Regulatory Finance* observed that “small market-cap stocks experience  
17 higher returns than large market-cap stocks with equivalent betas,” and concluded that  
18 “the CAPM understates the risk of smaller utilities, and a cost of equity based purely on  
19 a CAPM beta will therefore produce too low an estimate.”<sup>54</sup> As FERC has recognized,  
20 “[t]his type of size adjustment is a generally accepted approach to CAPM analyses.”<sup>55</sup>

21 **Q75. IS THIS SIZE ADJUSTMENT RELATED TO THE RELATIVE SIZE OF**  
22 **NORTHWESTERN AS COMPARED WITH THE PROXY GROUP?**

23 A75. No. I am not proposing to apply a general size risk premium in evaluating a just and  
24 reasonable ROE for the Company and my recommendation does not include any  
25 adjustment related to the relative size of NorthWestern. Rather, this size adjustment is

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<sup>54</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 187.

<sup>55</sup> Opinion No. 531-B at P 117.

1 specific to the CAPM and merely corrects for an observed inability of the beta measure  
2 to fully reflect the risks perceived by investors for the firms in the proxy group.

3 **Q76. WHAT IS THE IMPLIED ROE FOR THE GAS GROUP USING THE CAPM**  
4 **APPROACH?**

5 A76. As shown on Exhibit AMM-7, the CAPM approach implies an average ROE for the Gas  
6 Group of 11.0%, or 11.9% after adjusting for the impact of firm size.

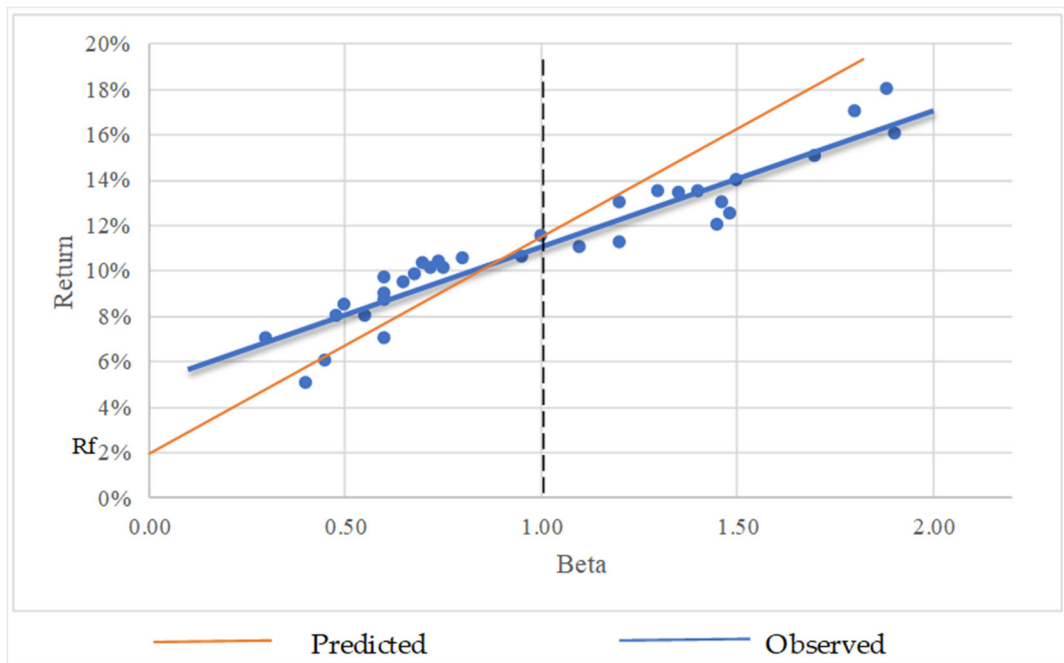
7 **D. Empirical Capital Asset Pricing Model**

8 **Q77. HOW DOES THE ECAPM APPROACH DIFFER FROM TRADITIONAL**  
9 **APPLICATIONS OF THE CAPM?**

10 A77. 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:

1  
2

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



3  
4  
5  
6

Because the betas of utility stocks, including those in the proxy 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*:

7  
8  
9  
10  
11  
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>56</sup>

14  
15  
16

Based on a review of the empirical evidence, *New Regulatory Finance* concluded the expected return on a security is represented by the following formula:

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

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<sup>56</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports (2006) at 189.

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

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

11 A78. My application of the ECAPM is based on the same forward-looking market rate of  
12 return, risk-free rates, and beta values discussed earlier in connections with the CAPM.  
13 As shown on Exhibit AMM-8, applying the forward-looking ECAPM approach to the  
14 firms in the Gas Group results in an average cost of equity estimate of 11.2%, or 12.2%  
15 after incorporating the size adjustment.

16 **E. Utility Risk Premium**

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

18 A79. The risk premium approach is based on the fundamental risk-return principle that is  
19 central to finance, which holds that investors will require a premium in the form of a  
20 higher return to assume additional risk. The risk premium method extends the risk-  
21 return tradeoff observed with bonds to estimate investors' required rate of return on  
22 common stocks. The cost of equity is estimated by first determining the additional  
23 return investors require to forgo the relative safety of bonds and to bear the greater risks  
24 associated with common stock, and then adding this equity risk premium to the current  
25 yield on bonds. Like the DCF model, the risk premium method is capital market  
26 oriented. However, unlike DCF models, which indirectly impute the cost of equity, risk

1 premium methods directly estimate investors' required rate of return by adding an equity  
2 risk premium to observable bond yields.

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

5 A80. Yes. This method is routinely referenced by the investment community and in academia  
6 and regulatory proceedings and provides an important tool in estimating a just and  
7 reasonable ROE for NorthWestern.

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

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

19 **Q82. HOW DO YOU CALCULATE EQUITY RISK PREMIUMS BASED ON**  
20 **ALLOWED RETURNS?**

21 A82. The ROEs authorized for gas utilities by regulatory commissions across the U.S. are  
22 compiled and published by RRA. On pages 2-4 of Exhibit AMM-9, the average yield  
23 on single-A public utility bonds is subtracted from the average allowed return for gas  
24 utilities to calculate equity risk premiums for each quarter between 1980 and 2023. As  
25 shown on page 4 of Exhibit AMM-9, over this period, these equity risk premiums for

1 gas utilities averaged 3.80%, and the yields on single-A public utility bonds averaged  
2 7.56%.

3 **Q83. WHAT CAPITAL MARKET RELATIONSHIP MUST BE CONSIDERED**  
4 **WHEN IMPLEMENTING THE RISK PREMIUM METHOD?**

5 A83. The magnitude of equity risk premiums is not constant and equity risk premiums tend  
6 to move inversely with interest rates. In other words, when interest rate levels are  
7 relatively high, equity risk premiums narrow, and when interest rates are relatively low,  
8 equity risk premiums widen. The implication of this inverse relationship is that the cost  
9 of equity does not move as much as, or in lockstep with, interest rates. Accordingly, for  
10 a 1% increase or decrease in interest rates, the cost of equity may only rise or fall some  
11 fraction of 1%. When implementing the risk premium method, adjustments may be  
12 required to incorporate this inverse relationship if current interest rates differ from the  
13 average interest rate level represented in the data set.

14 Current bond yields are lower than those prevailing over the risk premium study  
15 periods. Given that equity risk premiums move inversely with interest rates, these lower  
16 bond yields also imply an increase in the equity risk premium that investors require to  
17 accept the higher uncertainties associated with an investment in utility common stocks  
18 versus bonds. In other words, higher required equity risk premiums offset the impact  
19 of declining interest rates on the ROE.

20 **Q84. IS THIS INVERSE RELATIONSHIP CONFIRMED BY PUBLISHED**  
21 **FINANCIAL RESEARCH?**

22 A84. Yes. The inverse relationship between equity risk premiums and interest rates has been  
23 widely reported in the financial literature. As summarized by *New Regulatory Finance*:

24 Published studies by Brigham, Shome, and Vinson (1985), Harris  
25 (1986), Harris and Marston (1992, 1993), Carleton, Chambers, and  
26 Lakonishok (1983), Morin (2005), and McShane (2005), and others  
27 demonstrate that, beginning in 1980, risk premiums varied inversely with

1 the level of interest rates – rising when rates fell and declining when rates  
2 rose.<sup>57</sup>

3 Other regulators have also recognized that, while the cost of equity trends in the  
4 same direction as interest rates, these variables do not move in lockstep.<sup>58</sup> This  
5 relationship is illustrated in the figure on page 5 of Exhibit AMM-9.

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

8 A85. Based on the regression output between the interest rates and equity risk premiums  
9 displayed on page 5 of Exhibit AMM-9, the equity risk premium for gas utilities  
10 increases by approximately 48 basis points for each percentage point drop in the yield  
11 on average public utility bonds. As shown on page 1 of Exhibit AMM-9, with an  
12 average yield on single-A public utility bonds for the six-months ending March 2024 of  
13 5.74%, this implies a current equity risk premium of 4.67%. Adding this equity risk  
14 premium to the average yield on Baa-rated utility bonds of 5.98% results in an indicated  
15 cost of equity for NorthWestern of 10.65%.

16 **F. Expected Earnings Approach**

17 **Q86. WHAT OTHER ANALYSES DO YOU CONDUCT TO EVALUATE A FAIR ROE**  
18 **FOR NORTHWESTERN?**

19 A86. I also evaluate the ROE using the expected earnings method. Reference to rates of  
20 return available from alternative investments of comparable risk can provide an  
21 important benchmark in assessing the return necessary to assure confidence in the  
22 financial integrity of a firm and its ability to attract capital. This expected earnings  
23 approach is consistent with the economic underpinnings for a just and reasonable rate

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<sup>57</sup> Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports (2006) at 128.

<sup>58</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. 7, 2024); *Martha Coakley et al.*, 147 FERC ¶ 61,234 at P 147 (2014).

1 of return established by the U.S. Supreme Court in *Bluefield* and *Hope*. Moreover, it  
2 avoids the complexities and limitations of capital market methods and instead focuses  
3 on the returns earned on book equity, which are readily available to investors.

4 **Q87. WHAT ECONOMIC PREMISE UNDERLIES THE EXPECTED EARNINGS**  
5 **APPROACH?**

6 A87. The expected earnings approach is based on the concept that investors compare each  
7 investment alternative with the next best opportunity. If the utility is unable to offer a  
8 return similar to that available from other opportunities of comparable risk, investors  
9 will become unwilling to supply the capital on reasonable terms. For existing investors,  
10 denying the utility an opportunity to earn what is available from other similar risk  
11 alternatives prevents them from earning their opportunity cost of capital. This outcome  
12 would violate the *Hope* and *Bluefield* standards and undermine the utility's access to  
13 capital on reasonable terms.

14 **Q88. HOW IS THE EXPECTED EARNINGS APPROACH TYPICALLY**  
15 **IMPLEMENTED?**

16 A88. The traditional comparable earnings test identifies a group of companies that are  
17 believed to be comparable in risk to the utility. The actual earnings of those companies  
18 on the book value of their investment are then compared to the allowed return of the  
19 utility. While the traditional comparable earnings test is implemented using historical  
20 data taken from the accounting records, it is also common to use projections of returns  
21 on book investment, such as those published by recognized investment advisory  
22 publications (*e.g.*, Value Line). Because these returns on book value equity are  
23 analogous to the allowed return on a utility's rate base, this measure of opportunity costs  
24 results in a direct, "apples to apples" comparison.



1 **Q89. WHAT OTHER CONSIDERATION SUPPORTS REFERENCE TO EXPECTED**  
2 **RETURNS ON BOOK VALUE?**

3 A89. Regulators do not set the returns that investors earn in the capital markets, which are a  
4 function of dividend payments and fluctuations in common stock prices—both of which  
5 are outside their control. Regulators can only establish the allowed ROE, which is  
6 applied to the book value of a utility’s investment in rate base, as determined from its  
7 accounting records. This is analogous to the expected earnings approach, which  
8 measures the return that investors expect the utility to earn on book value. As a result,  
9 the expected earnings approach provides a meaningful guide to ensure that the allowed  
10 ROE is similar to what other utilities of comparable risk will earn on invested capital.  
11 This expected earnings test does not require theoretical models to indirectly infer  
12 investors’ perceptions from stock prices or other market data. As long as the proxy  
13 companies are similar in risk, their expected earned returns on invested capital provide  
14 a direct benchmark for investors’ opportunity costs that is independent of fluctuating  
15 stock prices, market-to-book ratios, debates over DCF growth rates, or the limitations  
16 inherent in any theoretical model of investor behavior.

17 **Q90. WHAT ROE IS INDICATED FOR NORTHWESTERN BASED ON THE**  
18 **EXPECTED EARNINGS APPROACH?**

19 A90. For the firms in the Gas Group, the year-end returns on common equity projected by  
20 Value Line over its forecast horizon are shown on Exhibit AMM-10. As I explained  
21 earlier in my discussion of the  $br+sv$  growth rates used in applying the DCF model,  
22 Value Line’s returns on common equity are calculated using year-end equity balances,  
23 which understates the average return earned over the year.<sup>59</sup> Accordingly, these year-

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<sup>59</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 end values were converted to average returns using the same adjustment factor discussed  
2 earlier and developed on Exhibit AMM-6. As shown on Exhibit AMM-10, Value Line's  
3 projections suggest an average ROE of 10.3% for the Gas Group.

## VI. NON-UTILITY BENCHMARK

### 4 **Q91. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

5 A91. 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 a just and reasonable  
9 ROE for the Company's utility operations.

### 10 **Q92. DO UTILITIES HAVE TO COMPETE WITH NON-REGULATED FIRMS FOR** 11 **CAPITAL?**

12 A92. 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 an abundance of alternatives available to investors. Utilities must compete for capital,  
16 not just against firms in their own industry, but with other investment opportunities of  
17 comparable risk. Indeed, modern portfolio theory is built on the assumption that rational  
18 investors will hold a diverse portfolio of stocks, not just companies in a single industry.

### 19 **Q93. IS IT CONSISTENT WITH THE *BLUEFIELD* AND *HOPE* CASES TO** 20 **CONSIDER INVESTORS' REQUIRED ROE FOR NON-UTILITY** 21 **COMPANIES?**

22 A93. Yes. The cost of equity capital in the competitive sector of the economy forms the  
23 underpinning for utility ROEs because regulation purports to serve as a substitute for  
24 the actions of competitive markets. The Supreme Court has recognized that it is the  
25 degree of risk, not the nature of the business, which is relevant in evaluating an allowed

1 ROE for a utility. The *Bluefield* case refers to “business undertakings attended with  
2 comparable risks and uncertainties.” It does not restrict consideration to other utilities.

3 Similarly, the *Hope* case states:

4 By that standard the return to the equity owner should be commensurate  
5 with returns on investments in other enterprises having corresponding  
6 risks.<sup>60</sup>

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

9 **Q94. DOES CONSIDERATION OF THE RESULTS FOR THE NON-UTILITY**  
10 **GROUP IMPROVE THE RELIABILITY OF DCF RESULTS?**

11 A94. Yes. Growth estimates used in the DCF model depend on analysts’ forecasts. It is  
12 possible for utility growth rates to be distorted by short-term trends in the industry, or  
13 by the industry falling into favor or disfavor by analysts. Such distortions could result  
14 in biased DCF estimates for utilities. Because the Non-Utility Group includes low risk  
15 companies from more than one industry, it helps to insulate against any possible  
16 distortion that may be present in results for a particular sector.

17 **Q95. WHAT CRITERIA DO YOU APPLY TO DEVELOP THE NON-UTILITY**  
18 **GROUP?**

19 A95. My comparable risk proxy group was composed of those United States companies  
20 followed by Value Line that:

- 21 1) pay common dividends;
- 22 2) have a Safety Rank of “1”;
- 23 3) have a Financial Strength Rating of “A” or greater;
- 24 4) have a beta of 0.95 or less; and,
- 25 5) have investment grade credit ratings from Moody’s and S&P.

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<sup>60</sup> *Federal Power Comm’n v. Hope Natural Gas Co.*, 320 U.S. 391 (1944).

1 **Q96. HOW DO THE OVERALL RISKS OF YOUR NON-UTILITY GROUP**  
 2 **COMPARE WITH THE GAS GROUP?**

3 A96. Table 6 compares the Non-Utility Group with the Gas Group and NorthWestern across  
 4 the measures of investment risk discussed earlier:

5 **TABLE 6**  
 6 **COMPARISON OF RISK INDICATORS**

<u>Proxy Group</u>	<u>Credit Ratings</u>		<u>Value Line</u>		
	<u>S&amp;P</u>	<u>Moody's</u>	<u>Safety Rank</u>	<u>Financial Strength</u>	<u>Beta</u>
Non-Utility Group	A	A2	1	A+	0.79
Gas Group	A-	A3	2	A	0.86
NorthWestern	BBB	Baa2	3	B+	0.95

7 As shown above, the risk indicators for the Non-Utility Group consistently suggest less  
 8 risk than for the Gas Group and NorthWestern.

9 The companies that make up the Non-Utility Group are representative of the  
 10 pinnacle of corporate America. These firms, which include household names such as  
 11 Coca-Cola, Johnson & Johnson, Procter & Gamble, and Walmart, have long corporate  
 12 histories, well-established track records, and conservative risk profiles. Many of these  
 13 companies pay dividends on a par with utilities, with the average dividend yield for the  
 14 group at 2.1%. Moreover, because of their significance and name recognition, these  
 15 companies receive intense scrutiny by the investment community, which increases  
 16 confidence that published growth estimates are representative of the consensus  
 17 expectations reflected in common stock prices.

18 **Q97. WHAT ARE THE RESULTS OF YOUR DCF ANALYSIS FOR THE NON-**  
 19 **UTILITY GROUP?**

20 A97. I apply the DCF model to the Non-Utility Group using the same analysts' EPS growth  
 21 projections described earlier for the Gas Group. The results of my DCF analysis for the  
 22 Non-Utility Group are presented in Exhibit AMM-11. As summarized in Table 7, after

1 eliminating illogical values, application of the constant growth DCF model results in  
2 the following cost of equity estimates:

3 **TABLE 7**  
4 **DCF RESULTS – NON-UTILITY GROUP**

	<b>Non-Utility</b>	
<b><u>Growth Rate</u></b>	<b><u>Average</u></b>	<b><u>Midpoint</u></b>
Value Line	10.7%	11.2%
IBES	10.4%	11.4%
Zacks	10.9%	11.6%

5 As discussed earlier, reference to the Non-Utility Group is consistent with  
6 established regulatory principles. Required returns for utilities should be in line with  
7 those of nonutility firms of comparable risk operating under the constraints of free  
8 competition. Because the actual cost of equity is unobservable, and DCF results  
9 inherently incorporate a degree of error, cost of equity estimates for the Non-Utility  
10 Group provide an important benchmark in evaluating a just and reasonable ROE for  
11 NorthWestern.

12 **Q98. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

13 A98. Yes, it does.