Montana Public Service Commission
Docket No. 2024.05.053
Electric and Natural Gas Rate Review

DIRECT TESTIMONY

OF

ADRIEN M. MCKENZIE, CFA

On behalf of

NORTHWESTERN ENERGY

July 8, 2024

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GLOSSARY

CAPM	Capital Asset Pricing Model
Commission	Montana 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
FCRM	Fixed Cost Recovery Mechanism
FERC	Federal Energy Regulatory Commission
FINCAP, Inc.	Financial Concepts and Applications, Inc.
FOMC	Federal Open Market Committee
GDP	Gross Domestic Product
HEI	Hawaiian Electric Industries, Inc.
IBES	Institutional Brokers' Estimate System (now Refinitiv)
MDEQ	Montana Department of Environmental Quality
MDPSC	Maryland Public Service Commission
Moody's	Moody's Investors Service
MW	Megawatts
NASDAQ	The Nasdaq Stock Market LLC
NorthWestern or Company	NorthWestern Corporation, d/b/a NorthWestern Energy
NWE	NorthWestern Energy Group, Inc.
PCCAM	Power Costs and Credits Adjustment Mechanism
PCE	Personal Consumption Expenditure Price Index
RCA	Regulatory Commission of Alaska
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
Zacks	Zacks Investment Research, Inc.

I. INTRODUCTION

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

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

Q2. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND QUALIFICATIONS.

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

A. Overview

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

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

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

A4. To prepare my testimony, I use information from a variety of sources that would normally be relied upon by a person in my capacity. I am familiar with the organization, finances, and operations of NorthWestern from my participation in prior proceedings before the Commission. In connection with the present filing, I consider and rely upon discussions with corporate management, publicly available financial reports and prior regulatory filings relating to NorthWestern and its parent, NWE. I also review

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

Q5. HOW IS YOUR TESTIMONY ORGANIZED?

A5. First, I summarize my conclusions and recommendations, giving special attention to the importance of financial strength and the implications of regulatory mechanisms and other risk factors. I also comment on the reasonableness of the Company's proposed capital structure.

Next, I briefly review NorthWestern's operations and finances. I then discuss current conditions in the capital markets and their implications in evaluating a just and reasonable return for the Company. Next, I explain the development of the proxy group of utilities used as the basis for my quantitative analyses, including the implications of the Company's regulatory mechanisms and other risk factors. With this as a background, I discuss well-accepted quantitative analyses to estimate the current cost of equity. These include the DCF model, the CAPM, the ECAPM, an equity risk premium approach based on allowed equity returns, and reference to expected earned rates of return for utilities, which are all methods that are commonly relied on in regulatory proceedings.

Based on the results of my analyses, I determine a fair ROE for NorthWestern. My evaluation considers the specific risks for the Company's electric and natural gas utility operations in Montana and NorthWestern's requirements for financial strength. Further, consistent with the fact that utilities must compete for capital with firms outside

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

B. Summary and Conclusions

Q6. WHAT ROE DO YOU RECOMMEND FOR NORTHWESTERN?

A6. I apply the DCF, CAPM, ECAPM, risk premium, and expected earnings analyses to a proxy group of twenty-two utilities, with the results being summarized on Exhibit AMM-2. As shown there, based on the results of my analysis, I recommend a cost of equity range for the Company of 10.3% to 11.3%. It is my conclusion that the 10.8% midpoint of this range represents a just and reasonable cost of equity that is adequate to compensate the Company's investors, while maintaining NorthWestern's financial integrity and ability to attract capital on reasonable terms. Based on the results of my analyses, I recommend an ROE of 10.8% for NorthWestern's electric and natural gas utility operations.

Q7. DO FUNDAMENTAL FINANCIAL PRINCIPLES AND CAPITAL MARKET TRENDS JUSTIFY A SIGNIFICANT INCREASE TO NORTHWESTERN'S AUTHORIZED ROE?

A7. Yes. Because investors evaluate investments against available alternatives, the cost of equity and the cost of long-term debt are inextricably linked. The Supreme Court recognized in *Bluefield* that, "A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally."[1] As my testimony documents, long-term bond yields climbed dramatically beginning in 2022 and investors anticipate that these increases will be sustained. This provides direct evidence that the cost of equity to NorthWestern has also risen significantly. My ROE recommendation reflects trends in

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

observable capital market data and the results of my analyses, both of which support a material increase to the Company's allowed ROEs.

II. RETURN ON EQUITY FOR NORTHWESTERN

Q8. WHAT IS THE PURPOSE OF THIS SECTION?

A8. This section presents an overview of the relationship between ROE and preservation of a utility's financial integrity and the ability to attract capital under reasonable terms and presents my conclusions regarding the just and reasonable ROE applicable to NorthWestern's utility operations. Finally, I discuss the reasonableness of the Company's capital structure request in this case.

A. Importance of Financial Strength

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

A9. 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 to provide utility service. Investors commit capital only if they expect to earn a return on their investment commensurate with returns available from alternative investments with comparable risks. Moreover, a just and reasonable ROE is integral in meeting sound regulatory economics and the standards set forth by the U.S. Supreme Court. The *Bluefield* case set the standard against which just and reasonable rates are measured:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties. . . . The return should be reasonable, sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management, to maintain and

> support its credit and enable it to raise money necessary for the proper discharge of its public duties.[2]

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

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. . . . By that standard, the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain credit and attract capital.[3]

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

While the *Hope* and *Bluefield* decisions did not establish a particular method to be followed in fixing rates (or in determining the allowed ROE),[4] these and subsequent cases enshrined the importance of an end result that meets the opportunity cost standard of finance. Under this doctrine, the required return is established by investors in the

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[2] *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923).

[3] *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) ("*Hope*").

[4] *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.").

capital markets based on expected returns available from comparable risk investments. Coupled with modern financial theory, which has led to the development of formal risk-return models (e.g., DCF and CAPM), practical application of the *Bluefield* and *Hope* standards involves the independent, case-by-case consideration of capital market data in order to evaluate an ROE that will produce a balanced and fair end result for investors and customers.

Q10. THROUGHOUT YOUR TESTIMONY YOU REFER REPEATEDLY TO THE CONCEPTS OF "FINANCIAL STRENGTH," "FINANCIAL INTEGRITY," AND "FINANCIAL FLEXIBILITY." WOULD YOU BRIEFLY DESCRIBE WHAT YOU MEAN BY THESE TERMS?

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

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

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

A11. Regulatory signals are a major driver of investors' risk assessment for utilities. Investors recognize that constructive regulation is a key ingredient in supporting utility credit ratings and financial integrity. Security analysts study commission orders and regulatory policy statements to advise investors about where to put their money. As Moody's noted, "the regulatory environment is the most important driver of our outlook because it sets the pace for cost recovery."[5] Similarly, S&P observed that, "Regulatory advantage is the most heavily weighted factor when S&P Global Ratings analyzes a regulated utility's business risk profile."[6] Value Line summarizes these sentiments:

> As we often point out, the most important factor in any utility's success, whether it provides electricity, gas, or water, is the regulatory climate in which it operates. Harsh regulatory conditions can make it nearly impossible for the best run utilities to earn a reasonable return on their investment.[7]

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

A12. Yes. Providing an ROE that is sufficient to maintain the Company's ability to attract capital under reasonable terms, even in times of financial and market stress, is not only consistent with the economic requirements embodied in the U.S. Supreme Court's *Hope* and *Bluefield* decisions, but it is also in customers' best interests. Customers enjoy the

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[5] Moody's Investors Service, *Regulation Will Keep Cash Flow Stable As Major Tax Break Ends*, Industry Outlook (Feb. 19, 2014).

[6] S&P Global Ratings, *Assessing U.S. Investors-Owned Utility Regulatory Environments*, RatingsExpress (Aug. 10, 2016).

[7] Value Line Investment Survey, *Water Utility Industry* (Jan. 13, 2017) at 1780.

benefits that come from ensuring that the utility has the financial wherewithal to take whatever actions are required to ensure safe and reliable service.

B. Conclusions and Recommendations

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

A13. Considering the economic requirements necessary to support continuous access to capital under reasonable terms and the results of my analysis, I recommend a 10.8% ROE for NorthWestern's utility operations, which is consistent with the case-specific evidence presented in my testimony. The bases for my conclusion are summarized below:

- In order to reflect the risks and prospects associated with NorthWestern's utility business, my analyses focused on a proxy group of twenty-two utility firms.
- Because investors' required return on equity is unobservable and no single method should be viewed in isolation, I applied the DCF, CAPM, ECAPM, and risk premium methods to estimate a just and reasonable ROE for NorthWestern, as well as referencing the expected earnings approach.
- As summarized on Exhibit AMM-2, based on the average values resulting from these analyses, and giving less weight to extremes at the high and low ends of the range, I conclude that the cost of equity falls in the 10.3% to 11.3% range.
- My ROE recommendation for NorthWestern's utility operations is the midpoint of this ROE range, or 10.8%.

Q14. WHAT OTHER EVIDENCE DO YOU CONSIDER IN EVALUATING A FAIR ROE FOR NORTHWESTERN?

A14. My conclusion that an ROE of 10.8% is fair and reasonable and should be approved is reinforced by the following findings:

- The reasonableness of a 10.8% ROE for NorthWestern is supported by the need to consider challenges to the Company's credit standing:
  - The pressure of funding utility capital expenditures of approximately $1.6 billion through 2027 heightens the

uncertainties associated with NorthWestern, especially given that the Company's existing rate base is approximately $3.9 billion.
    - NorthWestern's ongoing electric capacity shortfall position in Montana exposes NorthWestern to relatively greater risks of power cost volatility.
    - The PCCAM exacerbates these risks during times of rising energy prices, given that NorthWestern absorbs 10% of the variance between established base revenues and actual costs.
    - NorthWestern's elevated exposure to wildfires heightens the need to buttress the Company's financial strength.
- The opportunity to actually earn a fair ROE and mitigate exposure to attrition is an important objective, and NorthWestern's utility operations in Montana have been chronically unable to earn the authorized rate of return.
- The Company currently operates with a narrower range of regulatory adjustment mechanisms than exist for the utilities in the Utility Group, which makes NorthWestern's utility operations relatively more susceptible to attrition.
- Investors recognize that constructive regulation is a key ingredient in supporting utility credit standing and financial integrity, and providing NorthWestern with the opportunity to earn a return that adequately reflects its risks is an essential ingredient to support the Company's financial position, which ultimately benefits customers by ensuring reliable service at lower long-run costs.
- Continued support for NorthWestern's financial integrity, including the opportunity to earn a reasonable ROE, is imperative to ensure that the Company has the capability to maintain and build its credit standing while confronting potential challenges associated with funding infrastructure development necessary to meet the needs of its customers.

These findings indicate that a 10.8% ROE for NorthWestern is reasonable and should be approved.

Q15. WHAT OTHER EVIDENCE SUPPORTS A SIGNIFICANT INCREASE FROM THE ROES CURRENTLY AUTHORIZED FOR NORTHWESTERN?

A15. As I demonstrate subsequently in Table 1, trends in bond yields since the Company's current ROEs were first established document a substantial increase in the returns on long-term capital demanded by investors. After adjusting for current financial market conditions, the 9.65% and 9.55% ROEs currently approved for NorthWestern's electric and natural gas utility operations, respectively, would be substantially higher. The

calculations supporting this conclusion are presented on Exhibit AMM-12. The average yield on Baa utility bonds at the time of the settlements first establishing the Company's current ROEs was approximately 4.5%, versus 5.8% in March 2024. Adding the adjusted risk premiums of 4.62% and 4.50% to the average Baa utility bond yield in March 2024 of 5.79% results in implied costs of equity of 10.41% and 10.29% for NorthWestern's electric and natural gas operations, respectively, in today's capital markets. These benchmark calculations further reinforce the point that the Company's current ROEs are far below a reasonable level.

Q16. WHAT DID THE DCF RESULTS FOR YOUR SELECT GROUP OF NON-UTILITY FIRMS INDICATE WITH RESPECT TO YOUR EVALUATION?

A16. As shown on page 3 of Exhibit AMM-11, average DCF estimates for a low-risk group of firms in the competitive sector of the economy ranged from 10.4% to 10.9%. While I did not base my recommendations on these results, they confirm that an ROE for NorthWestern of 10.8% falls in a reasonable range to maintain the Company's financial integrity, provide a return commensurate with investments of comparable risk, and support the ability to attract capital.

Q17. WHAT DOES YOUR EVIDENCE SUGGEST WITH RESPECT TO NORTHWESTERN'S PROPOSED CAPITAL STRUCTURE?

A17. NorthWestern's capital structure is consistent with industry benchmarks and reflects the need to address the funding of ongoing capital expenditures and support the Company's financial integrity and access to capital on reasonable terms. Based on this evidence, I conclude that the Company's capital structure represents a reasonable mix of capital sources from which to calculate the overall rate of return.

III. FUNDAMENTAL ANALYSES

Q18. WHAT IS THE PURPOSE OF THIS SECTION?

A18. As a foundation for my opinions and subsequent quantitative analyses, this section briefly reviews the operations and finances of NorthWestern and examines conditions impacting today's capital markets and the general economy. An understanding of the fundamental factors driving the risks and prospects of utilities is essential in developing an informed opinion of investors' expectations and requirements that are the basis of a fair ROE.

A. NorthWestern Energy

Q19. BRIEFLY DESCRIBE NORTHWESTERN AND ITS UTILITY OPERATIONS.

A19. A subsidiary of NWE, NorthWestern provides electric and natural gas utility service to approximately 617,600 customers in Montana.[8] NorthWestern accounts for approximately 85% of NWE's consolidated utility margins.

The regulated electric utility business in Montana includes generation, transmission, and distribution. Retail electric load requirements are supplied by owned and contracted resources. Load requirements during peak demand in excess of the Company's owned and long-term contracted resources are satisfied through market purchases. At December 31, 2023, the nameplate capacity of Company-owned and contracted generating resources include approximately 501 MW of hydro, 454 MW of wind, 309 MW of coal, 202 MW of natural gas, and 177 MW of solar generation.[9] The Company's electric transmission and distribution network in Montana consists of approximately 25,300 miles of overhead and underground lines. Estimated rate base

[8] Unless otherwise noted, the information in this section comes from the NorthWestern Energy Group, Inc., SEC Form 10-K, for the fiscal year ended December 31, 2023.

[9] At commercial operation, the Yellowstone County Generating Station will add 175 MW of natural gas generating capacity to this total.

attributable to NorthWestern's Montana electric operations is approximately $3.1 billion, with total annual revenues of approximately $840 million.

The regulated natural gas utility business in Montana includes production, storage, transmission, and distribution. Natural gas is distributed to approximately 212,100 customers in 118 Montana communities over a system of approximately 5,200 miles of underground distribution pipelines. The natural gas transmission system consists of more than 2,200 miles of transmission pipeline. Natural gas is used primarily for residential and commercial heating, and as fuel for electric generating facilities. Since 2010, the Company has acquired gas production and gathering systems as a part of an overall strategy to provide rate stability and customer value through the addition of regulated natural gas supply assets that are not subject to market forces. Estimated rate base attributable to NorthWestern's Montana natural gas operations is approximately $744 million**,** with total annual revenues of approximately $210 million.

Q20. WHERE DOES NORTHWESTERN OBTAIN THE CAPITAL USED TO FINANCE ITS INVESTMENT IN UTILITY PLANT?

A20. Common equity capital supporting the Montana electric and natural gas utility operations is provided through retained earnings and from NWE, whose common stock is publicly traded on NASDAQ. NorthWestern also issues long-term debt in its own name and has been assigned a long-term rating of Baa2 from Moody's and an issuer rating of BBB by S&P. Meanwhile, Fitch has affirmed the Company's long-term issuer default rating of BBB.

Q21. DOES NORTHWESTERN ANTICIPATE THE NEED FOR CAPITAL GOING FORWARD?

A21. Yes. The Company must undertake investments to meet growing peak demand needs and provide for necessary maintenance and replacements of its utility systems as it continues to provide safe and reliable service to its customers. Capital additions for

NorthWestern's electric and gas utility systems in Montana are expected to total more than $1.6 billion for the years 2024 through 2027. These planned capital additions are significant, given NorthWestern's total estimated rate base for its Montana utility operations of $3.9 billion. Moody's has noted that the Company's financial metrics are weak for its rating and in relation to its peers, and that NorthWestern's high capex program magnifies these challenges.[10] Continued support for NorthWestern's financial integrity and flexibility will be instrumental in attracting the capital necessary to fund these projects in an effective manner.

B. Outlook for Capital Costs

Q22. PLEASE SUMMARIZE CURRENT ECONOMIC CONDITIONS.

A22. 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%.[11] More recently, increases in spending by consumers and the federal government led real GDP to grow by 2.5% in 2023.[12] Meanwhile, indicators of employment remain relatively stable, with the national unemployment rate falling slightly to 3.8% in March 2024.[13]

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

[10] Moody's Investors Service, *NorthWestern Corporation*, Credit Opinion (Aug. 24, 2023).

[11] https://fred.stlouisfed.org/series/A191RL1A225NBEA (last visited Apr. 25, 2024).

[12] *Id.*

[13] https://www.bls.gov/news.release/empsit.nr0.htm (last visited Apr. 25, 2024).

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 9.1%, its highest level since November 1981. Since then, CPI inflation has generally moderated, but remained elevated at 3.5% in March 2024.[14] The so-called "core" price index, which excludes more volatile energy and food costs, rose at an annual rate of 3.8% in March 2024.[15] PCE inflation rose 2.5% in February 2024, or 2.8% after excluding more volatile food and energy costs.[16] As Federal Reserve Chair Powell recently noted, "inflation is still too high, ongoing progress in bringing it down is not assured, and the path forward is uncertain."[17]

Investor confidence has also been tested by turmoil in the banking sector, which led to increased volatility in bond and equity markets. The Federal Reserve and U.S. Treasury took quick and dramatic action to shore up banks' liquidity needs and strengthen public confidence in the banking system, but as Moody's noted, "bank stress has added uncertainty to the outlook."[18]

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[14] https://www.bls.gov/news.release/cpi.nr0.htm (last visited Apr. 25, 2024).

[15] *Id.*

[16] https://www.bea.gov/news/2024/personal-income-and-outlays-february-2024 (last visited Apr. 25, 2024).

[17] Federal Reserve, *Transcript of Chair Powell's Press Conference* (Mar. 20, 2024), https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20240320.pdf.

[18] Moody's Investors Service, *Baseline US macro forecasts unchanged but outlook more uncertain*, Sector Comment (Apr. 12, 2023).

Q23. WHAT IMPACT DO INFLATION EXPECTATIONS HAVE ON THE RETURN THAT EQUITY INVESTORS REQUIRE FROM NORTHWESTERN?

A23. Implicit in the required rate of return for long-term capital—whether debt or common equity—is compensation for expected inflation. This is highlighted in the textbook, *Financial Management, Theory and Practice*:

> The four most fundamental factors affecting the cost of money are (1) production opportunities, (2) time preferences for consumption, (3) risk, and (4) inflation.[19]

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

Q24. HAVE THESE DEVELOPMENTS IMPACTED THE RISKS FACED BY UTILITIES AND THEIR INVESTORS?

A24. Yes. S&P recently revised its outlook for the utility sector to "negative," noting that:

> Credit quality for North American investor-owned regulated utilities has weakened over the past four years, with downgrades outpacing upgrades by more than three times. We expect downgrades to again surpass upgrades in 2024 for the fifth consecutive year.[20]

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[19] Eugene F. Brigham, Louis C. Gapenski, and Michael C. Ehrhardt, *Financial Management, Theory and Practice*, Ninth Edition (1999) at 126.

[20] S&P Global Ratings, *Rising Risks: Outlook For North American Investor-Owned Regulated Utilities Weakens*, Comments (Feb. 14, 2024).

S&P cited rising physical risks, as well as weakening financial measures due to rising capital spending and cash flow deficits, and observed that "much of the industry operates with minimal financial cushion from their downgrade threshold."[21]

Meanwhile, Fitch noted that its deteriorating outlook for utilities "reflects continuing macroeconomic headwinds and elevated capex that are putting pressure on credit metrics in the high-cost funding environment."[22] Value Line echoed these sentiments for utilities, concluding that:

> **A Challenging Macroeconomic Backdrop Remains**
> Inflationary pressure, rising interest rates, and high energy and raw material prices will likely remain a significant burden for most utilities. Inflationary headwinds are raising operating and maintenance costs, as well as fuel prices. Meanwhile, the rising interest rate environment is leading income-oriented investors to the bond market, as well as increasing borrowing costs, which is especially significant for utilities as they usually have low returns on total capital and rely heavily on debt borrowings. We think many of these companies will continue to struggle with the higher costs related to the challenging macroeconomic climate in the near term.[23]

Q25. DO TRENDS IN BOND YIELDS INDICATE THAT THE COST OF EQUITY HAS INCREASED?

A25. Yes. While the cost of equity is unobservable, the yields on long-term bonds provide a widely referenced benchmark for the direction of capital costs, including required returns on common stocks. Table 1 below compares the average yields on Treasury securities and Baa-rated public utility bonds in March 2024 with those required at the

[21] *Id.*

[22] Fitch Ratings, Inc., *North American Utilities, Power & Gas Outlook 2024* (Dec. 6, 2023).

[23] The Value Line Investment Survey, *Electric Utility (Central) Industry* (Sep. 8, 2023) (emphasis original).

time of the settlement agreements that originally established NorthWestern's current ROEs of 9.55% (natural gas)[24] and 9.65% (electric).[25]

TABLE 1
BOND YIELD TRENDS

Series	Mar-24	Gas May-17	Change (bps)	Electric May-19	Change (bps)
10-Year Treasury Bonds	4.21%	2.30%	191	2.40%	181
30-Year Treasury Bonds	4.36%	2.96%	140	2.82%	154
Baa Utility Bonds	5.79%	4.50%	129	4.47%	132
Average			**153**		**156**

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

As shown above, trends in bond yields document a substantial increase in the returns on long-term capital demanded by investors over the levels prevailing when NorthWestern's current ROEs were established.

Q26. WHAT IMPLICATIONS DO THESE TRENDS HAVE IN EVALUATING A FAIR ROE FOR NORTHWESTERN?

A26. The upward move in interest rates demonstrates that long-term capital costs—including the cost of equity—have increased significantly. Exposure to higher interest rates, inflation, and capital expenditure requirements also reinforce the importance of buttressing NorthWestern's credit standing. Considering the potential for financial market instability, competition with other investment alternatives, and investors' sensitivity to risk exposures in the utility industry, greater credit strength is a key ingredient in maintaining access to capital at reasonable cost.

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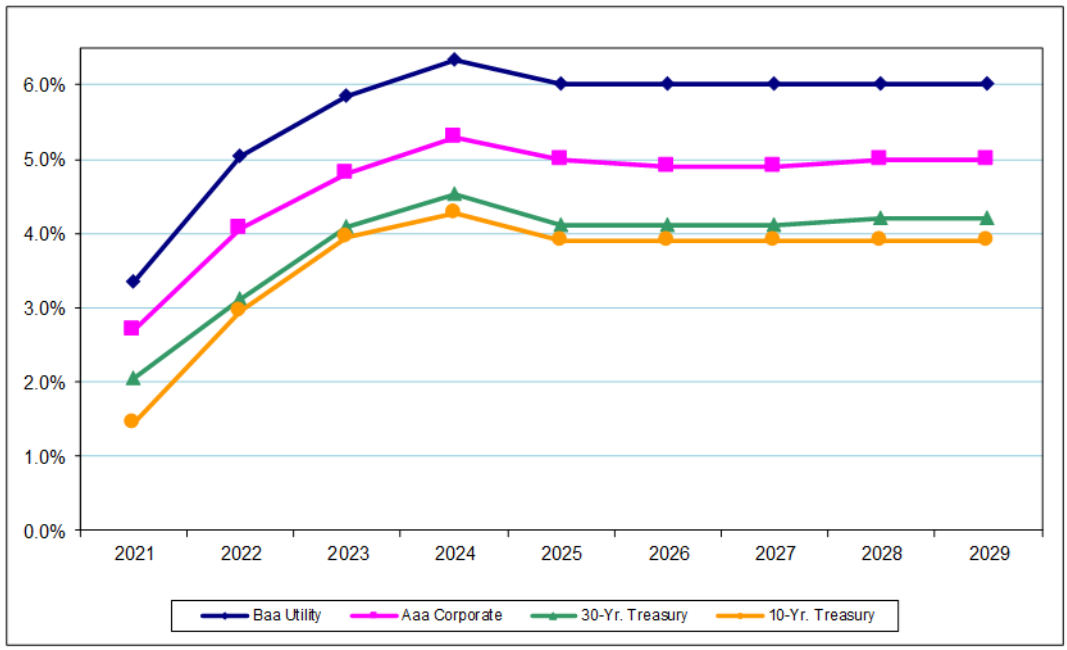
[24] Docket No. 2016.9.68, *Joint Motion of NorthWestern Energy and the Montana Consumer Counsel for Approval of Stipulation and Settlement Agreement* (May 5, 2017).

[25] Docket No. 2018.02.012, *Amended Stipulation and Settlement Agreement of NorthWestern Energy, The Montana Consumer Counsel, The Montana Large Customer Group, The Federal Executive Agencies, and Walmart* (May 12, 2019).

Q27. DO INVESTORS ANTICIPATE THAT THESE HIGHER BOND YIELDS WILL BE SUSTAINED?

A27. Yes. As illustrated in Figure 1 below, the most recent long-term consensus projections from top economists published by Blue Chip document that long-term bond yields are expected to remain elevated when compared to recent historical levels.

FIGURE 1
PROJECTED INTEREST RATES



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

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

Q28. WOULD IT BE REASONABLE TO DISREGARD THE IMPLICATIONS OF CURRENT CAPITAL MARKET CONDITIONS IN ESTABLISHING A FAIR ROE FOR NORTHWESTERN?

A28. No. Current capital market conditions reflect the reality of the situation in which NorthWestern must attract and retain capital. The standards underlying a fair rate of

return require an authorized ROE for the Company that is competitive with other investments of comparable risk and sufficient to preserve its ability to maintain access to capital on reasonable terms. These standards can only be met by considering the requirements of investors over the time period when the rates established in this proceeding will be in effect. If the upward shift in investors' risk perceptions and required rates of return for long-term capital are not incorporated in the allowed ROE, the results will fail to meet the comparable earnings standard that is fundamental in determining the cost of capital. From a more practical perspective, failing to provide investors with the opportunity to earn a rate of return commensurate with NorthWestern's risks will weaken its financial integrity, while hampering the Company's ability to attract the capital necessary to provide safe and reliable service at the lowest reasonable cost.

IV. DETERMINATION OF THE PROXY GROUP

Q29. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A29. This section explains the basis of the proxy group of publicly traded companies I use to estimate the cost of equity, examines alternative objective indicators of investment risk for these firms, and compares the investment risks applicable to NorthWestern with my reference group.

Q30. WHAT KEY PRINCIPLES UNDERPIN THE EVALUATION OF A PROXY GROUP?

A30. The United States Supreme Court's *Hope* and *Bluefield* decisions establish a standard of comparison between a subject utility and other companies based on comparable risk. The generally accepted approach is to select a group of companies that are of similar risk to the subject utility, and then to perform various quantitative analyses based on this proxy group to estimate investors' required returns. The results of these analyses are

then used to evaluate a range of reasonableness and a final recommendation for the ROE attributable to the subject utility.

A. Determination of the Proxy Group

Q31. HOW DO YOU IMPLEMENT QUANTITATIVE METHODS TO ESTIMATE THE COST OF COMMON EQUITY FOR NORTHWESTERN'S UTILITY OPERATIONS?

A31. Application of quantitative methods to estimate the cost of common equity requires observable capital market data, such as stock prices and beta values. Moreover, even for a firm with publicly traded stock, the cost of common equity can only be estimated. As a result, applying quantitative models using observable market data produces an estimate that inherently includes some degree of error. The accepted approach to increase confidence in the results is to apply quantitative methods to a proxy group of publicly traded companies that investors regard as risk comparable. The results of the analyses on the sample of companies are relied upon to establish a range of reasonableness for the cost of equity for the specific utility at issue.

Q32. HOW DO YOU IDENTIFY THE PROXY GROUP OF UTILITIES RELIED ON FOR YOUR ANALYSES?

A32. To reflect the risks and prospects associated with NorthWestern's utility operations, I began with the following criteria to identify a proxy group of utilities:

1. Included in the Electric Utility Industry groups compiled by Value Line.
2. Moody's issuer credit ratings of Baa3, Baa2, or Baa1 and S&P ratings of BBB-, BBB, and BBB+.
3. Value Line Safety Rank of "2" or "3".
4. Value Line Financial Strength Rating of "B" or higher.
5. Paid common dividends over the last six months and have not announced a dividend cut since that time.
6. No ongoing involvement in a major merger or acquisition that would distort quantitative results.

Q33. IS THERE ANY OTHER PUBLICLY TRADED UTILITY THAT IS RELEVANT IN ESTABLISHING A PROXY GROUP?

A33. Yes. Emera Inc.'s electric and gas utility operations are comparable to those of the other utilities in the proxy group. Although Value Line currently includes Emera Inc. in its power industry group, rather than its utility groups, Emera Inc.'s regulated electric and gas utility operations are its dominant businesses and account for approximately 96% of consolidated net income.[26] Emera Inc.'s Florida and New Mexico utility operations account for 59% of consolidated net income.[27] Emera Inc. has been assigned credit ratings of Baa3 by Moody's and BBB by S&P, a Value Line Safety Rank of "3", and a Value Line Financial Strength Rating of B++, which satisfy the criteria discussed above.

With the addition of Emera Inc., the criteria described above result in a proxy group composed of twenty-two companies, which I refer to as the "Utility Group."

B. Relative Risks of the Proxy Group and NorthWestern

Q34. DO YOU EVALUATE INVESTORS' RISK PERCEPTIONS FOR THE PROXY GROUP?

A34. Yes. My evaluation of relative risk considers five objective, published benchmarks that are widely relied on by investors—credit ratings from Moody's and S&P, along with Value Line's Safety Rank, Financial Strength Rating, and beta values. Credit ratings are assigned by independent rating agencies for the purpose of providing investors with a broad assessment of the creditworthiness of a firm. Ratings generally extend from triple-A (the highest) to D (in default). Other symbols (*e.g.*, "+" or "-") are used to show relative standing within a category. Because the rating agencies' evaluation includes all

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[26] Emera, Inc., *Investor Presentation* (March & April 2024). https://s25.q4cdn.com/978989322/files/doc_presentations/2024/Feb/27/mar-apr-2024_marketing-deck.pdf (last visited Apr. 25, 2024).

[27] *Id.*

of the factors normally considered important in assessing a firm's relative credit standing, corporate credit ratings provide a broad, objective measure of overall investment risk that is readily available to investors. Widely cited in the investment community and referenced by investors, credit ratings are also frequently used as a primary risk indicator in establishing proxy groups to estimate the cost of common equity.

While credit ratings provide the most widely referenced benchmark for investment risks, Value Line is one of the most widely available source of investment advisory information, and its quality rankings provide an important and objective assessment of investors' risk perceptions for common stocks. Value Line's primary risk indicator is its Safety Rank, which ranges from "1" (Safest) to "5" (Riskiest). This overall risk measure is intended to capture the total risk of a stock and incorporates elements of stock price stability and financial strength. Meanwhile, the Financial Strength Rating is designed as a guide to overall financial strength and creditworthiness, with the key inputs including financial leverage, business volatility measures, and company size. Value Line's Financial Strength Ratings range from "A++" (strongest) down to "C" (weakest) in nine steps. These objective, published indicators incorporate consideration of a broad spectrum of risks, including financial and business position, relative size, and exposure to firm-specific factors.

Finally, beta measures a utility's stock price volatility relative to the market as a whole and reflects 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 1.00, while stocks that tend to move more than the market have betas greater than 1.00. Beta is the only relevant measure of investment risk under modern capital market theory and is widely cited in academics and in the investment industry as a guide to investors' risk

perceptions. Moreover, in my experience Value Line is the most widely referenced source for beta in regulatory proceedings. As noted in *New Regulatory Finance*:

> Value Line is the largest and most widely circulated independent investment advisory service, and influences the expectations of a large number of institutional and individual investors. … Value Line betas are computed on a theoretically sound basis using a broadly based market index, and they are adjusted for the regression tendency of betas to converge to 1.00.[28]

Q35. HOW DOES THE OVERALL RISK OF THE UTILITY GROUP COMPARE TO NORTHWESTERN?

A35. Table 2 compares the Utility Group to the Company across the five key indices of investment risk discussed above. Because NorthWestern has no publicly traded common stock, the Value Line risk measures shown reflect those published for its parent, NWE.

TABLE 2
COMPARISON OF RISK INDICATORS

			Value Line		
	Moody's	S&P	Safety Rank	Financial Strength	Beta
Utility Group	Baa2	BBB+	3	B++	0.95
NorthWestern	Baa2	BBB	3	B+	0.95

While the average Moody's credit rating corresponding to the Utility Group is identical to that of NorthWestern, the Company's lower S&P rating indicates slightly greater risk.[29] The average Value Line Safety Rank and beta values for the Utility Group are identical to those corresponding to the Company, while the average Financial

[28] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports (2006) at 71.

[29] While I reference corporate credit ratings in evaluating a risk-comparable proxy group, these indicators are focused on the risk of default associated with a utility's outstanding debt securities. While debtholders are also concerned about the stability and sufficiency of a utility's cash flows, the implications of attrition and earnings variability are especially relevant to equity investors, who are only entitled to the residual earnings once all other claimants have been paid.

Strength rating for the Utility Group indicates lower risk compared to NorthWestern. Considered together, a comparison of these objective measures indicates that investors would likely conclude that the overall investment risks for the firms in the Utility Group are generally comparable to NorthWestern.

Q36. WHAT EXPOSURES ARE PARTICULARLY RELEVANT FOR NORTHWESTERN?

A36. NorthWestern continues to face a shortfall in electric generating capacity needed to serve Montana customers. While NorthWestern has taken concrete steps towards reducing that deficit—notably through development of the Yellowstone County Generating Station ("Yellowstone") and acquisition of Avista Corporation's 15% share of Colstrip Units 3 and 4—the Company continues to rely significantly on market purchases.

Investors recognize that the potential for volatile energy markets and NorthWestern's reliance on wholesale purchases to meet a significant portion of its resource needs can expose the Company to the risk of reduced cash flows and unrecovered power supply costs. For example, cold weather events in December 2022 and January 2024 required NorthWestern to procure significant portions of its peak load requirement from market purchases during periods of high and volatile energy prices. The risks inherent in NorthWestern's exposure to wholesale electricity markets is exacerbated by the capacity constraints associated with large-scale retirements of coal-fired generation in the Pacific Northwest region, along with the intermittent nature of certain renewable resources.

Moody's observed that NorthWestern "faces various near and long-term supply uncertainties, mainly as a result of its capacity shortfall position in Montana," and concluded that this exposure represents a key challenge to the Company's credit

standing.[30] NorthWestern's reliance on purchased power to meet shortfalls in generating capacity magnifies the importance of strengthening financial flexibility, which is essential to guarantee the cash resources and interim financing required to cover inadequate operating cash flows, as well as maintaining access to the long-term capital necessary to support an expanded capital expenditure program.

Q37. DOES THE CURRENT PCCAM AMPLIFY INVESTORS' CONCERNS OVER NORTHWESTERN'S EXPOSURE TO WHOLESALE POWER MARKETS?

A37. Yes. Under the PCCAM that governs recovery of electric supply costs for NorthWestern's Montana-jurisdictional electric utility operations, 90% of the difference between actual costs and base level costs are passed through to customers, with 10% absorbed/retained by shareholders.[31] Investors recognize that this sharing mechanism exposes the Company to unrecovered electric supply costs. As Fitch concluded, the PCCAM's "unusual risk-sharing mechanism between customers and shareholders . . . exacerbates regulatory lag during a period of rising energy prices, which is significant given the company's reliance on purchased power."[32] More recently, Fitch characterized the sharing mechanism under the PCCAM as "punitive."[33]

NorthWestern's ability to recover its actual energy costs on a timely basis is further undermined by the Commission's October 2021 determination that the PCCAM Base can only be updated in a general rate case. Considering NorthWestern's continued shortfall in generating capacity, this magnifies the risks of under-recovery of electric supply costs amid a climate of rising energy prices.

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[30] Moody's Investors Service, *NorthWestern Corporation,* Credit Opinion (Aug. 24, 2023).

[31] Amounts related to power supplied by Qualifying Facilities are not subject to cost sharing under the PCCAM.

[32] Fitch Ratings, Inc., *Fitch Downgrades NorthWestern Corp. to 'BBB'; Outlook Stable*, Rating Action Commentary (Mar. 24, 2022).

[33] Fitch Ratings, Inc., *NorthWestern Corporation*, Rating Report (June 15, 2023).

Q38. DO CLIMATE-RELATED FACTORS ALSO IMPACT INVESTORS' ASSESSMENT OF NORTHWESTERN'S RISK EXPOSURE?

A38. Yes. The risk posed by climate-related weather events magnifies concerns over the Company's shortfall in generating capacity. S&P concluded that "water-intensive assets like power plants [are] especially vulnerable," and concluded that water stress is "a serious threat."[34] Similarly, Moody's noted that, "The heavy reliance on hydrology and wind for fuel exposes NorthWestern, and the region, to the impact of rainfall, wind and temperature variation on plant output and wholesale prices."[35]

In addition, rising temperatures and reduced rainfall have led to increasing exposure to wildfires, particularly for utilities in the western U.S. While noting that the risks of such events are generally manageable under recovery mechanisms that allow related costs to be recuperated, S&P also observed that:

> In the most extreme events, including those of late, utility companies' exposure to acute and chronic climate risks can damage assets or disrupt supplies, which can weaken their financial position and ultimately credit quality.[36]

In response, NorthWestern is implementing additional measures to mitigate these risks through its Wildfire Mitigation Plan.

Q39. HAVE RECENT EVENTS BROUGHT THE POTENTIAL RISKS OF WILDFIRES INTO SHARP FOCUS FOR INVESTORS?

A39. Yes. Catastrophic wildfires in California and Hawaii have brought the potential risks into sharp focus for investors. Most recently, lawsuits alleging that negligence on the

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[34] S&P Global Ratings, *Keeping The Lights On: U.S. Utilities' Exposure To Physical Climate Risks*, RatingsDirect (Sep. 16, 2021).

[35] Moody's Investors Service, *NorthWestern Corporation,* Credit Opinion (Aug. 24, 2023).

[36] *Id.*

part of HEI's subsidiary, Maui Electric Company, caused the wildfires that ravaged Maui in August 2023 led the credit rating agencies to downgrade HEI and its utility subsidiaries to "junk" status.[37] HEI was forced to suspend common dividend payments in an effort to conserve cash due to the associated financial constraints, and its common stock price has fallen on the order of 70%. Warren Buffet highlighted the risks to electric utility investors in his annual letter to shareholders, observing that:

> [T]he regulatory climate in a few states has raised the specter of zero profitability or even bankruptcy (an actual outcome at California's largest utility and a current threat in Hawaii). In such jurisdictions, it is difficult to project both earnings and asset values in what was once regarded as among the most stable industries in America. . . . It will be many years before we know the final tally from . . . forest-fire losses and can intelligently make decisions about the desirability of future investments in vulnerable western states.[38]

As Mr. Buffet concluded, "the final result for the utility industry may be ominous."[39]

While concerns over wildfire risk in the utility sector have largely focused on specific events in California, the Pacific Northwest, and Maui, the Wall Street Journal reported to investors that utilities in other states "are facing similar prospects."[40] Xcel Energy, Inc., for example, is also confronting potential liabilities associated with the December 2021 Marshall wildfire in Colorado and the Smokehouse Creek fire in the northeastern Texas panhandle, which was the largest wildfire in Texas history. With respect to NorthWestern specifically, S&P highlighted that "because of climate change,

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[37] HEI is rated B1 by Moody's and B- by S&P.

[38] Berkshire Hathaway Inc., *Shareholder Letters* (Feb. 24, 2024). https://www.berkshirehathaway.com/letters/2023ltr.pdf (last visited Apr. 25, 2024).

[39] *Id.*

[40] Katherine Blunt, *Wildfires Make Utilities a Tricky Investment. Just Ask Warren Buffet.,* The Wall Street Journal (Apr. 8, 2024).

the company's exposure to wildfires is increasing in its Montana service territory."[41] Fitch recently noted that NorthWestern's service territory faces "elevated exposure to wildfire risk," and that "the rise of more frequent, significantly larger and more destructive wildfires in recent years, especially in the U.S. West, is a credit concern."[42] Moody's echoed these sentiments, noting that "the prevalence of wildfires in Montana . . . exposes the utility to event risk," and that climate conditions "could have a negative impact on credit quality over the long-term."[43] Thus, the Company's ongoing exposure to wildfires heightens NorthWestern's overall risk profile and the Company's need to buttress its financial strength.

Q40. WHAT OTHER COMPANY-SPECIFIC RISK FACTORS WOULD INVESTORS CONSIDER?

A40. Environmental concerns are leading to a profound transformation in the electric utility industry, especially for utilities such as NorthWestern that have historically relied significantly on coal-fired generating capacity. The generation segment is undergoing material changes in fuel mix, as natural gas and renewable sources increasingly supplant coal. Over the next decade, renewable sources are widely expected to account for a rising share of the electricity generated in the U.S., including a significant expansion in distributed generation, which will accompany declining costs and increased efficiency of energy storage technologies. Accommodating this effort to decarbonize generation will also require significant investment to modernize the transmission grid. And while this disruption offers the potential for growth through increased capital investment, it also conveys higher risks, such as the potential for stranded costs.

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[41] S&P Global Ratings, *NorthWestern Energy Group Inc. And NorthWestern Energy Public Service Corp. Assigned 'BBB' Ratings; Outlooks Stable,* Research Update (Dec. 19, 2023).

[42] Fitch Ratings, Inc., *Fitch Rates NorthWestern Energy Group, Inc. and Subsidiaries 'BBB'; Outlooks Stable*, Ration Action Commentary (Dec. 20, 2023).

[43] Moody's Investors Service, *Moody's affirms NorthWestern Corp. ratings; assigns first-time Baa2 Issuer rating to NorthWestern Energy Public Service; outlooks stable*, Rating Action (Dec. 21, 2023).

With respect to NorthWestern specifically, S&P noted that, "owned and contracted coal-fired generation accounts for about 33% of its total energy capacity, increasing [NorthWestern's] environmental and regulatory risks and its susceptibility to potential environmental regulations that could require significant capital investments."[44] Further magnifying these concerns, ongoing legal proceedings regarding the MDEQ's evaluation of greenhouse gas emissions in connection with the air quality permit for Yellowstone threaten to impose delays and additional costs. As Moody's noted:

> At a minimum, the branches of Montana's government have had a vacillating effect on NorthWestern's $275 million budgeted investment in Yellowstone, bringing greater uncertainty to both current and future capital spending. The worst-case scenario for the company would be a vacated air permit and stranded investment in the plant.[45]

Apart from the impact on Yellowstone specifically, Moody's concluded more generally that opposing actions of the Montana legislature and state courts regarding greenhouse gas emissions "creates uncertainty with regard to the . . . underpinnings of Montana's regulatory framework, a key component of the utility's credit quality."[46]

Q41. WOULD INVESTORS ALSO CONSIDER THE IMPLICATIONS OF REGULATORY MECHANISMS IN EVALUATING THE COMPANY'S RELATIVE RISKS?

A41. 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

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[44] S&P Global Ratings, *NorthWestern Energy Group Inc. And NorthWestern Energy Public Service Corp. Assigned 'BBB' Ratings; Outlooks Stable*, Research Update (Dec. 19, 2023).

[45] Moody's Investors Service, *NorthWestern Corporation, Montana court ruling on state's greenhouse gas laws is credit negative for NorthWestern*, Issuer Comment (Aug. 18, 2023).

[46] *Id.*

recovery uncertainty and align the interests 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 instances, these mechanisms may even provide the utilities a cash return on construction work in progress.
>
> . . . [C]ertain types of adjustment clauses are more prevalent than others. For example, those that address electric fuel and gas commodity charges are in place in all jurisdictions. Also, about two-thirds of all utilities have riders in place to recover costs related to energy efficiency programs, and roughly half of the utilities have some type of decoupling mechanism in place.[47]

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

[47] S&P Global Market Intelligence, *Adjustment Clause: A state-by-state overview*, RRA Regulatory Focus (Jul. 18, 2022).

Q42. WHAT REGULATORY MECHANISMS ARE APPLICABLE TO NORTHWESTERN'S UTILITY OPERATIONS IN MONTANA?

A42. With respect to its electric utility operations, as discussed earlier NorthWestern operates under the PCCAM.[48]

With respect to its natural gas utility operations in Montana, the Company benefits from the Natural Gas Supply Tracker,[49] which adjusts certain supply rates on a monthly basis for volumes and costs during a 12-month tracking period. Annually, supply rates are adjusted to include any differences between the previous tracking year's revenues and expenses for recovery during the subsequent tracking year. NorthWestern also operates under a tracker applicable to both electric and natural gas services that allows recovery of a portion of incremental property taxes since the Company's last base rate filing.

Q43. DOES THE COMPANY'S LACK OF REGULATORY MECHANISMS SET IT APART FROM THE FIRMS IN THE UTILITY GROUP?

A43. Yes. As summarized on page 1 of Exhibit AMM-3, a far broader array of other adjustment mechanisms is available to the companies in the Utility Group. As detailed on pages 2 through 4 of Exhibit AMM-3, thirty-two of the sixty-eight operating companies benefit from a full or partial decoupling mechanism that accounts for various factors affecting sales volumes and revenues. In addition, fifty-two of the operating utilities operate under capital cost trackers that allow for recovery of new capital investment in utility infrastructure outside of a traditional rate case, and forty operate in jurisdictions that allow for future test periods. Other regulatory adjustment clauses automatically recover costs associated with wholesale transmission and storms, along with various taxes and expenses.

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[48] The PCCAM also allows for recovery of costs related to demand-side management programs.

[49] Like the PCCAM, this tracker also includes recovery for demand-side management costs.

In contrast Montana has routinely relied on a historical test year approach that creates a lag in cost recovery and, as discussed earlier, investors recognize that the sharing mechanism under the PCCAM exposes the Company to unrecovered electric supply costs.[50] Regulatory adjustment mechanisms have important implications for a utility's financial health and relative risk. Thus, investors would view the risks of NorthWestern as higher than the proxy group in this important respect.

Q44. WOULD INVESTORS ALSO HAVE CONCERNS REGARDING THE POTENTIAL FOR ATTRITION AND REGULATORY LAG ASSOCIATED WITH NORTHWESTERN'S OPERATIONS?

A44. Yes. Attrition is the deterioration of the actual return below the allowed return that occurs when the relationships between revenues, costs, and rate base used to establish rates do not reflect the actual costs incurred to serve customers during the period that rates are in effect. For example, if external factors are driving costs to increase more than revenues, then the rate of return will fall short of the allowed return even if the utility is operating efficiently. Similarly, when growth in the utility's investment outstrips the rate base used for ratemaking, the earned rate of return will fall below the allowed return through no fault of the utility's management. These imbalances are exacerbated as the regulatory lag increases between the time when the data used to establish rates is measured and the date when the rates go into effect.

Regulatory lag and attrition have been consistent issues for NorthWestern, and the Company has been chronically unable to earn its authorized ROE. Figures 2 and 3 below compare NorthWestern's actual earned ROEs attributable to its jurisdictional electric and natural gas utility operations with its authorized ROEs over the last five years:

[50] The Fixed Cost Recovery Mechanism pilot, which has now been discontinued, also contributed to NorthWestern's inability to recover its costs of providing service.

FIGURE 2

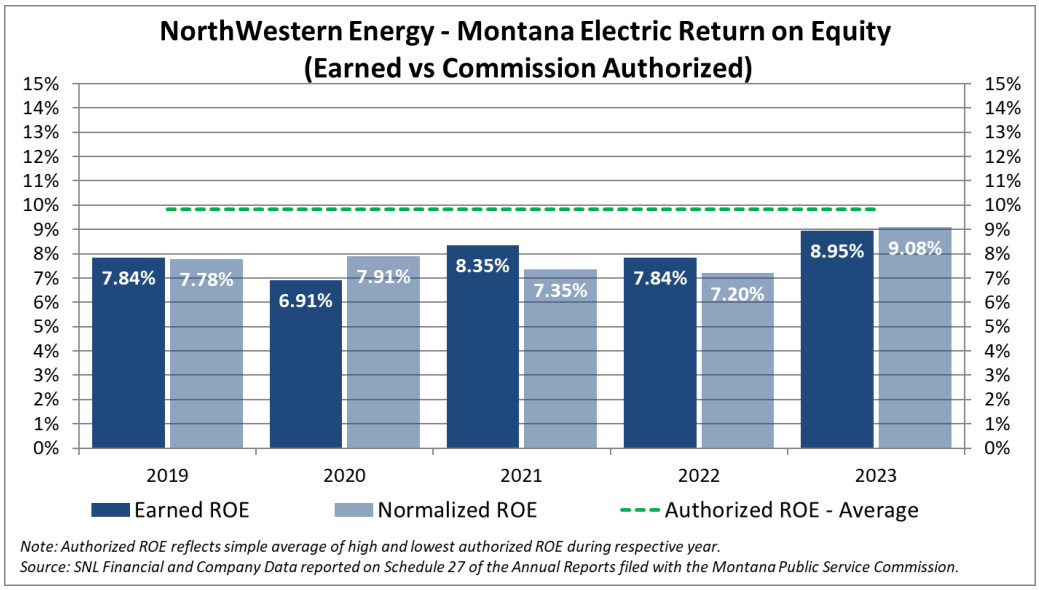
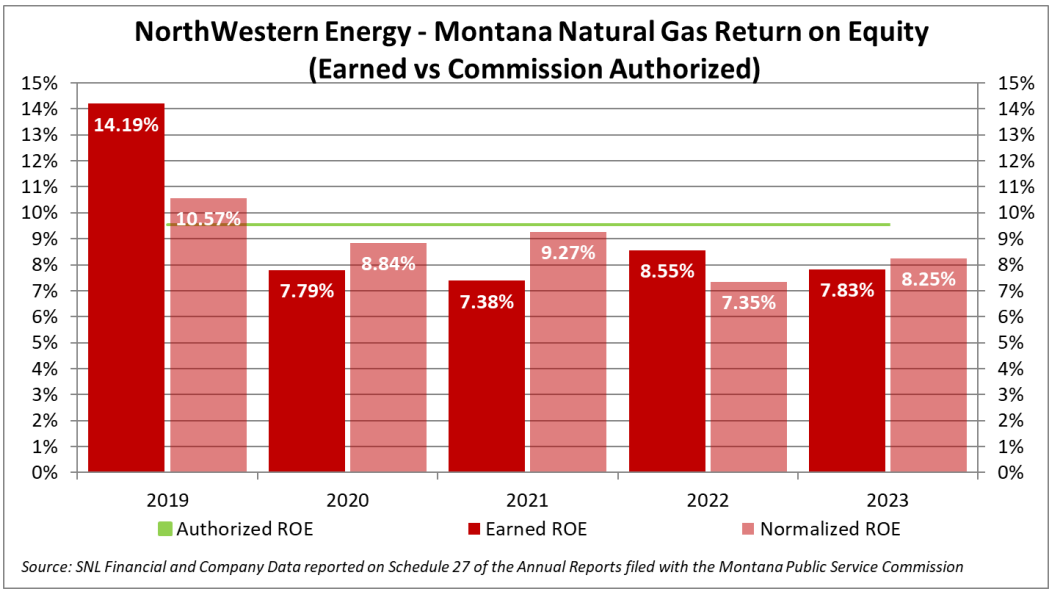


FIGURE 3



If the equity capital that is dedicated to utility public service does not have an opportunity to earn a return commensurate with that available from alternatives of equivalent risk in the capital markets, investors are not being adequately compensated for the use of their money and bearing risk. Setting rates at a level that considers the

impact of attrition and allows the utility an opportunity to actually earn its authorized ROE is consistent with fundamental regulatory principles.

Q45. IS THERE EVIDENCE THAT THE INVESTMENT COMMUNITY CONTINUES TO VIEW ATTRITION AS AN ONGOING RISK FOR NORTHWESTERN?

A45. Yes. As S&P emphasized, NorthWestern's ability to "earn its authorized returns and maintain steady cash flows . . . are fundamental to our forecast."[51] Concern over ongoing regulatory lag was a key driver in Fitch's decision to downgrade the Company in March 2022.[52] Fitch concluded that "under-recovery of electric supply costs amid rising energy prices could further exacerbate growing regulatory lag."[53] As Fitch reaffirmed in its most recent rating review of NorthWestern:

> Persistent Regulatory Lag: Regulatory lag stems from a challenging regulatory framework, which is largely backward-looking, and a punitive 90%/10% risk-sharing mechanism for electric supply costs between customers and shareholders under its energy supply tracking mechanism.[54]

Q46. IS NORTHWESTERN PROPOSING MODIFICATIONS TO PARTIALLY ADDRESS ONGOING ATTRITION AND REGULATORY LAG?

A46. Yes. As discussed in the testimony of Company witness Fang, NorthWestern proposes to establish balancing accounts to address variations in costs associated with wildfire management from a baseline established in a general rate proceeding.

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[51] S&P Global Ratings, *NorthWestern Corp.*, RatingsDirect (Mar. 14, 2023).

[52] Fitch Ratings, Inc., *Fitch Downgrades NorthWestern Corp. to 'BBB'; Outlook Stable*, Rating Action Commentary (Mar. 24, 2022).

[53] *Id.*

[54] Fitch Ratings, Inc., *Fitch Rates NorthWestern Energy Group, Inc. and Subsidiaries 'BBB'; Outlooks Stable*, Rating Action Commentary (Dec, 20, 2023).

Q47. WOULD APPROVAL OF THESE BALANCING ACCOUNTS SET NORTHWESTERN APART FROM OTHERS IN THE INDUSTRY?

A47. No. As indicated earlier, the companies in the Utility Group operate under a much more encompassing slate of regulatory mechanisms than does NorthWestern. In light of the long history of under-earning experienced by NorthWestern and its relative lack of regulatory mechanisms, approval of these proposals would only bring the Company more into line with its industry peers. Moreover, addressing the underlying factors that undermine NorthWestern's ability to earn a fair ROE does not remove overhanging regulatory risks. NorthWestern remains exposed to future determinations as to the prudency of its expenditures and investments, and investors continue to evaluate expectations for balance in the regulatory framework and in establishing allowed ROEs.

Q48. IS THE REGULATORY RELATIONSHIP IN MONTANA AN ONGOING CONCERN FOR INVESTORS?

A48. Yes. Moody's affirmed that:

> The company's relationship with the [Commission] has been historically challenging, due to various commission decisions that have reduced, or disallowed, [NorthWestern's] financial recovery for items such as lost revenue, replacement power, property tax recovery and introduced a degree of uncertainty into long-term generation cost recovery and a portion of fuel costs.[55]

Moody's concluded that "we continue to view the Montana regulatory environment as more challenging than most in the US, since the [Commission] has a history of rate orders that can be unpredictable and negative to the credit of [NorthWestern], at times."[56]

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[55] Moody's Investors Service, *NorthWestern Corporation*, Credit Opinion (Aug. 24, 2023).

[56] *Id.*

Similarly, in announcing its decision to downgrade NorthWestern's credit ratings in 2022, Fitch concluded that, "A series of unfavorable rulings by the [Commission] to deny or delay recovery of expenses weighs on [NorthWestern's] credit quality."[57]

Q49. WHAT DO THESE CHARACTERISTICS IMPLY WITH RESPECT TO THE COMPANY'S RISKS RELATIVE TO OTHER UTILITIES IN GENERAL?

A49. Coupled with the challenges of climate and environmental-related risks, NorthWestern's continued exposure to wholesale power markets and the uncertainties of revenue variability and regulatory lag imply a greater level of risk than is faced by other utilities, including the firms in the Utility Group.

C. Capital Structure

Q50. WHAT IS THE ROLE OF CAPITAL STRUCTURE IN SETTING A UTILITY'S RATE OF RETURN?

A50. Capital structure reflects the mix of capital—debt, preferred securities, and common equity—used to finance a utility's assets. The proportions of the total capitalization attributable to each source of capital are typically used to weight the costs of investor-supplied capital in calculating an overall rate of return.

Q51. HOW DO COMPANIES DETERMINE AN APPROPRIATE CAPITAL STRUCTURE FOR THEIR OPERATIONS?

A51. There are many considerations in the capital structure decision. In general, the goal is to employ the mix of capital that minimizes the weighted average cost of capital. Given the interplay between costs of debt and equity, the impact of taxes, bankruptcy costs, and the level of business risks, determining a firm's optimal capital structure is an imprecise exercise. In practice, capital structure decisions must be made by combining

[57] Fitch Ratings, Inc., *Fitch Downgrades NorthWestern Corp. to 'BBB'; Outlook Stable*, Rating Action Commentary (Mar. 24, 2022).

managements' judgment, numerical analysis, and considering investors' risk perceptions.

It is generally accepted that the norms established by comparable firms provide a valid benchmark to evaluate a reasonable capital structure for a utility. The capital structure maintained by other utilities should reflect their collective efforts to finance themselves so as to minimize capital costs while preserving their financial integrity and ability to attract capital. Moreover, these industry capital structures should also incorporate the requirements of investors (both debt and equity), as well as the influence of regulators.

Q52. WHAT COMMON EQUITY RATIO IS IMPLICIT IN NORTHWESTERN'S CAPITAL STRUCTURE?

A52. NorthWestern's capital structure is presented in the direct testimony of Company witness Lail. As summarized in her testimony, the common equity ratio applicable to the Company is 46.81%.

Q53. IS THIS CONSISTENT WITH INDUSTRY BENCHMARKS FOR OTHER UTILITY OPERATING COMPANIES?

A53. Yes. Because this proceeding focuses on the ROE for the regulated utility operations of NorthWestern, the capital structures of other regulated utility operating companies provide a consistent basis of comparison. Pages 1 and 2 of Exhibit AMM-4 display capital structure data for the group of utility operating companies owned by the firms in the Utility Group. As shown there, common equity ratios for these utilities ranged from 37.9% to 62.7% and averaged 52.3%. Forty-seven of these fifty-one operating companies maintained common equity ratios that exceed the 46.81% applicable to NorthWestern.

Q54. WHAT ARE THE EQUITY RATIOS CORRESPONDING TO THE COMPANIES IN THE UTILITY GROUP?

A54. As shown on page 3 of Exhibit AMM-4, common equity ratios for the Utility Group ranged from a low of 31.9% to a high of 67.9% at year-end 2023. Also shown on page 3 of Exhibit AMM-4, Value Line expects common equity ratios for the Utility Group to range between 28.5% and 59.5% over its three-to-five year forecast horizon.

Q55. WHAT OTHER EVIDENCE SUPPORTS THE REASONABLENESS OF THE COMPANY'S REQUESTED CAPITAL STRUCTURE?

A55. Reference to recent findings for electric and gas utilities in other regulatory proceedings also supports the reasonableness of NorthWestern's 46.81% common equity ratio. The table below presents the range of common equity ratios approved for electric and gas utilities over the past eight quarters, as reported by RRA:

TABLE 3
ELECTRIC AND GAS UTILITY ALLOWED COMMON EQUITY RATIOS

	Electric				Gas			
	Low		**High**	**Average**	**Low**		**High**	**Average**
Q1-22	48.00%	--	55.69%	51.80%	48.00%	--	51.60%	50.24%
Q2-22	44.54%	--	52.00%	50.04%	48.00%	--	60.59%	52.77%
Q3-22	48.29%	--	53.37%	51.19%	47.00%	--	52.20%	50.52%
Q4-22	45.07%	--	58.22%	51.45%	45.00%	--	58.22%	51.75%
Q1-23	42.50%	--	52.50%	50.90%	45.16%	--	59.74%	53.89%
Q2-23	49.00%	--	52.50%	51.69%	50.00%	--	62.20%	56.18%
Q3-23	48.00%	--	60.70%	51.89%	48.00%	--	59.63%	52.88%
Q4-23	48.00%	--	56.06%	51.55%	48.00%	--	56.06%	51.27%
Average	**46.68%**	**--**	**55.13%**	**51.31%**	**47.40%**	**--**	**57.53%**	**52.44%**

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

As demonstrated in the table above, the Company's requested 46.81% common equity ratio falls at the bottom end of the range of capital structures recently approved for other utilities.

Q56. DO ONGOING ECONOMIC AND CAPITAL MARKET UNCERTAINTIES ALSO INFLUENCE THE APPROPRIATE CAPITAL STRUCTURE FOR NORTHWESTERN?

A56. 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, liquidity becomes critically important because access to capital markets may be difficult.[58]

More recently, Moody's emphasized that the utility sector "is likely to continue to generate negative free cash flow and credit quality is likely to suffer unless utilities fund this negative free cash flow appropriately with a balance of debt and equity financing."[59]

S&P confirmed the financial challenges associated with funding heightened investment in the utility sector, noting that, "[a]bout one-third of the industry is strategically managing their financial performance with only minimal financial cushion," and warning that "when unexpected risks occur or base-case assumptions deviate from expectations, the utility's credit quality can weaken."[60] More recently, S&P added that "given the current high percentage of negative outlooks, we anticipate that 2024 will be another challenging year for the industry's credit quality."[61]

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[58] Moody's Investors Service, *FAQ on credit implications of the coronavirus outbreak*, Sector Comment (Mar. 26, 2020).

[59] 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).

[60] S&P Global Ratings, *The Outlook For North American Regulated Utilities Turns Stable* (May 18, 2023).

[61] S&P Global Ratings, *Rising Risks: Outlook For North American Investor-Owned Regulated Utilities Weakens*, Comments (Feb. 14, 2024).

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

Q57. WHAT OTHER FACTORS DO INVESTORS CONSIDER IN THEIR ASSESSMENT OF A COMPANY'S CAPITAL STRUCTURE?

A57. Utilities, including NorthWestern, are facing significant capital investment plans. Coupled with the potential for turmoil in capital markets, this warrants a stronger balance sheet to deal with an uncertain environment. As S&P noted:

> Under our base case, we expect that by 2024 the industry's capital spending will exceed $180 billion. Because of the industry's continued robust capital spending, we expect that [the] industry will continue to generate negative discretionary cash flow. This requires that the industry has consistent access to the capital markets to finance capital spending and dividends requirements.[62]

More recently, S&P noted that, "[w]ithout a commensurate focus on balance sheet preservation through equity support of discretionary negative cash flow deficits, limited financial cushion could give rise to another round of negative rating actions."[63] Similarly, Moody's noted that higher interest rates and the pressure of maintaining credit metrics while funding capital investments were leading to greater reliance on common equity.[64] Moody's concluded that the utility sector "is likely to continue to generate negative free cash flow and credit quality is likely to suffer unless utilities fund this negative free cash flow appropriately with a balance of debt and equity financing."[65]

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[62] 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).

[63] S&P Global Ratings, *Record CapEx Fuels Growth Along With Credit Risk For North American Investor-Owned Utilities*, Comments (Sep. 12, 2023).

[64] 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).

[65] *Id.*

In addition, the investment community also considers the impact of other considerations, such as leases, purchased power agreements, and postretirement benefit and asset retirement obligations in its evaluation of a utility's financial standing. Considering the Company's ongoing exposure to attrition, a conservative financial profile, in the form of a reasonable common equity ratio, is warranted to maintain the continuous access to capital under reasonable terms that is required to fund operations and necessary system investment, even during times of adverse capital market conditions.

Q58. WHAT DOES THIS EVIDENCE SUGGEST WITH RESPECT TO NORTHWESTERN'S CAPITAL STRUCTURE?

A58. NorthWestern's capital structure is consistent with industry benchmarks for other utility operating companies. While industry averages provide one benchmark for comparison, each firm must select its capitalization based on the risks and prospects it faces, as well as its specific needs to access the capital markets. The Company's capital structure reflects the need to address the funding of ongoing capital expenditures and support NorthWestern's financial integrity and access to capital on reasonable terms. Based on this evidence, and considering the importance of maintaining the Company's financial strength and credit standing, I conclude that NorthWestern's capital structure represents a reasonable mix of capital sources from which to calculate the overall rate of return.

V. CAPITAL MARKET ESTIMATES

Q59. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A59. This section presents capital market estimates of the cost of equity. First, I address the concept of the cost of common equity, along with the risk-return tradeoff principle fundamental to capital markets. I then describe the quantitative analyses I conducted to estimate the cost of common equity for the Utility Group.

A. Economic Standards

Q60. WHAT FUNDAMENTAL ECONOMIC PRINCIPLE UNDERLIES THE COST OF EQUITY CONCEPT?

A60. The fundamental economic principle underlying the cost of equity concept is the notion that investors are risk averse. In capital markets where relatively risk-free assets are available (e.g., U.S. Treasury securities), investors can be induced to hold riskier assets only if they are offered a premium, or additional return, above the rate of return on a risk-free asset. Because all assets compete for investor funds, riskier assets must yield a higher expected rate of return than safer assets to induce investors to invest and hold them.

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

$$k_i = R_f + RP_i$$

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

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

Q61. IS THERE EVIDENCE THAT THE RISK-RETURN TRADEOFF PRINCIPLE OPERATES IN THE CAPITAL MARKETS?

A61. Yes. The risk-return tradeoff can be documented in segments of the capital markets where required rates of return can be directly inferred from market data and where generally accepted measures of risk exist. Bond yields, for example, reflect investors' expected rates of return, and bond ratings measure the risk of individual bond issues. Comparing the observed yields on government securities, which are considered free of

default risk, to the yields on bonds of various rating categories demonstrates that the risk-return tradeoff does, in fact, exist.

Q62. DOES THE RISK-RETURN TRADEOFF OBSERVED WITH FIXED INCOME SECURITIES EXTEND TO COMMON STOCKS AND OTHER ASSETS?

A62. It is widely accepted that the risk-return tradeoff evidenced with long-term debt extends to all assets. Documenting the risk-return tradeoff for assets other than fixed income securities, however, is complicated by two factors. First, there is no standard measure of risk applicable to all assets. Second, for most assets—including common stock—required rates of return cannot be observed. Nevertheless, there is every reason to believe that investors demonstrate risk aversion in deciding whether to hold common stocks and other assets, just as when choosing among fixed-income securities.

Q63. IS THIS RISK-RETURN TRADEOFF LIMITED TO DIFFERENCES BETWEEN FIRMS?

A63. No. The risk-return tradeoff principle applies not only to investments in different firms, but also to different securities issued by the same firm. The securities issued by a utility vary considerably in risk because they have different characteristics and priorities. The last investors in line are common shareholders. They share in the net earnings, if any, that remain after all other claimants have been paid. As a result, the rate of return that investors require from a utility's common stock, the most junior and riskiest of its securities, must be considerably higher than the yield offered by the utility's senior, long-term debt.

Q64. WHAT ARE THE CHALLENGES IN DETERMINING A JUST AND REASONABLE ROE FOR A UTILITY?

A64. The actual return investors require is not directly observable. Different methodologies have been developed to estimate investors' expected and required return on capital, but these theoretical tools produce a range of estimates, based on different assumptions and

inputs. The DCF method, which is frequently referenced and relied on by regulators, is only one theoretical approach to gain insight into the return investors require. There are a number of other accepted methodologies for estimating the cost of capital, and the ranges produced by these approaches can vary widely.

Q65. IS IT CUSTOMARY TO CONSIDER THE RESULTS OF MULTIPLE APPROACHES WHEN EVALUATING A JUST AND REASONABLE ROE?

A65. Yes. In my experience, financial analysts and regulators routinely consider the results of alternative approaches in determining allowed ROEs. It is widely recognized that no single method can be regarded as failsafe; all approaches have advantages and shortcomings. As FERC has noted, "[t]he determination of rate of return on equity starts from the premise that there is no single approach or methodology for determining the correct rate of return."[66] Similarly, a publication of the Society of Utility and Regulatory Financial Analysts concluded that:

> Each model requires the exercise of judgment as to the reasonableness of the underlying assumptions of the methodology and on the reasonableness of the proxies used to validate the theory. Each model has its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises, most of which cannot be validated empirically. Investors clearly do not subscribe to any singular method, nor does the stock price reflect the application of any one single method by investors.[67]

As this treatise succinctly observed, "no single model is so inherently precise that it can be relied on solely to the exclusion of other theoretically sound models."[68] Similarly, *New Regulatory Finance* concluded that:

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[66] *Northwest Pipeline Co.*, Opinion No. 396-C, 81 FERC ¶ 61,036 at 4 (1997).

[67] David C. Parcell, *The Cost of Capital – A Practitioner's Guide*, Society of Utility and Regulatory Financial Analysts (2010) at 84.

[68] *Id*.

> There is no single model that conclusively determines or estimates the expected return for an individual firm. Each methodology possesses its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. Each method proceeds from different fundamental premises that cannot be validated empirically. Investors do not necessarily subscribe to any one method, nor does the stock price reflect the application of any one single method by the price-setting investor. There is no monopoly as to which method is used by investors. In the absence of any hard evidence as to which method outdoes the other, all relevant evidence should be used and weighted equally, in order to minimize judgmental error, measurement error, and conceptual infirmities.[69]

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

> There are three principal reasons for our unwillingness to place a great deal of weight on the results of any DCF analysis. One is. . . the failure of the DCF model to conform to reality. The second is the undeniable fact that rarely if ever do two expert witnesses agree on the terms of a DCF equation for the same utility – for example, as we shall see in more detail below, projections of future dividend cash flow and anticipated price appreciation of the stock can vary widely. And, the third reason is that the unadjusted DCF result is almost always well below what any informed financial analysis would regard as defensible, and therefore require an upward adjustment based largely on the expert witness's judgment. In these circumstances, we find it difficult to regard the results of a DCF computation as any more than suggestive.[70]

More recently, FERC recognized the potential for any application of the DCF model to produce unreliable results.[71]

As this discussion indicates, considering results from alternative approaches reduces the potential for error associated with any single quantitative method. Just as

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[69] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 429.

[70] *Ind. Michigan Power Co.*, Cause No. 38728, 116 PUR4th, 1, 17-18 (IURC 8/24/1990).

[71] *Coakley v. Bangor Hydro-Elec. Co.*, Opinion No. 531, 147 FERC ¶ 61,234 at P 41 (2014).

investors inform their decisions using a variety of methodologies, my evaluation of a fair ROE for NorthWestern considers the results of multiple financial models.

Q66. DOES THE FACT THAT NORTHWESTERN IS A SUBSIDIARY OF NWE IN ANY WAY ALTER THESE FUNDAMENTAL STANDARDS UNDERLYING A JUST AND REASONABLE ROE?

A66. No. While the Company has no publicly traded common stock and NWE is the Company's only shareholder, this does not change the standards governing the determination of a just and reasonable ROE. Ultimately, the common equity required to support NorthWestern's utility operations must be raised in the capital markets, where investors consider the Company's ability to offer a rate of return that is competitive with other risk-comparable alternatives. NorthWestern must compete with other investment opportunities, and unless there is a reasonable expectation that investors will have the opportunity to earn returns commensurate with the underlying risks, capital will be allocated elsewhere, the Company's financial integrity will be weakened, and investors will demand an even higher rate of return. NorthWestern's ability to offer a reasonable return on investment is a necessary ingredient to ensure that customers continue to enjoy economical rates and reliable service.

Q67. WHAT DOES THE ABOVE DISCUSSION IMPLY WITH RESPECT TO ESTIMATING THE COST OF EQUITY FOR A UTILITY?

A67. Although the cost of equity cannot be observed directly, it is a function of the returns available from other investment alternatives and the risks of the investment. Because it is not readily observable, the cost of equity for a particular utility must be estimated by analyzing information about capital market conditions generally, assessing the relative risks of the Company specifically, and employing alternative quantitative methods that focus on investors' required rates of return. These methods typically attempt to infer

investors' required rates of return from stock prices, interest rates, or other capital market data.

B. Discounted Cash Flow Analysis

Q68. HOW IS THE DCF MODEL USED TO ESTIMATE THE COST OF COMMON EQUITY?

A68. 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:[72]

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

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

[72] 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.

words, investors expect to receive a portion of their total return in the form of current dividends and the remainder through price appreciation.

Q69. WHAT STEPS ARE REQUIRED TO APPLY THE CONSTANT GROWTH DCF MODEL?

A69. The first step is to determine the expected dividend yield (D_1/P_0) for the firm in question. This is usually calculated based on an estimate of dividends to be paid in the coming year divided by the current price of the stock. The second, and more controversial, step is to estimate investors' long-term growth expectations (g) for the firm. The final step is to add the firm's dividend yield and estimated growth rate to arrive at an estimate of its cost of common equity.

Q70. HOW DO YOU DETERMINE THE DIVIDEND YIELDS FOR THE UTILITY GROUP?

A70. I rely on Value Line's estimates of dividends to be paid by each of these utilities over the next twelve months as D_1. This annual dividend was then divided by a 30-day average stock price for each utility to arrive at the expected dividend yield. The expected dividends, stock prices, and resulting dividend yields for the firms in the Utility Group are presented on Exhibit AMM-5. As shown on the first page of this exhibit, dividend yields for the firms in the Utility Group ranged from 2.2% to 6.0% and averaged 4.5%.

Q71. WHAT IS THE NEXT STEP IN APPLYING THE CONSTANT GROWTH DCF MODEL?

A71. The next step is to evaluate long-term growth expectations, or "*g*", for the firm in question. In constant growth DCF theory, earnings, dividends, book value, and market price are all assumed to grow in lockstep, and the growth horizon of the DCF model is infinite. But implementation of the DCF model is more than just a theoretical exercise; it is an attempt to replicate the mechanism investors used to arrive at observable stock

prices. A wide variety of techniques can be used to derive growth rates, but the only "*g*" that matters in applying the DCF model is the value that investors expect.

Q72. WHAT ARE INVESTORS MOST LIKELY TO CONSIDER IN DEVELOPING THEIR LONG-TERM GROWTH EXPECTATIONS?

A72. Implementation of the DCF model is solely concerned with replicating the forward-looking evaluation of real-world investors. In the case of utilities, dividend growth rates are not likely to provide a meaningful guide to investors' current growth expectations. Utility dividend policies reflect the need to accommodate business risks and investment requirements in the industry, as well as potential uncertainties in the capital markets. As a result, dividend growth in the utility industry has generally lagged growth in earnings as utilities conserve financial resources.

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

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

Q73. DO THE GROWTH RATE PROJECTIONS OF SECURITY ANALYSTS ALSO CONSIDER HISTORICAL TRENDS?

A73. Yes. Professional security analysts study historical trends extensively in developing their projections of future earnings. To the extent there is any useful information in historical patterns, that information is incorporated into analysts' growth forecasts.

Q74. WHAT ARE SECURITY ANALYSTS CURRENTLY PROJECTING IN THE WAY OF GROWTH FOR THE FIRMS IN THE PROXY GROUP?

A74. The EPS growth projections for each of the firms in the Utility Group reported by Value Line, IBES,[73] and Zacks are displayed on page 2 of Exhibit AMM-5.

Q75. HOW ELSE ARE INVESTORS' EXPECTATIONS OF FUTURE LONG-TERM GROWTH PROSPECTS SOMETIMES ESTIMATED WHEN APPLYING THE CONSTANT GROWTH DCF MODEL?

A75. In constant growth theory, growth in book equity will be equal to the product of the earnings retention ratio (one minus the dividend payout ratio) and the earned rate of return on book equity. Furthermore, if the earned rate of return and the payout ratio are constant over time, growth in earnings and dividends will be equal to growth in book value. Despite the fact that these conditions are never met in practice, this "sustainable growth" approach may provide a rough guide for evaluating a firm's growth prospects.

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

[73] Formerly I/B/E/S International, Inc., IBES growth rates are now compiled and published by Refinitiv.

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

The sustainable growth rate analysis shown in Exhibit AMM-6 incorporates an "adjustment factor" because Value Line's reported returns are based on year-end book values. Since earnings is a flow over the year while book value is determined at a given point in time, the measurement of earnings and book value are distinct concepts. It is this fundamental difference between a flow (earnings) and point estimate (book value) that makes it necessary to adjust to mid-year in calculating the ROE. Given that book value will increase or decrease over the year, using year-end book value (as Value Line does) understates or overstates the average investment that corresponds to the flow of earnings. To address this concern, earnings must be matched with a corresponding representative measure of book value, or the resulting ROE will be distorted. The adjustment factor determined in Exhibit AMM-6, is solely a means of converting Value Line's end-of-period values to an average return over the year, and the formula for this adjustment is supported in recognized textbooks and has been adopted by other regulators.[74]

Q76. ARE THERE SIGNIFICANT SHORTCOMINGS ASSOCIATED WITH THE "BR+SV" GROWTH RATE?

A76. Yes. First, in order to calculate the sustainable growth rate, it is necessary to develop estimates of investors' expectations for four separate variables; namely, "b", "r", "s", and "v." Given the inherent difficulty in forecasting each parameter and the difficulty of estimating the expectations of investors, the potential for measurement error is significantly increased when using four variables, as opposed to referencing a direct

[74] *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).

projection for EPS growth. Second, empirical research in the finance literature indicates that sustainable growth rates are not as significantly correlated to measures of value, such as share prices, as are analysts' EPS growth forecasts.[75] The "sustainable growth" approach is included for completeness, but evidence indicates that analysts' forecasts provide a superior and more direct guide to investors' growth expectations. Accordingly, I give less weight to cost of equity estimates based on br+sv growth rates in evaluating the results of the DCF model.

Q77. WHAT COST OF COMMON EQUITY ESTIMATES WERE IMPLIED FOR THE UTILITY GROUP USING THE DCF MODEL?

A77. After combining the dividend yields and respective growth projections for each utility, the resulting cost of common equity estimates are shown on page 3 of Exhibit AMM-5.

Q78. IN EVALUATING THE RESULTS OF THE CONSTANT GROWTH DCF MODEL, IS IT APPROPRIATE TO ELIMINATE ILLOGICAL ESTIMATES?

A78. Yes. It is essential that the cost of equity estimates produced by quantitative methods pass fundamental tests of reasonableness and economic logic. Accordingly, DCF estimates that are implausibly low or high should be eliminated.

Q79. HOW DO YOU EVALUATE DCF ESTIMATES AT THE LOW END OF THE RANGE?

A79. My evaluation of DCF estimates at the low end of the range is based on the fundamental risk-return tradeoff, which holds that investors will only take on more risk if they expect to earn a higher rate of return to compensate them for the greater uncertainty. Because common stocks lack the protections associated with an investment in long-term bonds, a utility's common stock imposes far greater risks on investors. As a result, the rate of return that investors require from a utility's common stock is considerably higher than

[75] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 307.

the yield offered by senior, long-term debt. Consistent with this principle, DCF results that are not sufficiently higher than the yield available on less risky utility bonds must be eliminated.

Q80. HAVE SIMILAR TESTS BEEN APPLIED BY OTHER REGULATORS?

A80. Yes. FERC has noted that adjustments are justified where applications of the DCF approach and other methods produce illogical results. FERC evaluates low-end DCF results against observable yields on long-term public utility debt and has recognized that it is appropriate to eliminate estimates that do not sufficiently exceed this threshold.[76] FERC's current practice is to exclude low-end estimates that fall below the six-month average yield on Baa-rated utility bonds, plus 20% of the CAPM market risk premium.[77] In addition, FERC also excludes estimates that are "irrationally or anomalously high."[78] Similarly, the Staff of the Maryland Public Service Commission has also eliminated DCF values where they do not offer a sufficient premium above the cost of debt to be attractive to an equity investor.[79]

Q81. DO YOU EXCLUDE ANY ESTIMATES AT THE LOW OR HIGH END OF THE RANGE OF DCF RESULTS?

A81. Yes. As highlighted on page 3 of Exhibit AMM-5, I remove low-end DCF cost of equity estimates ranging from -7.3% to 7.5%. I also eliminate high-end DCF estimates in the range of 25.0% to 41.3%. After removing these illogical values, the lower end of the DCF results is set by a cost of equity estimate of 7.7% and the upper end is established by a cost of equity estimate of 14.4%. While a 14.4% cost of equity estimate may

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[76] *See, e.g.*, *Southern California Edison Co*., 131 FERC ¶ 61,020 at P 55 (2010).

[77] 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%.

[78] *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc*., 171 FERC ¶ 61,154 at P 152 (2020).

[79] *See, e.g.*, Maryland Public Service Commission, Case No. 9702, *Direct Testimony and Exhibits of Anson R. Justi* (Dec. 15, 2023) at 33.

exceed the majority of the remaining values, low-end DCF estimates in the 7.7% to 8.3% range are assuredly far below investors' required rate of return. Taken together and considered along with the balance of the results, the remaining values provide a reasonable basis on which to frame the range of plausible DCF estimates and evaluate investors' required rate of return.

Q82. WHAT ROE ESTIMATES ARE IMPLIED BY YOUR DCF RESULTS FOR THE UTILITY GROUP?

A82. As shown on page 3 of Exhibit AMM-5 and summarized in Table 4, application of the constant growth DCF model results in the following ROE estimates:

TABLE 4
DCF RESULTS – UTILITY GROUP

Growth Rate	Average	Midpoint
Value Line	10.0%	10.2%
IBES	10.7%	10.6%
Zacks	10.7%	11.3%
br + sv	9.2%	9.2%

C. Capital Asset Pricing Model

Q83. PLEASE DESCRIBE THE CAPM.

A83. 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,

β_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 (β). 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.

Q84. WHY IS THE CAPM A RELEVANT APPROACH TO EVALUATE THE COST OF EQUITY FOR NORTHWESTERN?

A84. The CAPM approach (which also forms the foundation of the ECAPM) generally is considered the most widely referenced method for estimating the cost of equity among academicians and professional practitioners, with the pioneering researchers of this method receiving the Nobel Prize in 1990. Because this is the dominant model for estimating the cost of equity outside the regulatory sphere, the CAPM (and ECAPM) provides important insight into investors' required rate of return for utility stocks, including the Company.

Q85. HOW DO YOU APPLY THE CAPM TO ESTIMATE THE ROE?

A85. Application of the CAPM to the proxy group is based on a forward-looking estimate for investors' required rate of return from common stocks presented in Exhibit AMM-7. To capture the expectations of today's investors in current capital markets, the expected market rate of return was estimated by conducting a DCF analysis on the dividend paying firms in the S&P 500.

The dividend yield for each firm is obtained from Value Line, and the growth rate is equal to the average of the earnings growth projections from IBES, Value Line, and Zacks for each firm, with each firm's dividend yield and growth rate being weighted

by its proportionate share of total market value. After removing companies with growth rates that were negative or greater than 20%, the weighted average of the projections for the individual firms implies an average growth rate over the next five years of 10.1%. Combining this average growth rate with a year-ahead dividend yield of 1.9% results in a current cost of common equity estimate for the market as a whole (R_m) of 12.0%. Subtracting a 4.5% risk-free rate based on the average yield on 30-year Treasury bonds for the six month period ending March 2024 produced a market equity risk premium of 7.5%.

Q86. WHAT BETA VALUES DO YOU USE?

A86. As indicated earlier in my discussion of risk measures for the proxy group, I relied on the beta values reported by Value Line, which in my experience is the most widely referenced source for beta in regulatory proceedings.

Q87. WHAT ELSE SHOULD BE CONSIDERED IN APPLYING THE CAPM?

A87. Financial research indicates that the CAPM does not fully account for observed differences in rates of return attributable to firm size. Accordingly, a modification is required to account for this size effect. As explained by Morningstar:

> One of the most remarkable discoveries of modern finance is the finding of a relationship between firm size and return. On average, small companies have higher returns than large ones. . . . The relationship between firm size and return cuts across the entire size spectrum; it is not restricted to the smallest stocks.[80]

According to the CAPM, the expected return on a security should consist of the riskless rate, plus a premium to compensate for the systematic risk of the particular security. The degree of systematic risk is represented by the beta coefficient. The need for the size adjustment arises because differences in investors' required rates of return that are related to firm size are not fully captured by beta. To account for this,

[80] Morningstar, *2015 Ibbotson SBBI Classic Yearbook*, at 99.

researchers have developed size premiums that need to be added to account for the level of a firm's market capitalization in determining the CAPM cost of equity.[81] Accordingly, my CAPM analyses also incorporated an adjustment to recognize the impact of size distinctions, as measured by the market capitalization for the firms in the Utility Group.

Q88. WHAT IS THE BASIS FOR THE SIZE ADJUSTMENT?

A88. The size adjustment required in applying the CAPM is based on the finding that *after controlling for risk differences reflected in beta*, the CAPM overstates returns to companies with larger market capitalizations and understates returns for relatively smaller firms. The size adjustments utilized in my analysis are sourced from Kroll, which now publishes the well-known compilation of capital market series originally developed by Professor Roger G. Ibbotson of the Yale School of Management. Calculation of the size adjustments involve the following steps:

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

New Regulatory Finance observed that "small market-cap stocks experience higher returns than large market-cap stocks with equivalent betas," and concluded that "the CAPM understates the risk of smaller utilities, and a cost of equity based purely on

[81] 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.*

a CAPM beta will therefore produce too low an estimate."[82] As FERC has recognized, "[t]his type of size adjustment is a generally accepted approach to CAPM analyses."[83]

Q89. IS THIS SIZE ADJUSTMENT RELATED TO THE RELATIVE SIZE OF NORTHWESTERN AS COMPARED WITH THE PROXY GROUP?

A89. No. I am not proposing to apply a general size risk premium in evaluating a just and reasonable ROE for the Company, and my recommendation does not include any adjustment related to the relative size of NorthWestern. Rather, this size adjustment is specific to the CAPM and merely corrects for an observed inability of the beta measure to fully reflect the risks perceived by investors for the firms in the proxy group.

Q90. WHAT IS THE IMPLIED ROE FOR THE UTILITY GROUP USING THE CAPM APPROACH?

A90. As shown on Exhibit AMM-7, the CAPM approach implies an average ROE for the Utility Group of 11.6%, or 12.2% after adjusting for the impact of firm size.

D. Empirical Capital Asset Pricing Model

Q91. HOW DOES THE ECAPM APPROACH DIFFER FROM TRADITIONAL APPLICATIONS OF THE CAPM?

A91. Empirical tests of the CAPM have shown that low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted. In other words, the CAPM tends to overstate the actual sensitivity of the cost of capital to beta, with low-beta stocks tending to have higher returns and high-beta stocks tending to have lower risk returns than predicted by the CAPM. This is illustrated graphically in Figure 4:

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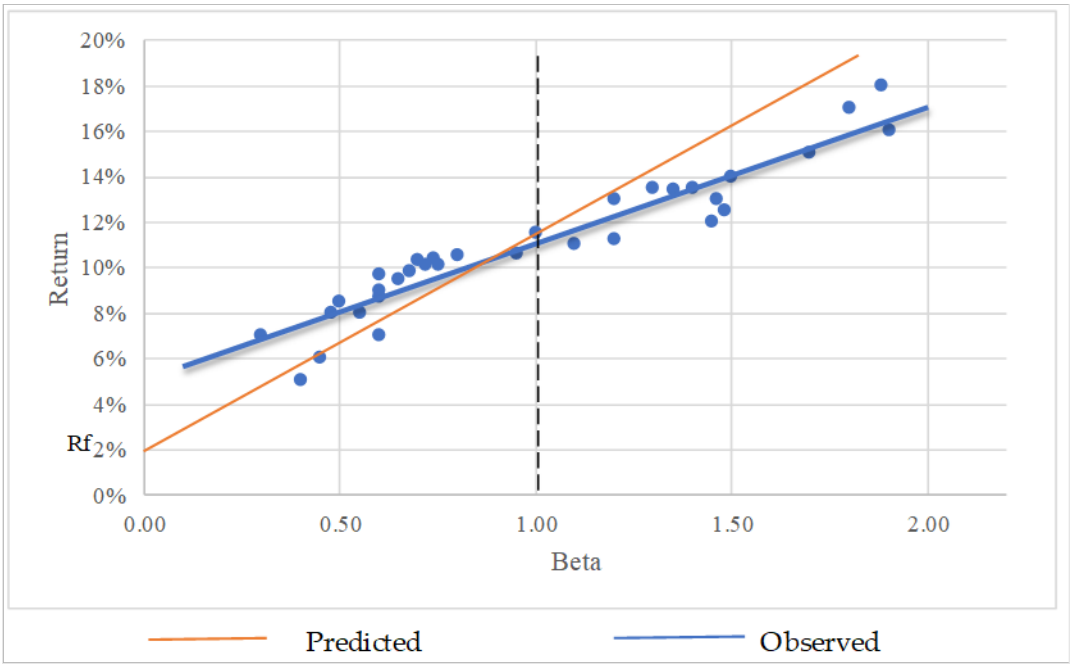
[82] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports, Inc. (2006) at 187.

[83] Opinion No. 531-B at P 117.

FIGURE 4
CAPM – PREDICTED VS. OBSERVED RETURNS



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*:

> 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.[84]

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

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

[84] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports (2006) at 189.

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

Q92. WHAT COST OF EQUITY IS INDICATED BY THE ECAPM?

A92. My application of the ECAPM is based on the same forward-looking market rate of return, risk-free rates, and beta values discussed earlier in connection with the CAPM. As shown on Exhibit AMM-8, applying the forward-looking ECAPM approach to the firms in the Utility Group results in an average cost of equity estimate of 11.7%, or 12.3% after incorporating the size adjustment.

E. Utility Risk Premium

Q93. BRIEFLY DESCRIBE THE RISK PREMIUM METHOD.

A93. The risk premium approach is based on the fundamental risk-return principle that is central to finance, which holds that investors will require a premium in the form of a higher return to assume additional risk. The risk premium method extends the risk-return tradeoff observed with bonds to estimate investors' required rate of return on common stocks. The cost of equity is estimated by first determining the additional return investors require to forgo the relative safety of bonds and to bear the greater risks associated with common stock, and then adding this equity risk premium to the current yield on bonds. Like the DCF model, the risk premium method is capital market oriented. However, unlike DCF models, which indirectly impute the cost of equity, risk

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

Q94. IS THE RISK PREMIUM APPROACH A WIDELY ACCEPTED METHOD FOR ESTIMATING THE COST OF EQUITY?

A94. Yes. This method is routinely referenced by the investment community and in academia and regulatory proceedings and provides an important tool in estimating a just and reasonable ROE for NorthWestern.

Q95. HOW DO YOU IMPLEMENT THE RISK PREMIUM METHOD?

A95. Estimates of equity risk premiums for utilities are based on surveys of previously authorized ROEs. Authorized ROEs presumably reflect regulatory commissions' best estimates of the cost of equity, however determined, at the time they issued their final order. Such ROEs should represent a balanced and impartial outcome that considers the need to maintain a utility's financial integrity and ability to attract capital. Moreover, allowed returns are an important consideration for investors and have the potential to influence other observable investment parameters, including credit ratings and borrowing costs. Thus, when considered in the context of a complete and rigorous analysis, this data provides a logical and frequently referenced basis for estimating equity risk premiums for regulated utilities.

Q96. HOW DO YOU CALCULATE EQUITY RISK PREMIUMS BASED ON ALLOWED RETURNS?

A96. The ROEs authorized for electric utilities by regulatory commissions across the U.S. are compiled by RRA. On page 2 of Exhibit AMM-9, the average yield on public utility bonds is subtracted from the average allowed ROE for electric utilities to calculate equity risk premiums for each year between 1974 and 2023.[85] As shown there, over this

[85] My analysis encompasses the entire period for which published data is available.

period these equity risk premiums for electric utilities average 3.89%, and the yields on public utility bonds average 7.78%.

Q97. WHAT CAPITAL MARKET RELATIONSHIP MUST BE CONSIDERED WHEN IMPLEMENTING THE RISK PREMIUM METHOD?

A97. The magnitude of equity risk premiums is not constant, and equity risk premiums tend to move inversely with interest rates. In other words, when interest rate levels are relatively high, equity risk premiums narrow, and when interest rates are relatively low, equity risk premiums widen. The implication of this inverse relationship is that the cost of equity does not move as much as, or in lockstep with, interest rates. Accordingly, for a 1% increase or decrease in interest rates, the cost of equity may only rise or fall some fraction of 1%. When implementing the risk premium method, adjustments may be required to incorporate this inverse relationship if current interest rates differ from the average interest rate level represented in the data set.

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

Q98. IS THIS INVERSE RELATIONSHIP CONFIRMED BY PUBLISHED FINANCIAL RESEARCH?

A98. Yes. The inverse relationship between equity risk premiums and interest rates has been widely reported in the financial literature. As summarized by *New Regulatory Finance*:

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

the level of interest rates – rising when rates fell and declining when rates rose.[86]

Other regulators have also recognized that, while the cost of equity trends in the same direction as interest rates, these variables do not move in lockstep.[87] This relationship is illustrated in the figure on page 3 of Exhibit AMM-9.

Q99. WHAT ROE IS IMPLIED BY THE RISK PREMIUM METHOD USING SURVEYS OF ALLOWED RETURNS?

A99. Based on the regression output between the interest rates and equity risk premiums displayed on page 3 of Exhibit AMM-9, the equity risk premium for electric utilities increases by approximately 42 basis points for each percentage point drop in the yield on average public utility bonds. As illustrated on page 1 of Exhibit AMM-9 with an average yield on public utility bonds for the six month period ending March 2024 of 5.77%, this implies a current equity risk premium of 4.74% for electric utilities. Adding this equity risk premium to the average yield on Baa utility bonds of 5.98% implies a current ROE of 10.72%.

F. Expected Earnings Approach

Q100. WHAT OTHER ANALYSES DO YOU CONDUCT TO EVALUATE A FAIR ROE FOR NORTHWESTERN?

A100. I also evaluate the ROE using the expected earnings method. Reference to rates of return available from alternative investments of comparable risk can provide an important benchmark in assessing the return necessary to assure confidence in the financial integrity of a firm and its ability to attract capital. This expected earnings approach is consistent with the economic underpinnings for a just and reasonable rate

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[86] Roger A. Morin, *New Regulatory Finance*, Pub. Utils. Reports (2006) at 128.

[87] *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 (last visited Apr. 7, 2024); *Martha Coakley et al.*, 147 FERC ¶ 61,234 at P 147 (2014).

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

Q101. WHAT ECONOMIC PREMISE UNDERLIES THE EXPECTED EARNINGS APPROACH?

A101. The expected earnings approach is based on the concept that investors compare each investment alternative with the next best opportunity. If the utility is unable to offer a return similar to that available from other opportunities of comparable risk, investors will become unwilling to supply the capital on reasonable terms. For existing investors, denying the utility an opportunity to earn what is available from other similar risk alternatives prevents them from earning their opportunity cost of capital. This outcome would violate the *Hope* and *Bluefield* standards and undermine the utility's access to capital on reasonable terms.

Q102. HOW IS THE EXPECTED EARNINGS APPROACH TYPICALLY IMPLEMENTED?

A102. The traditional comparable earnings test identifies a group of companies that are believed to be comparable in risk to the utility. The actual earnings of those companies on the book value of their investment are then compared to the allowed return of the utility. While the traditional comparable earnings test is implemented using historical data taken from the accounting records, it is also common to use projections of returns on book investment, such as those published by recognized investment advisory publications (*e.g.*, Value Line). Because these returns on book value equity are analogous to the allowed return on a utility's rate base, this measure of opportunity costs results in a direct, "apples to apples" comparison.

Q103. WHAT OTHER CONSIDERATION SUPPORTS REFERENCE TO EXPECTED RETURNS ON BOOK VALUE?

A103. Regulators do not set the returns that investors earn in the capital markets, which are a function of dividend payments and fluctuations in common stock prices—both of which are outside their control. Regulators can only establish the allowed ROE, which is applied to the book value of a utility's investment in rate base, as determined from its accounting records. This is analogous to the expected earnings approach, which measures the return that investors expect the utility to earn on book value. As a result, the expected earnings approach provides a meaningful guide to ensure that the allowed ROE is similar to what other utilities of comparable risk will earn on invested capital. This expected earnings test does not require theoretical models to indirectly infer investors' perceptions from stock prices or other market data. As long as the proxy companies are similar in risk, their expected earned returns on invested capital provide a direct benchmark for investors' opportunity costs that is independent of fluctuating stock prices, market-to-book ratios, debates over DCF growth rates, or the limitations inherent in any theoretical model of investor behavior.

Q104. WHAT ROE IS INDICATED FOR NORTHWESTERN BASED ON THE EXPECTED EARNINGS APPROACH?

A104. For the firms in the Utility Group, the year-end returns on common equity projected by Value Line over its forecast horizon are shown on Exhibit AMM-10. As I explained earlier in my discussion of the br+sv growth rates used in applying the DCF model, Value Line's returns on common equity are calculated using year-end equity balances, which understates the average return earned over the year.[88] Accordingly, these year-

[88] 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.

end values were converted to average returns using the same adjustment factor discussed earlier and developed on Exhibit AMM-6. As shown on Exhibit AMM-10, Value Line's projections suggest an average ROE of 10.7% for the Utility Group.

VI. NON-UTILITY BENCHMARK

Q105. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A105. This section presents the results of my DCF analysis applied to a group of low-risk firms in the competitive sector, which I refer to as the "Non-Utility Group." This analysis was not relied on to arrive at my recommended ROE range of reasonableness; however, it is my opinion that this is a relevant consideration in evaluating a just and reasonable ROE for the Company's utility operations.

Q106. DO UTILITIES HAVE TO COMPETE WITH NON-REGULATED FIRMS FOR CAPITAL?

A106. Yes. The cost of capital is an opportunity cost based on the returns that investors could realize by putting their money in other alternatives. Clearly, the total capital invested in utility stocks is only the tip of the iceberg of total common stock investment, and there is an abundance of alternatives available to investors. Utilities must compete for capital, not just against firms in their own industry, but with other investment opportunities of comparable risk. Indeed, modern portfolio theory is built on the assumption that rational investors will hold a diverse portfolio of stocks, not just companies in a single industry.

Q107. IS IT CONSISTENT WITH THE *BLUEFIELD* AND *HOPE* CASES TO CONSIDER INVESTORS' REQUIRED ROE FOR NON-UTILITY COMPANIES?

A107. Yes. The cost of equity capital in the competitive sector of the economy forms the underpinning for utility ROEs because regulation purports to serve as a substitute for the actions of competitive markets. The Supreme Court has recognized that it is the degree of risk, not the nature of the business, which is relevant in evaluating an allowed

ROE for a utility. The *Bluefield* case refers to "business undertakings attended with comparable risks and uncertainties." It does not restrict consideration to other utilities. Similarly, the *Hope* case states:

> By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.[89]

As in the *Bluefield* decision, there is nothing to restrict "other enterprises" solely to the utility industry.

Q108. DOES CONSIDERATION OF THE RESULTS FOR THE NON-UTILITY GROUP IMPROVE THE RELIABILITY OF DCF RESULTS?

A108. Yes. Growth estimates used in the DCF model depend on analysts' forecasts. It is possible for utility growth rates to be distorted by short-term trends in the industry, or by the industry falling into favor or disfavor by analysts. Such distortions could result in biased DCF estimates for utilities. Because the Non-Utility Group includes low risk companies from more than one industry, it helps to insulate against any possible distortion that may be present in results for a particular sector.

Q109. WHAT CRITERIA DO YOU APPLY TO DEVELOP THE NON-UTILITY GROUP?

A109. My comparable risk proxy group was composed of those United States companies followed by Value Line that:

1) pay common dividends;
2) have a Safety Rank of "1";
3) have a Financial Strength Rating of "A" or greater;
4) have a beta of 0.95 or less; and,
5) have investment grade credit ratings from Moody's and S&P.

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[89] *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 391 (1944).

Q110. HOW DO THE OVERALL RISKS OF YOUR NON-UTILITY GROUP COMPARE WITH THE UTILITY GROUP?

A110. Table 5 compares the Non-Utility Group with the Utility Group and NorthWestern across the measures of investment risk discussed earlier:

TABLE 5
COMPARISON OF RISK INDICATORS

			Value Line		
	Moody's	S&P	Safety Rank	Financial Strength	Beta
Non-Utility Group	A2	A	1	A+	0.79
Utility Group	Baa2	BBB+	3	B++	0.95
NorthWestern	Baa2	BBB	3	B+	0.95

Note: NorthWestern's Value Line ratings are for its parent company, NWE.

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

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

Q111. WHAT ARE THE RESULTS OF YOUR DCF ANALYSIS FOR THE NON-UTILITY GROUP?

A111. I apply the DCF model to the Non-Utility Group using the same analysts' EPS growth projections described earlier for the Utility Group. The results of my DCF analysis for

the Non-Utility Group are presented in Exhibit AMM-11. As summarized in Table 6, after eliminating illogical values, application of the constant growth DCF model results in the following cost of equity estimates:

TABLE 6
DCF RESULTS – NON-UTILITY GROUP

	Non-Utility	
Growth Rate	**Average**	**Midpoint**
Value Line	10.7%	11.2%
IBES	10.4%	11.4%
Zacks	10.9%	11.6%

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

Q112. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A112. Yes, it does.

VERIFICATION

This Direct Testimony of Adrien M. McKenzie is true and accurate to the best of my knowledge, information, and belief.

/s/ Adrien M. McKenzie
Adrien M. McKenzie