Direct Testimony and Schedules
Dylan W. D'Ascendis

Before the North Dakota Public Service Commission
State of North Dakota

In the Matter of the Application of Northern States Power Company
for Authority to Increase Rates for Natural Gas Service in North Dakota

Case No. PU-21-___
Exhibit___(DWD-1)

Rate of Return

September 1, 2021

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Schedules

I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME, AFFILIATION, AND BUSINESS ADDRESS.

A. My name is Dylan W. D'Ascendis. I am employed by ScottMadden, Inc. as Partner. My business address is 3000 Atrium Way, Suite 200, Mount Laurel, NJ 08054.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

A. I am submitting this direct testimony (referred to throughout as my Direct Testimony) before the North Dakota Public Service Commission (Commission) on behalf of Northern States Power, a Minnesota corporation (NSP or the Company).

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE AND EDUCATIONAL BACKGROUND.

A. I have offered expert testimony on behalf of investor-owned utilities before 30 state regulatory commissions in the United States, the Federal Energy Regulatory Commission (FERC), the Alberta Utility Commission, and one American Arbitration Association panel on issues including, but not limited to, common equity cost rate, rate of return, valuation, capital structure, class cost of service, and rate design.

On behalf of the American Gas Association (AGA), I calculate the AGA Gas Index, which serves as the benchmark against which the performance of the American Gas Index Fund (AGIF) is measured on a monthly basis. The AGA Gas Index and AGIF are a market capitalization weighted index

and mutual fund, respectively, comprised of the common stocks of the publicly traded corporate members of the AGA.

I am a member of the Society of Utility and Regulatory Financial Analysts (SURFA). In 2011, I was awarded the professional designation "Certified Rate of Return Analyst" by SURFA, which is based on education, experience, and the successful completion of a comprehensive written examination.

I am also a member of the National Association of Certified Valuation Analysts (NACVA) and was awarded the professional designation "Certified Valuation Analyst" by NACVA in 2015.

I am a graduate of the University of Pennsylvania, where I received a Bachelor of Arts degree in Economic History. I have also received a Master of Business Administration with high honors and concentrations in Finance and International Business from Rutgers University.

The details of my educational background and expert witness appearances are shown in Appendix A.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to present evidence on behalf of the Company and recommend a weighted average cost of capital (WACC) to be used in setting rates in this proceeding. My testimony first provides a summary of financial theory and regulatory principles pertinent to the

development of the recommended cost of capital. I then present evidence and analysis on: (1) the appropriate capital structure, (2) the appropriate cost of long- and short-term debt, and (3) the appropriate return on common equity (ROE) on the Company's North Dakota jurisdictional rate base.

Q. HAVE YOU PREPARED AN EXHIBIT IN SUPPORT OF YOUR RECOMMENDATION?

A. Yes. I have prepared Exhibit__(DWD-1), which contains Schedules 1 through 12, and was prepared by me or under my direction.

II. SUMMARY

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE WACC FOR THE COMPANY IN THIS PROCEEDING?

A. I recommend that the Commission authorize the Company the opportunity to earn a WACC of 7.45% on its North Dakota-jurisdictional rate base. My recommendation is based on the Company's forecasted capital structure for the test year ending December 31, 2022 that consists of 47.03% long-term debt at a forecasted cost rate of 4.10%, 0.43% short-term debt at a forecasted cost rate of 1.09%, and 52.54% common equity at my recommended ROE of 10.50%. Those capital structure ratios and cost rates result in a return on investor-supplied capital of 7.45%, summarized on page 1 of Exhibit___(DWD-1), Schedule 1 and in Table 1 below:

Table 1

Summary of Recommended Weighted Average Cost of Capital

Type of Capital	Ratios	Cost Rate	Weighted Cost Rate
Long-Term Debt	47.03%	4.10%	1.93%
Short-Term Debt	0.43%	1.09%	0.00%
Common Equity	52.54%	10.50%	5.52%
Total	100.00%		7.45%

Q. PLEASE SUMMARIZE YOUR RECOMMENDED ROE.

A. My recommended ROE of 10.50% is summarized on page 2 of Exhibit___(DWD-1), Schedule 1. In determining my recommendation, I assessed the market-based common equity cost rates of companies of relatively similar, but not necessarily identical, risk to the Company. Using companies of relatively comparable risk as proxies is consistent with the principles of fair rate of return established in the *Hope*[1] and *Bluefield*[2] decisions, which I discuss further in Section III, below. Of course, no proxy group can be identical in risk to any single company. Consequently, there must be an evaluation of relative risk between the Company and the proxy group to determine if it is appropriate to adjust the proxy group's indicated rate of return.

My recommendation results from applying and considering several cost of common equity models, specifically the Constant Growth Discounted Cash Flow (DCF) model, the Risk Premium Model (RPM), and the Capital

1 *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) (*Hope*).
2 *Bluefield Water Works Improvement Co. v. Public Serv. Comm'n*, 262 U.S. 679 (1922) (*Bluefield*).

Asset Pricing Model (CAPM), to the market data of the Utility Proxy Group whose selection criteria will be discussed below. In addition, I applied these same models to a Non-Price Regulated Proxy Group. The results derived from these analyses are as follows:

Table 2

Summary of Common Equity Cost Rates[3]

Discounted Cash Flow Model	9.44%
Risk Premium Model	10.96%
Capital Asset Pricing Model	11.75%
Cost of Equity Models Applied to Comparable Risk, Non-Price Regulated Companies	12.42%
Indicated Range of Common Equity Cost Rates Before Adjustments	9.44% - 12.42%
Business Risk Adjustment	0.50%
Credit Risk Adjustment	-0.04%
Flotation Cost Adjustment	0.14%
Indicated Range of Common Equity Cost Rates after Adjustment	10.04% - 13.02%
Recommended Cost of Common Equity	10.50%

The indicated range of common equity cost rates applicable to the Utility Proxy Group is between 9.44% and 12.42% before any Company-specific adjustments. I then adjusted the indicated common equity cost rate upward by 0.50% to reflect the Company's greater relative business risk and downward by 0.04% to account for a less risky bond rating, as compared to the Utility Proxy Group. I also adjusted the indicated common equity cost rate upward by 0.14% to account for flotation costs.[4]

3 *See,* Section VII for a detailed discussion regarding the application of my cost of common equity models.
4 *See,* Section IX for a detailed discussion of my cost of common equity adjustments.

These adjustments resulted in a Company-specific indicated range of common equity cost rates between 10.04% and 13.02%.

The wide range of model results may reflect increased uncertainty related to the COVID-19 pandemic and unknown timeframe for when economic conditions will normalize as vaccinations ramp up and the public health crises subsides. Because of this uncertainty, I recommend an ROE for the Company toward the lower end of my Company-specific range, specifically 10.50%.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATION WITH RESPECT TO THE COMPANY'S CAPITAL STRUCTURE.

A. As mentioned briefly above, I recommend a capital structure including 52.54% common equity, 47.03% long-term debt, and 0.43% short-term debt. That capital structure is consistent with the Company's historical capital structures, the capital structures of the Utility Proxy Group, and the operating subsidiary companies of the Utility Proxy Group.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATION WITH RESPECT TO THE COMPANY'S COST OF LONG-TERM AND SHORT-TERM DEBT.

A. I recommend a cost of long-term debt of 4.10% and a cost of short-term debt of 1.09% as will be discussed in detail below.

Q. HOW IS THE REMAINDER OF YOUR DIRECT TESTIMONY ORGANIZED?

A. The remainder of my Direct Testimony is organized as follows:

- *Section III* – Provides a summary of financial theory and regulatory principles pertinent to the development of the Cost of Capital;
- *Section IV* – Explains my selection of the Utility Proxy Group used to develop my analytical results;
- *Section V* – Explains the proposed capital structure;
- *Section VI* – Explains my selection of the Utility Proxy Group used to develop my analytical results;
- *Section VII* – Describes the analyses on which my recommendation is based;
- *Section VIII* – Summarizes my common equity cost rate before adjustments to reflect Company-specific factors;
- *Section IX* – Explains my adjustments to my common equity cost rate to reflect the Company-specific factors; and
- *Section X* – Presents my conclusions.

III. GENERAL PRINCIPLES

Q. WHAT PRINCIPLES HAVE YOU CONSIDERED IN ARRIVING AT YOUR RECOMMENDATIONS?

A. In unregulated industries, marketplace competition is the principal determinant of the price of products or services. For regulated public utilities, regulation must act as a substitute for marketplace competition. Assuring that the utility can fulfill its obligations to the public, while providing safe and reliable service at all times, requires a level of earnings sufficient to maintain the integrity of presently invested capital. Sufficient

earnings also permit the attraction of needed new capital at a reasonable cost, for which the utility must compete with other firms of comparable risk, consistent with the fair rate of return standards established by the U.S. Supreme Court in the previously cited *Hope* and *Bluefield* cases.

The U.S. Supreme Court affirmed the fair rate of return standards in *Hope*, when it stated:

> The rate-making process under the Act, *i.e.,* the fixing of 'just and reasonable' rates, involves a balancing of the investor and the consumer interests. Thus we stated in the Natural Gas Pipeline Co. case that 'regulation does not insure that the business shall produce net revenues.' 315 U.S. at page 590, 62 S.Ct. at page 745. But such considerations aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates are being regulated. 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. Cf. Chicago & Grand Trunk R. Co. v. Wellman, 143 U.S. 339, 345, 346 12 S.Ct. 400,402. 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 its credit and to attract capital.[5]

In summary, the U.S. Supreme Court has found a return that is adequate to attract capital at reasonable terms enables the utility to provide service while maintaining its financial integrity. As discussed above, and in keeping with established regulatory standards, that return should be

5 *Hope*, 320 U.S. 591 (1944), at 603.

commensurate with the returns expected elsewhere for investments of equivalent risk. The Commission's decision in this proceeding, therefore, should provide the Company with the opportunity to earn a return that is: (1) adequate to attract capital at reasonable cost and terms; (2) sufficient to ensure its financial integrity; and (3) commensurate with returns on investments in enterprises having corresponding risks.

Lastly, the required return for a regulated public utility is established on a stand-alone basis, i.e., for the utility operating company at issue in a rate case. Parent entities, like other investors, have capital constraints and must look at the attractiveness of the expected risk-adjusted return of each investment alternative in their capital budgeting process. That is, utility holding companies that own many utility operating companies have choices as to where they will invest their capital within the holding company family. Therefore, the opportunity cost concept applies regardless of whether the funding source is public or corporate.

When funding is provided by a parent entity, the return still must be sufficient to provide an incentive to allocate equity capital to the subsidiary or business unit rather than other internal or external investment opportunities. That is, the regulated subsidiary must compete for capital with all the parent company's affiliates, and with other similar risk companies, which may include non-utilities. In that regard, investors value corporate entities on a sum-of-the-parts basis and expect each division within the parent company to provide an appropriate risk-adjusted return.

It therefore is important that the authorized ROE for the Company reflects the risks and prospects of its operations and supports its financial integrity from a stand-alone perspective.

Q. WITHIN THAT BROAD FRAMEWORK, HOW IS THE COST OF CAPITAL ESTIMATED IN REGULATORY PROCEEDINGS?

A. Regulated utilities primarily use common stock and long-term debt to finance their permanent property, plant, and equipment (*i.e.*, rate base). The fair rate of return for a regulated utility is based on its WACC, in which, as noted earlier, the costs of the individual sources of capital are weighted by their respective book values.

The cost of capital is the return investors require to make an investment in a firm. Investors will provide funds to a firm only if the return that they *expect* is equal to, or greater than, the return that they *require* to accept the risk of providing funds to the firm.

The cost of capital (that is, the combination of the costs of debt and equity) is based on the economic principle of "opportunity costs." The principle of opportunity costs recognizes that investing in any asset (whether debt or equity securities) represents a forgone opportunity to invest in alternative assets. For any investment to be sensible, its expected return must be at least equal to the return expected on alternative investment opportunities with comparable risks. Because investments with like risks should offer similar returns, the opportunity cost of an

investment should equal the return available on an investment of comparable risk.

The cost of debt is contractually defined and can be directly observed as the interest rate or yield on debt securities. However, the cost of equity must be estimated based on market data and various financial models. Because the cost of equity is premised on opportunity costs, the models used to determine it are typically applied to a group of "comparable" or "proxy" companies.

In the end, the estimated cost of capital should reflect the return that investors require in light of the subject company's business and financial risks, and the returns available on comparable investments.

A. Business Risk

Q. PLEASE DEFINE BUSINESS RISK AND EXPLAIN WHY IT IS IMPORTANT FOR DETERMINING A FAIR RATE OF RETURN.

A. The investor-required return on common equity reflects investors' assessment of the total investment risk of the subject firm. Total investment risk is often discussed in the context of business and financial risk.

Business risk reflects the uncertainty associated with owning a company's common stock without the company's use of debt and/or preferred stock financing. One way of considering the distinction between business and financial risk is to view the former as the uncertainty of the expected

earned return on common equity, assuming the firm is financed with no debt.

Examples of business risks generally faced by utilities include, but are not limited to, the regulatory environment, mandatory environmental compliance requirements, customer mix and concentration of customers, service territory economic growth, market demand, operations, capital intensity, size, the degree of operating leverage, emerging technologies including distributed energy resources, the vagaries of weather, and the like, all of which have a direct bearing on earnings.

Although analysts, including rating agencies, may categorize business risks individually, as a practical matter, such risks are interrelated and not wholly distinct from one another. When determining an appropriate return on common equity, the relevant issue is where investors see the subject company in relation to other similarly situated utility companies (i.e., the Utility Proxy Group). To the extent investors view a company as being exposed to higher risk, the required return will increase, and vice versa.

For regulated utilities, business risks are both long-term and near-term in nature. Whereas near-term business risks are reflected in year-to-year variability in earnings and cash flow brought about by economic or regulatory factors, long-term business risks reflect the prospect of an impaired ability of investors to obtain both a fair rate of return on, and return of, their capital. Moreover, because utilities accept the obligation to provide safe, adequate, and reliable service at all times (in exchange for

a reasonable opportunity to earn a fair return on their investment), they generally do not have the option to delay, defer, or reject capital investments. Because those investments are capital-intensive, utilities generally do not have the option to avoid raising external funds. The obligation to serve and the corresponding need to access capital is even more acute during periods of capital market distress.

Because utilities invest in long-lived assets, long-term business risks are of paramount concern to equity investors. That is, the risk of not recovering the return on their investment extends far into the future. The timing and nature of events that may lead to losses, however, also are uncertain and, consequently, those risks and their implications for the required return on equity tend to be difficult to quantify. Regulatory commissions (like investors who commit their capital) must review a variety of quantitative and qualitative data and apply their reasoned judgment to determine how long-term risks weigh in their assessment of the market-required return on common equity.

B. Financial Risk

Q. PLEASE DEFINE FINANCIAL RISK AND EXPLAIN WHY IT IS IMPORTANT IN DETERMINING A FAIR RATE OF RETURN.

A. Financial risk is the additional risk created by the introduction of debt and preferred stock into the capital structure. The higher the proportion of debt and preferred stock in the capital structure, the higher the financial risk to common equity owners (*i.e.,* failure to receive dividends due to default or other covenants). Therefore, consistent with the basic financial

principle of risk and return, common equity investors require higher returns as compensation for bearing higher financial risk.

Q. CAN BOND AND CREDIT RATINGS BE A PROXY FOR A FIRM'S COMBINED BUSINESS AND FINANCIAL RISKS TO EQUITY OWNERS (I.E., TOTAL INVESTMENT RISK)?

A. Yes, similar bond ratings/issuer credit ratings reflect, and are representative of, similar combined business and financial risks (*i.e.*, total investment risk) faced by bond investors.[6] Although specific business or financial risks may differ between companies, the same bond/credit rating indicates that the combined risks are roughly similar from a debtholder perspective. The caveat is that these debtholder risk measures do not translate directly to risks for common equity.

IV. NSP AND THE UTILITY PROXY GROUP

Q. WHY IS IT NECESSARY TO DEVELOP A PROXY GROUP WHEN ESTIMATING THE ROE FOR THE COMPANY?

A. Because the Company is not publicly traded and does not have publicly traded equity securities, it is necessary to develop groups of publicly traded, comparable companies to serve as "proxies" for the Company. In addition to the analytical necessity of doing so, the use of proxy companies

6 Risk distinctions within Standard and Poor's (S&P) bond rating categories are recognized by a plus or minus, e.g., within the A category, an S&P rating can be an A+, A, or A-. Similarly, risk distinction for Moody's ratings are distinguished by numerical rating gradations, e.g., within the A category, a Moody's rating can be A1, A2 and A3.

is consistent with the *Hope* and *Bluefield* comparable risk standards, as discussed above. I have selected two proxy groups that, in my view, are fundamentally risk-comparable to the Company: A Utility Proxy Group and a Non-Price Regulated Proxy Group, which is comparable in total risk to the Utility Proxy Group.[7]

Even when proxy groups are carefully selected, it is common for analytical results to vary from company to company. Despite the care taken to ensure comparability, because no two companies are identical, market expectations regarding future risks and prospects will vary within the proxy group. It therefore is common for analytical results to reflect a seemingly wide range, even for a group of similarly situated companies. At issue is how to estimate the ROE from within that range. That determination will be best informed by employing a variety of sound analyses and necessarily must consider the sort of quantitative and qualitative information discussed throughout my Direct Testimony. Additionally, a relative risk analysis between the Company and the Utility Proxy Group must be made to determine whether or not explicit Company-specific adjustments need to be made to the Utility Proxy Group indicated results.

My analyses are based on the Utility Proxy Group, containing U.S. natural gas utilities. As discussed earlier, utilities must compete for capital with other companies with commensurate risk (including non-utilities) and, to

7 The development of the Non-Price Regulated Proxy Group is explained in more detail in Section VII.

do so, must be provided the opportunity to earn a fair and reasonable return. Consequently, it is appropriate to consider the Utility Proxy Group's market data in determining the Company's ROE.

Q. PLEASE SUMMARIZE THE COMPANY'S OPERATIONS.

A. NSP is a vertically integrated electric and natural gas utility that provides electric generation, transmission, and distribution service, as well as natural gas distribution service to approximately 1,500,000 retail electric customers and 600,000 natural gas customers in North Dakota, Minnesota, and South Dakota.[8] The operations that are subject to the Commission's jurisdiction provides natural gas service to approximately 60,000 retail customers in North Dakota.[9] The Company has long-term issuer ratings of A2 from Moody's Investor Services (Moody's) and A- from Standard & Poor's (S&P).[10] The Company is not publicly-traded as it is an operating subsidiary of Xcel Energy Inc. (XEI or the Parent). XEI is publicly-traded under ticker symbol XEL.

Page 1 of Exhibit___(DWD-1), Schedule 2 contains comparative capitalization and financial statistics for the Company for the years 2016 to 2020.[11] During the five-year period ending 2020, the historically achieved average earnings rate on book common equity for the Company averaged 9.15%. The average common equity ratio based on total capital

8 Xcel Energy, SEC Form 10-K at 9 (Dec. 31, 2020).
9 *2020 Reports of Regulated Earnings for Xcel Energy's North Dakota Electric and Natural Gas Operations*, Case No. PU-21-159, April 30, 2021, at S-1.
10 Source: S&P Global Market Intelligence.
11 Source: Company audited financial statements per the as-filed Form 10-Ks.

(including short-term debt) was 52.36%, and the average dividend payout ratio was 86.42%.

Total debt to earnings before interest, taxes, depreciation, and amortization for the years 2016 to 2020 ranges between 3.09 and 3.69 times, with an average of 3.38 times. Funds from operations to total debt range from 15.52% to 31.94%, with an average of 22.67%.[12]

Q. PLEASE EXPLAIN HOW YOU CHOSE THE COMPANIES IN THE UTILITY PROXY GROUP.

A. Because the Cost of Equity is a comparative exercise, my objective in developing a proxy group was to select companies that are comparable to the Company. Because the Company is a 100% rate regulated natural gas utility, I applied the following criteria to select my Utility Proxy Group:

(i) They were included in the Natural Gas Utility Group of *Value Line Investment Survey* (Standard Edition)(*Value Line*);

(ii) They have 60% or greater of fiscal year 2020 total operating income derived from, and 60% or greater of fiscal year 2020 total assets attributable to, regulated natural gas distribution operations;

(iii) At the time of preparation of this testimony, they had not publicly announced that they were involved in any major merger or acquisition activity (*i.e.*, one publicly-traded utility merging with or acquiring another) or any other major development;

12 Source: Company audited financial statements per the as filed Form 10-Ks.

(iv) They have not cut or omitted their common dividends during the five years ending 2020 or through the time of preparation of this testimony;

(v) They have *Value Line* and Bloomberg Professional Services (Bloomberg) adjusted Betas;

(vi) They have positive *Value Line* five-year dividends per share (DPS) growth rate projections; and

(vii) They have *Value Line*, Zacks, or Yahoo! Finance consensus five-year earnings per share (EPS) growth rate projections.

The following seven companies met these criteria:

Table 3

Utility Proxy Group Companies

Company Name	Ticker Symbol
Atmos Energy Corporation	ATO
New Jersey Resources Corporation	NJR
Northwest Natural Holding Company	NWN
ONE Gas, Inc.	OGS
South Jersey Industries, Inc.	SJI
Southwest Gas Holdings, Inc.	SWX
Spire Inc.	SR

Q. PLEASE SUMMARIZE THE UTILITY PROXY GROUP'S HISTORICAL CAPITALIZATION AND FINANCIAL STATISTICS.

A. Page 1 of Exhibit___(DWD-1), Schedule 3 contains comparative capitalization and financial statistics for the Utility Proxy Group for the years 2016 to 2020.

During the five-year period ending 2020, the historically achieved average earnings rate on book common equity for the group averaged 8.97%, the average common equity ratio based on total capital (including short-term debt) was 47.69% , and the average dividend payout ratio was 64.57%. Total debt to earnings before interest, taxes, depreciation, and amortization for the years 2016 to 2020 ranges between 4.00 and 7.72 times, with an average of 5.61 times. Funds from operations to total debt range from 13.18% to 23.75%, with an average of 17.96%. Given that those capitalization and financial statistics are generally consistent with the Company's, I conclude the Utility Proxy Group is comparable in risk to the Company.

V. CAPITAL STRUCTURE

Q. HOW DOES THE CAPITAL STRUCTURE AFFECT THE RATE OF RETURN?

A. As discussed above, there are two general categories of risk: business risk and financial risk. The capital structure relates to a company's financial risk, which represents the risk that a company may not have adequate cash flows to meet its financial obligations, and is a function of the percentage of debt (or financial leverage) in its capital structure. In that regard, as the

percentage of debt in the capital structure increases, so do the fixed obligations for the repayment of that debt. Consequently, as the degree of financial leverage increases, the risk of financial distress (*i.e.*, financial risk) also increases.[13] In essence, even if two firms face the same business risks, a company with meaningfully higher levels of debt in its capital structure is likely to have a higher cost of both debt and equity. Since the capital structure can affect the subject company's overall level of risk, it is an important consideration in establishing a just and reasonable rate of return.

Q. IS THERE SUPPORT FOR THE PROPOSITION THAT THE CAPITAL STRUCTURE IS A KEY CONSIDERATION IN ESTABLISHING AN APPROPRIATE RATE OF RETURN?

A. Yes. The Supreme Court and various utility commissions have long recognized the role of capital structure in the development of a just and reasonable rate of return for a regulated utility. In particular, a utility's leverage, or debt ratio, has been explicitly recognized as an important element in determining a just and reasonable rate of return:

> Although the determination of whether bonds or stocks should be issued is for management, the matter of debt ratio is not exclusively within its province. Debt ratio substantially affects the manner and cost of obtaining new capital. It is therefore an important factor in the rate of return and must necessarily be considered by and come within the authority of the body charged by law with the duty of fixing a just and reasonable rate of return.[14]

13 *See,* Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006, at 45-46. (Morin).

14 *New England Telephone & Telegraph Co. v. State*, 98 N.H. 211, 97 A.2d 213, (1953) (citing *New England Tel.*

Perhaps ultimate authority for balancing the issues of cost and financial integrity is found in the Supreme Court's statement in *Hope*: "The rate-making process under the Act, i.e., the fixing of 'just and reasonable' rates, involves a balancing of the investor and the consumer interests".[15]

And as the U.S. Court of Appeals, District of Columbia Circuit found in *Communications Satellite Corp. et. al. v. FCC*: "The equity investor's stake is made less secure as the company's debt rises, but the consumer rate-payer's burden is alleviated".[16]

That is, the U.S. Court of Appeals, District of Columbia Circuit found that because there is a relationship between the capital structure and the cost of equity, investor and consumer interests must be balanced. Consequently, the principles of fairness and reasonableness with respect to the allowed rate of return and capital structure are considered at both the federal and state levels.

Q. PLEASE SUMMARIZE THE COMPONENTS OF THE COMPANY'S RECOMMENDED CAPITAL STRUCTURE AND WACC.

A. The Company's proposed test year capital structure includes long-term debt, short-term debt, and common equity. The Company's proposed revenue requirement for the test year reflects a WACC of 7.45%, as shown on Exhibit__(DWD-1), Schedule 1, page 1 and Table 1, above.

& Tel. Co. v. Department of Pub. Util., 327 Mass. 81, 97 N.E. 2d 509, 514 (1951)); *see also Petitions of New England Tel. & Tel. Co.* 116 Vt. 480, 80 A2d 671, 685-86 (1951).

15 *Federal Power Commission v. Hope Natural Gas Co.,* 320 U.S., at 603 (1944).

16 *Communications Satellite Corp. et. al. v. FCC*, 198 U.S. App. D.C. 60, 63-64611 F.2d 883.

Q. DOES THE COMPANY HAVE A SEPARATE CAPITAL STRUCTURE THAT IS RECOGNIZED BY INVESTORS?

A. Yes. The Company is a separate corporate entity that has its own capital structure and issues its own debt with the Securities and Exchange Commission. That being said, the North Dakota jurisdictional operations' capital structure is an allocated portion of the Company's capital structure.

Q. WHY IS IT IMPORTANT THAT THE COMPANY'S RECOMMENDED CAPITAL STRUCTURE BE AUTHORIZED IN THIS PROCEEDING?

A. As a preliminary matter, the Company's recommended capital structure is comparable to its historical capital structure, and is within a reasonable range from the perspective of the Utility Proxy Group companies.[17] The use of an operating subsidiary's capital structure is consistent with the FERC's precedent, under which they use the applicant's capital structure, where possible.[18] In particular, the FERC will use the utility operating company's capital structure if it meets three criteria: (1) it issues its own debt without guarantees; (2) it has its own bond rating; and (3) it has a capital structure within the range of capital structures approved by the commission.[19] The Company meets all of these criteria.

Importantly, in order to provide safe, reliable, and affordable service to its customers, the Company must meet the needs and serve the interests of its various stakeholders, including customers, shareholders, and

17 Exhibit__(DWD-1), Schedule 3.
18 *See, Transcontinental Gas Pipe Line Corp,* 80 FERC ¶ 61,157, 61,657 (1997) (Opinion No. 414).
19 148 FERC ¶ 61,049 Docket No. EL14-12-000, at 190.

bondholders. The interests of these stakeholder groups are aligned when the Company maintains a healthy balance sheet, strong credit ratings, and a supportive regulatory environment, ensuring it has access to capital on reasonable terms in order to make necessary investments.

Safe and reliable service cannot be maintained at a reasonable cost if utilities do not have the financial flexibility and strength to access competitive financing markets on reasonable terms. The authorization of a capital structure that understates the Company's actual common equity will weaken the financial condition of its operations and adversely impact the Company's ability to address expenses and investment, to the detriment of customers and shareholders. Safe and reliable service for customers cannot be sustained over the long term if the interests of shareholders and bondholders are minimized such that the public interest is not optimized.

Consequently, the Company's recommended capital structure should be used to set rates in this proceeding.

Q. WHAT METHODOLOGY DID THE COMPANY USE TO DEVELOP BALANCES FOR THE VARIOUS COMPONENTS OF CAPITAL STRUCTURE?

A. The Company's methodology to develop its balances for the various components of capital structure is as follows:

- Long-term debt balances are based on the average of forecasted month-end balances for the 12 months ending December 2022,

and include forecasted long-term debt issuances and retirements during that period;

- Short-term debt balances are based on the average of forecasted month-end balances for the 12 months ending December 2022; and

- Common equity balances represent the average of forecasted 13 month-end equity balances from December 2021 through December 2022. The common equity balance averages the accounting month-end balances consistent with Generally Accepted Accounting Principles (GAAP) and eliminates the non-regulated investments.

The derivation of the balances of long-term debt, short-term debt, and common equity for the Company's proposed capital structure is presented on Exhibit__(DWD-1), Schedule 2, page 2.

Q. HOW DOES THE COMPANY'S REQUESTED TEST YEAR CAPITAL STRUCTURE COMPARE WITH ITS RECENT CAPITAL STRUCTURES?

A. The requested test year capital structure is highly consistent with NSP's historical capital structures. As shown on Exhibit__(DWD-1), Schedule 2, page 1, the common equity ratios for years 2016 through 2020 range from 52.08% to 52.67%, averaging 52.36%.

Q. HOW DOES NSP'S RECOMMENDED COMMON EQUITY RATIO OF 52.54% COMPARE WITH THE COMMON EQUITY RATIOS MAINTAINED BY THE UTILITY PROXY GROUP?

A. The Company's requested ratemaking common equity ratio of 52.54% is reasonable and consistent with the range of common equity ratios maintained by the Utility Proxy Group. In order to assess the reasonableness of the Company's requested ratemaking common equity ratio, I reviewed the actual common equity ratios maintained by the companies within the Utility Proxy Group.[20] As shown on page 2 of Exhibit___(DWD-1), Schedule 3, common equity ratios of the utilities range from 32.16% to 59.98% for fiscal year 2020. The Company's recommended equity ratio of 52.54% falls within this range and demonstrates both the reasonableness of using it to set rates and the Company's relative financial health. Setting the WACC as requested by the Company will continue to support the long-term financial health of the Company for the benefit of all of its stakeholders, including North Dakota customers.

I also considered *Value Line's* projected capital structures for the Utility Proxy Group for 2023-2025. That analysis shows a range of projected common equity ratios between 39.50% and 60.00%.[21]

In addition to comparing the Company's ratemaking common equity ratio with common equity ratios currently and expected to be maintained by

20 The development of the Utility Proxy Group is described more fully in Section VI.
21 Exhibit__(DWD-1), Schedule 5, at 2-8.

the Utility Proxy Group (*i.e.*, at the holding company level), I also compared the Company's ratemaking common equity ratio with the equity ratios maintained by the operating subsidiaries of the Utility Proxy Group companies. As shown on page 3 of Exhibit___(DWD-1), Schedule 3, common equity ratios of the operating utility subsidiaries of the Utility Proxy Group range from 40.43% to 58.75% for fiscal year 2020.

Q. IS THE COMPANY'S PROPOSED EQUITY RATIO OF 52.54% APPROPRIATE FOR RATEMAKING PURPOSES GIVEN THE RANGE OF THE UTILITY PROXY GROUP?

A. Yes, it is. The Company's proposed equity ratio of 52.54% is appropriate for ratemaking purposes in the current proceeding because it aligns with its historical capital structure and it is well within industry norms.

VI. COST OF LONG- AND SHORT-TERM DEBT

Q. HOW IS THE COMPANY PROPOSING TO SET ITS COST OF DEBT?

A. The Company is proposing to use its expected cost of debt for the test year.

Q. HOW WAS THE PROPOSED COST OF LONG-TERM DEBT DETERMINED?

A. As shown on Exhibit___(DWD-1), Schedule 4, page 1, the overall 4.10% cost of long-term debt for the test year includes the actual and forecasted coupon rate on all bonds expected to be outstanding for each month of

the test year.[22] In addition to the interest expense, the cost of long-term debt also includes actual amortization expense for debt issuance costs, discounts or premiums, losses on reacquired debt, gains and losses from hedging transactions, and the annual amortization of the upfront fees associated with the Company's multi-year credit agreement.

Q. HOW WAS THE COMPANY'S RECOMMENDED TEST YEAR SHORT-TERM DEBT COST CALCULATED?

A. The 1.09% cost of short-term debt in the test year included: (1) 0.31% actual interest expense for commercial paper, and (2) 0.78% actual monthly financing fee associated with the Company's June 2019 "Amended and Restated Credit Agreement" for its participation in the credit facility, which provides the back-up liquidity required for its commercial paper program.

Q. HAVE YOU ANALYZED THE COMPANY'S COST OF LONG-TERM DEBT FOR REASONABLENESS?

A. Yes, I have. To test the reasonableness of the Company's proposed long-term debt cost, I reviewed the yield on equivalent debt at the time of issuance. As shown in Exhibit___(DWD-1), Schedule 4, page 3, I compared the cost of each individual issuance to the Bloomberg Fair Value Curves for A-rated and BBB-rated utility debt at the time of the issuance. The expected cost of long-term debt based on the Bloomberg

22 The 4.10% cost of long-term debt includes forecasted interest rates for the 2021 and 2022 planned issuances. The forecast used for capital structure and cost of debt purposes was the Company's February forecast and precedes NSP's issuance of $825 million on March 30, 2021. As such, the 4.10% cost of long-term debt includes forecasted interest rates for the aforementioned years.

Fair Value Curves for A-rated and BBB-rated utility debt ranges from 4.19% to 4.57%, respectively, indicating that its 4.10% proposed cost of long-term debt is reasonable.

Q. HAVE YOU ANALYZED THE COMPANY'S COST OF SHORT-TERM DEBT FOR REASONABLENESS?

A. To determine the reasonableness of the proposed short-term debt rate, I reviewed the expected cost of short-term debt, based on the one-year Bloomberg Fair Value Curves for A-rated and BBB-rated utility debt in 2020. The cost of one-year A-rated utility debt ranged from 0.26% to 2.39%, with an average of 0.84% and the cost of one-year BBB-rated utility debt ranged from 0.33% to 3.46%, with an average of 1.02%. As such, the proposed cost of short-term debt of 1.09% is reasonable.

Q. GIVEN THE ABOVE, IS THE COMPANY'S OVERALL COST OF DEBT REASONABLE?

A. Yes.

VII. COMMON EQUITY COST RATE MODELS

Q. IS IT IMPORTANT THAT COST OF COMMON EQUITY MODELS BE MARKET-BASED?

A. Yes. As discussed previously, regulated public utilities, like the Company, must compete for equity in capital markets along with all other companies with commensurate risk, including non-utilities. The cost of

common equity is thus determined based on equity market expectations for the returns of those companies. If an individual investor is choosing to invest their capital among companies with comparable risk, they will choose the company providing a higher return over a company providing a lower return.

Q. ARE THE COST OF COMMON EQUITY MODELS YOU USE MARKET-BASED MODELS?

A. Yes. The DCF model is market-based in that market prices are used in developing the dividend yield component of the model. The RPM and CAPM are also market-based in that the bond/issuer ratings and expected bond yields/risk-free rate used in the application of the RPM and CAPM reflect the market's assessment of bond/credit risk. In addition, the use of the Beta coefficient to determine the equity risk premium also reflects the market's assessment of market/systematic risk, as Beta coefficients are derived from regression analyses of market prices. Moreover, market prices are used in the development of the monthly returns and equity risk premiums used in the Predictive Risk Premium Model (PRPM). Selection criteria for the Non-Price Regulated Proxy Group are based on regression analyses of market prices and reflect the market's assessment of total risk.

Q. WHAT ANALYTICAL APPROACHES DID YOU USE TO DETERMINE THE COMPANY'S ROE?

A. As discussed earlier, I have relied on the DCF model, the RPM, and the CAPM, which I apply to the Utility Proxy Group described above. I also

applied these same models to a Non-Price Regulated Proxy Group described later in this section.

I rely on multiple models because reasonable investors use a variety of tools and do not rely exclusively on a single source of information or single model. Moreover, the specific models on which I rely focus on different aspects of return requirements, and provide different insights into investors' views of risk and return. The DCF model, for example, estimates the investor-required return assuming a constant expected dividend yield and growth rate in perpetuity, while Risk Premium-based methods (*i.e.,* the RPM and CAPM approaches) provide the ability to reflect investors' views of risk, future market returns, and the relationship between interest rates and the Cost of Equity. Just as the use of market data for the Utility Proxy Group adds the reliability necessary to inform expert judgment in arriving at a recommended common equity cost rate, the use of multiple generally accepted common equity cost rate models also adds reliability and accuracy when arriving at a recommended common equity cost rate.

A. Discounted Cash Flow Model

Q. PLEASE DESCRIBE THE DCF MODEL GENERALLY.

A. The theory underlying the DCF model is that the present value of an expected future stream of net cash flows during the investment holding period can be determined by discounting those cash flows at the cost of capital, or the investors' capitalization rate. DCF theory indicates that an investor buys a stock for an expected total return rate, which is derived

from the cash flows received from dividends and market price appreciation. Mathematically, the expected dividend yield on market price plus a growth rate equals the capitalization rate; *i.e.*, the total common equity return rate expected by investors, as shown in Equation [1] below:

$$K_e = (D_0 (1+g))/P + g$$

where:
K_e = the required Return on Equity;
D_0 = the annualized Dividend Per Share;
P = the current stock price; and
g = the growth rate.

Q. WHICH VERSION OF THE DCF MODEL DID YOU USE?

A. I used the single-stage constant growth DCF model.

Q. PLEASE DESCRIBE THE DIVIDEND YIELD YOU USED IN APPLYING THE CONSTANT GROWTH DCF MODEL.

A. The unadjusted dividend yields are based on the proxy companies' dividends as of May 28, 2021 divided by the average closing market price for the 60 trading days ended May 28, 2021.[23]

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO THE DIVIDEND YIELD.

A. Because dividends are paid periodically (*e.g.* quarterly), as opposed to continuously (daily), an adjustment must be made to the dividend yield. This is often referred to as the discrete, or the Gordon Periodic, version of the DCF model.

23 *See,* Column 1, page 1 of Exhibit___(DWD-1), Schedule 5.

DCF theory calls for using the full growth rate, or D_1, in calculating the model's dividend yield component. Since the companies in the Utility Proxy Group increase their quarterly dividends at various times during the year, a conservative assumption is to reflect one-half the annual dividend growth rate rather than the full growth rate in the dividend yield component, or $D_{1/2}$. Because the dividend should be representative of the next 12-month period, this adjustment is a conservative approach that does not overstate the dividend yield. Therefore, the actual average dividend yields in Column 1, page 1 of Exhibit___(DWD-1), Schedule 5 have been adjusted upward to reflect one-half the average projected growth rate shown in Column 6.

Q. PLEASE EXPLAIN THE BASIS FOR THE GROWTH RATES YOU APPLY IN YOUR CONSTANT GROWTH DCF MODEL.

A. Investors with more limited resources than institutional investors are likely to rely on widely available financial information services, such as *Value Line*, Zacks, and Yahoo! Finance. Investors realize that analysts have significant insight into the dynamics of the industries and individual companies they analyze, as well as companies' abilities to effectively manage the effects of changing laws and regulations, and ever-changing economic and market conditions. For these reasons, I used analysts' five-year forecasts of EPS growth in my DCF analysis.

Over the long run, there can be no growth in DPS without growth in EPS. Security analysts' earnings expectations have a more significant influence on market prices than dividend expectations. Thus, using projected

earnings growth rates in a DCF analysis provides a better match between investors' market price appreciation expectations and the growth rate component of the DCF.

Q. PLEASE SUMMARIZE THE CONSTANT GROWTH DCF MODEL RESULTS.

A. As shown on page 1 of Exhibit___(DWD-1), Schedule 5, the application of the Constant Growth DCF model to the Utility Proxy Group results in a wide range of indicated ROEs from 8.06% to 11.66%. The mean of those results is 9.57%, the median result is 9.30%, and the average of the mean and median results is 9.44%. In arriving at a conclusion of the indicated common equity cost rate for the Utility Proxy Group implied by the Constant Growth DCF model, I relied on an average of the mean and the median results (*i.e.*, 9.44%) of the DCF. By doing so, I have considered the DCF results for each company without giving undue weight to outliers on either the high or the low side.

B. The Risk Premium Model

Q. PLEASE DESCRIBE THE THEORETICAL BASIS OF THE RPM.

A. The RPM is based on the fundamental financial principle of risk and return; namely, that investors require greater returns for bearing greater risk. The RPM recognizes that common equity capital has greater investment risk than debt capital, as common equity shareholders are behind debt holders in any claim on a company's assets and earnings. As a result, investors require higher returns from common stocks than from bonds to compensate them for bearing the additional risk.

While it is possible to directly observe bond returns and yields, investors' required common equity returns cannot be directly determined or observed. According to RPM theory, one can estimate a common equity risk premium over bonds (either historically or prospectively), and use that premium to derive a cost rate of common equity. The cost of common equity equals the expected cost rate for long-term debt capital, plus a risk premium over that cost rate, to compensate common shareholders for the added risk of being unsecured and last-in-line for any claim on the corporation's assets and earnings upon liquidation.

Q. PLEASE EXPLAIN HOW YOU DERIVED YOUR INDICATED COST OF COMMON EQUITY BASED ON THE RPM.

A. To derive my indicated cost of common equity under the RPM, I used two risk premium methods. The first method was the PRPM and the second method was a risk premium model using a total market approach. The PRPM estimates the risk-return relationship directly, while the total market approach indirectly derives a risk premium by using known metrics as a proxy for risk.

1. Predictive Risk Premium Model

Q. PLEASE EXPLAIN THE PRPM.

A. The PRPM, published in the *Journal of Regulatory Economics,*[24] was developed from the work of Robert F. Engle, who shared the Nobel Prize in

24 Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. *A New Approach for Estimating the Equity Risk Premium for Public Utilities*, The Journal of Regulatory Economics (December 2011), 40:261-278.

Economics in 2003 "for methods of analyzing economic time series with time-varying volatility" or ARCH.[25] Engle found that volatility changes over time and is related from one period to the next, especially in financial markets. Engle discovered that volatility of prices and returns clusters over time and is therefore highly predictable and can be used to predict future levels of risk and risk premiums. That is, historical volatility can be used to predict future volatility, which then can be translated to a predicted equity risk premium.

The PRPM estimates the risk-return relationship directly, as the predicted equity risk premium is generated by predicting volatility or risk. The PRPM is not based on an estimate of investor behavior, but rather on an evaluation of the results of that behavior (*i.e.*, the variance of historical equity risk premiums).

The inputs to the model are the historical returns on the common shares of each Utility Proxy Group company minus the historical monthly yield on long-term U.S. Treasury securities through May 2021. Using a generalized form of ARCH, known as GARCH, I calculated each Utility Proxy Group company's projected equity risk premium using Eviews© statistical software. When the GARCH model is applied to the historical return data, it produces a predicted GARCH variance series[26] and a GARCH coefficient.[27] Multiplying the predicted monthly variance by the

25 Autoregressive conditional heteroscedasticity; *See also,* www.nobelprize.org.
26 Illustrated on Columns 1 and 2, page 2 of Exhibit___(DWD-1), Schedule 6.
27 Illustrated on Column 4, page 2 of Exhibit___(DWD-1), Schedule 6.

GARCH coefficient and then annualizing it[28] produces the predicted annual equity risk premium. I then added the forecasted 30-year U.S. Treasury bond yield of 2.88%[29] to each company's PRPM-derived equity risk premium to arrive at an indicated cost of common equity. The 30-year U.S. Treasury bond yield is a consensus forecast derived from *Blue Chip Financial Services (Blue Chip).*[30] The mean PRPM indicated common equity cost rate for the Utility Proxy Group is 11.67%, the median is 11.19%, and the average of the two is 11.43%. Consistent with my reliance on the average of the median and mean results of the DCF models, I relied on the average of the mean and median results of the Utility Proxy Group PRPM to calculate a cost of common equity rate of 11.43%.

Q. PLEASE DESCRIBE YOUR SELECTION OF A RISK-FREE RATE OF RETURN.

A. As shown in Exhibit___(DWD-1), Schedules 6 and 7, the risk-free rate adopted for applications of the RPM and CAPM is 2.88%. This risk-free rate is based on the average of the *Blue Chip* consensus forecast of the expected yields on 30-year U.S. Treasury bonds for the six quarters ending with the third calendar quarter of 2022, and long-term projections for the years 2023 to 2027 and 2028 to 2033.

28 Annualized Return = (1 + Monthly Return) ^12 - 1
29 *See,* Column 6, page 2 of Exhibit___(DWD-1), Schedule 6.
30 *Blue Chip Financial Forecasts (Blue Chip)*, June 1, 2021 at 2, 14.

Q. WHY DO YOU USE THE PROJECTED 30-YEAR TREASURY YIELD IN YOUR ANALYSES?

A. The yield on long-term U.S. Treasury bonds is almost risk-free and its term is consistent with the long-term cost of capital to public utilities measured by the yields on Moody's A-rated public utility bonds; the long-term investment horizon inherent in utilities' common stocks; and the long-term life of the jurisdictional rate base to which the allowed fair rate of return (*i.e.*, cost of capital) will be applied. In contrast, short-term U.S. Treasury yields are more volatile and largely a function of Federal Reserve monetary policy.

More specifically, the term of the risk-free rate used for cost of capital purposes should match the life (or duration) of the underlying investment (*i.e.,* perpetuity). As noted by Morningstar:

> The traditional thinking regarding the time horizon of the chosen Treasury security is that it should match the time horizon of whatever is being valued. When valuing a business that is being treated as a going concern, the appropriate Treasury yield should be that of a long-term Treasury bond. Note that the horizon is a function of the investment, not the investor. If an investor plans to hold stock in a company for only five years, the yield on a five-year Treasury note would not be appropriate since the company will continue to exist beyond those five years.[31]

Morin also confirms this when he states:

> [b]ecause common stock is a long-term investment and because the cash flows to investors in the form of dividends last indefinitely, the yield on very long-term government

31 Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 44.

> bonds, namely, the yield on 30-year Treasury bonds, is the best measure of the risk-free rate for use in the CAPM (footnote omitted)… The expected common stock return is based on long-term cash flows, regardless of an individual's holding time period.[32]

Pratt and Grabowski recommend a similar approach to selecting the risk-free rate: "[i]n theory, when determining the risk-free rate and the matching ERP you should be matching the risk-free security and the ERP with the period in which the investment cash flows are expected."[33] Similarly, a 2004 paper titled *Applying The Capital Asset Pricing Model* by Robert Harris reviews current practices for application of the CAPM and, when summarizing best current practices, concludes "[t]he risk-free rate should match the tenor of the cash flows being valued."[34]

As a practical matter, equity securities represent a perpetual claim on cash flows; 30-year Treasury bonds are the longest-maturity securities available to approximate that perpetual claim. Thus, the use of a 30-year Treasury bond yield is a more appropriate risk-free rate as it more accurately reflects the life of the assets it finances.

2. Total Market Approach Risk Premium Model

Q. PLEASE EXPLAIN THE TOTAL MARKET APPROACH RPM.

A. The total market approach RPM adds a prospective public utility bond yield to an average of: 1) an equity risk premium that is derived from a

32 Morin, at 151.

33 Shannon Pratt and Roger Grabowski, Cost of Capital: Applications and Examples, 3rd Ed. (Hoboken, NJ: John Wiley & Sons, Inc., 2008), at 92. "ERP" is the Equity Risk Premium.

34 Paper cited with permission of author.

Beta-adjusted total market equity risk premium, 2) an equity risk premium based on the S&P Utilities Index, and 3) an equity risk premium based on authorized ROEs for natural gas utilities.

Q. PLEASE EXPLAIN HOW YOU DETERMINED THE EXPECTED BOND YIELD, APPLICABLE TO THE UTILITY PROXY GROUP.

A. The first step in the total market approach RPM analysis is to determine the expected bond yield. Because both ratemaking and the cost of capital, including the common equity cost rate, are prospective in nature, a prospective yield on similarly-rated long-term debt is essential. Because I am unaware of any publication that provides forecasted public utility bond yields, I relied on a consensus forecast of about 50 economists of the expected yield on Aaa-rated corporate bonds for the six calendar quarters ending with the third calendar quarter of 2022, and *Blue Chip's* long-term projections for 2023 to 2027, and 2028 to 2032. As shown on line 1, page 3 of Exhibit___(DWD-1), Schedule 6, the average expected yield on Moody's Aaa-rated corporate bonds is 3.56%.

Because that 3.56% estimate represents a corporate bond yield and not a utility specific bond yield, I adjusted the expected Aaa-rated corporate bond yield to an equivalent A2-rated public utility bond yield. That resulted in an upward adjustment of 0.39%, which represents a recent spread between Aaa-rated corporate bonds and A2-rated public utility bonds.[35] Adding that recent 0.39% spread to the expected Aaa-rated

35 As shown on line 2 and explained in note 2, page 3 of Exhibit___(DWD-1), Schedule 6.

corporate bond yield of 3.56% results in an expected A2-rated public utility bond yield of 3.95%.

I then reviewed the average credit rating for the Utility Proxy Group from Moody's to determine if an adjustment to the estimated A2-rated public utility bond was necessary. Since the Utility Proxy Group's average Moody's long-term issuer rating is A2/A3, another adjustment to the expected A2-rated public utility bond is needed to reflect the difference in bond ratings. An upward adjustment of 0.04%, which represents one-sixth of a recent spread between A2-rated and Baa2-rated public utility bond yields, is necessary to make the A2 prospective bond yield applicable to an A2/A3-rated public utility bond.[36] Adding the 0.04% to the 3.95% prospective A2-rated public utility bond yield results in a 3.99% expected bond yield applicable to the Utility Proxy Group.

36 As shown on line 4 and explained in note 3, page 3 of Exhibit___(DWD-1), Schedule 6. Moody's does not provide public utility bond yields for A3-rated bonds. As such, it was necessary to estimate the difference between A2-rated and A2/A3-rated public utility bonds. Because there are three steps between Baa2 and A2 (Baa2 to Baa1, Baa1 to A3, and A3 to A2) I assumed an adjustment of one-sixth of the difference between the A2-rated and Baa2-rated public utility bond yield was appropriate.

Table 4

Summary of the Calculation of the Utility Proxy Group

Projected Bond Yield[37]

Prospective Yield on Moody's Aaa-Rated Corporate Bonds (*Blue Chip)*	3.56%
Adjustment to Reflect Yield Spread Between Moody's Aaa-Rated Corporate Bonds and Moody's A2-Rated Utility Bonds	0.39%
Adjustment to Reflect the Utility Proxy Group's Average Moody's Bond Rating of A2/A3	0.04%
Prospective Bond Yield Applicable to the Utility Proxy Group	3.99%

To develop the total market approach RPM estimate of the appropriate return on equity, this prospective bond yield is then added to the average of the three different equity risk premiums, which I now discuss, in turn.

a. Beta Coefficient Derived Equity Risk Premium

Q. PLEASE EXPLAIN HOW THE BETA-DERIVED EQUITY RISK PREMIUM IS DETERMINED.

A. The components of the Beta-derived risk premium model are: 1) an expected market equity risk premium over corporate bonds, and 2) the Beta coefficient. The derivation of the Beta-derived equity risk premium that I applied to the Utility Proxy Group is shown on lines 1 through 9, page 8 of Exhibit___(DWD-1), Schedule 6. The total Beta-derived equity

[37] As shown on page 3 of Exhibit___(DWD-1), Schedule 6.

risk premium I applied is based on an average of three historical market data-based equity risk premiums, two *Value Line*-based equity risk premiums and a Bloomberg-based equity risk premium. Each of these is described below.

Q. HOW DID YOU DERIVE A MARKET EQUITY RISK PREMIUM BASED ON LONG-TERM HISTORICAL DATA?

A. To derive a historical market equity risk premium, I used the most recent holding period returns for the large company common stocks from the Stocks, Bonds, Bills, and Inflation (SBBI) Yearbook 2021 (SBBI - 2021)[38] less the average historical yield on Moody's Aaa/Aa-rated corporate bonds for the period 1928 to 2020. Using holding period returns over a very long time is appropriate because it is consistent with the long-term investment horizon presumed by investing in a going concern, *i.e.*, a company expected to operate in perpetuity.

SBBI's long-term arithmetic mean monthly total return rate on large company common stocks was 11.94% and the long-term arithmetic mean monthly yield on Moody's Aaa/Aa-rated corporate bonds was 6.02%.[39] As shown on line 1, page 8 of Exhibit___(DWD-1), Schedule 6, subtracting the mean monthly bond yield from the total return on large company stocks results in a long-term historical equity risk premium of 5.92%.

38 *See,* SBBI-2021 Appendix A Tables: Morningstar Stocks, Bonds, Bills, & Inflation 1926-2020.
39 As explained in note 1, page 9 of Exhibit___(DWD-1), Schedule 6.

I used the arithmetic mean monthly total return rates for the large company stocks and yields (income returns) for the Moody's Aaa/Aa corporate bonds, because they are appropriate for the purpose of estimating the cost of capital as noted in SBBI-2021.[40] Using the arithmetic mean return rates and yields is appropriate because historical total returns and equity risk premiums provide insight into the variance and standard deviation of returns needed by investors in estimating future risk when making a current investment. If investors relied on the geometric mean of historical equity risk premiums, they would have no insight into the potential variance of future returns, because the geometric mean relates the change over many periods to a constant rate of change, thereby obviating the year-to-year fluctuations, or variance, which is critical to risk analysis.

Q. PLEASE EXPLAIN THE DERIVATION OF THE REGRESSION-BASED MARKET EQUITY RISK PREMIUM.

A. To derive the regression-based market equity risk premium of 8.69% shown on line 2, page 8 of Exhibit___(DWD-1), Schedule 6, I used the same monthly annualized total returns on large company common stocks relative to the monthly annualized yields on Moody's Aaa/Aa-rated corporate bonds as mentioned above. I modeled the relationship between interest rates and the market equity risk premium using the observed monthly market equity risk premium as the dependent variable, and the monthly yield on Moody's Aaa/Aa-rated corporate bonds as the

40 *See,* SBBI-2021, at page 10-22, 10-23.

independent variable. I then used a linear Ordinary Least Squares (OLS) regression, in which the market equity risk premium is expressed as a function of the Moody's Aaa/Aa-rated corporate bond yield:

$$RP = \alpha + \beta\ (R_{Aaa/Aa})$$

Q. PLEASE EXPLAIN THE DERIVATION OF THE PRPM EQUITY RISK PREMIUM.

A. I used the same PRPM approach described above to the PRPM equity risk premium. The inputs to the model are the historical monthly returns on large company common stocks minus the monthly yields on Moody's Aaa/Aa-rated corporate bonds during the period from January 1928 through May 2021.[41] Using the previously discussed generalized form of ARCH, known as GARCH, the projected equity risk premium is determined using Eviews© statistical software. The resulting PRPM predicted a market equity risk premium of 9.02%.[42]

Q. PLEASE EXPLAIN THE DERIVATION OF A PROJECTED EQUITY RISK PREMIUM BASED ON *VALUE LINE* DATA FOR YOUR RPM ANALYSIS.

A. As noted above, because both ratemaking and the cost of capital are prospective, a prospective market equity risk premium is needed. The derivation of the forecasted or prospective market equity risk premium can be found in note 4, page 9 of Exhibit___(DWD-1), Schedule 6. Consistent with my calculation of the dividend yield component in my

41 Data from January 1926 to December 2020 is from SBBI - 2021. Data from January 2021 to May 2021 is from Bloomberg.

42 Shown on line 3, page 8 of Exhibit___(DWD-1), Schedule 6.

DCF analysis, this prospective market equity risk premium is derived from an average of the three- to five-year median market price appreciation potential by *Value Line* for the 13 weeks ended May 28, 2021, plus an average of the median estimated dividend yield for the common stocks of the 1,700 firms covered in *Value Line* (Standard Edition).[43]

The average median expected price appreciation is 28%, which translates to a 6.37% annual appreciation, and, when added to the average of *Value Line's* median expected dividend yields of 1.79%, equates to a forecasted annual total return rate on the market of 8.16%. The forecasted Moody's Aaa-rated corporate bond yield of 3.56% is deducted from the total market return of 8.16%, resulting in an equity risk premium of 4.60%, as shown on line 4, page 8 of Exhibit___(DWD-1), Schedule 6.

Q. PLEASE EXPLAIN THE DERIVATION OF AN EQUITY RISK PREMIUM BASED ON THE S&P 500 COMPANIES.

A. Using data from *Value Line*, I calculated an expected total return on the S&P 500 companies using expected dividend yields and long-term growth estimates as a proxy for capital appreciation. The expected total return for the S&P 500 is 14.32%. Subtracting the prospective yield on Moody's Aaa-rated corporate bonds of 3.56% results in a 10.76% projected equity risk premium.

43 As explained in detail in note 1, page 2 of Exhibit___(DWD-1), Schedule 7.

Q. PLEASE EXPLAIN THE DERIVATION OF AN EQUITY RISK PREMIUM BASED ON BLOOMBERG DATA.

A. Using data from Bloomberg, I calculated an expected total return on the S&P 500 using expected dividend yields and long-term growth estimates as a proxy for capital appreciation, identical to the method described above. The expected total return for the S&P 500 is 16.34%. Subtracting the prospective yield on Moody's Aaa-rated corporate bonds of 3.56% results in a 12.78% projected equity risk premium.

Q. WHAT IS YOUR CONCLUSION OF A BETA-DERIVED EQUITY RISK PREMIUM FOR USE IN YOUR RPM ANALYSIS?

A. I gave equal weight to all six equity risk premiums based on each source - historical, *Value Line*, and Bloomberg - in arriving at an 8.63% equity risk premium.

Table 5

Summary of the Calculation of the Equity Risk Premium

Using Total Market Returns[44]

Historical Spread Between Total Returns of Large Stocks and Aaa and Aa-Rated Corporate Bond Yields (1928 – 2020)	5.92%
Regression Analysis on Historical Data	8.69%
PRPM Analysis on Historical Data	9.02%
Prospective Equity Risk Premium using Total Market Returns from *Value Line* Summary & Index less Projected Aaa Corporate Bond Yields	4.60%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from *Value Line* for the S&P 500 less Projected Aaa Corporate Bond Yields	10.76%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from Bloomberg Professional Services for the S&P 500 less Projected Aaa Corporate Bond Yields	12.78%
Average	8.63%

After calculating the average market equity risk premium of 8.63%, I adjusted it by the Beta coefficient to account for the risk of the Utility Proxy Group. As discussed below, the Beta coefficient is a meaningful measure of prospective relative risk to the market as a whole, and is a logical way to allocate a company's, or proxy group's, share of the market's total equity risk premium relative to corporate bond yields. As shown on page 1 of Exhibit___(DWD-1), Schedule 6, the average of the mean and median Beta coefficient for the Utility Proxy Group is 0.93. Multiplying

44 As shown on page 8 of Exhibit___(DWD-1), Schedule 6.

the 0.93 average Beta coefficient by the market equity risk premium of 8.63% results in a Beta-adjusted equity risk premium for the Utility Proxy Group of 8.03%.

b. S&P Utility Index Derived Equity Risk Premium

Q. HOW DID YOU DERIVE THE EQUITY RISK PREMIUM BASED ON THE S&P UTILITY INDEX AND MOODY'S A-RATED PUBLIC UTILITY BONDS?

A. I estimated three equity risk premiums based on S&P Utility Index holding period returns, and two equity risk premiums based on the expected returns of the S&P Utilities Index, using *Value Line* and Bloomberg data, respectively. Turning first to the S&P Utility Index holding period returns, I derived a long-term monthly arithmetic mean equity risk premium between the S&P Utility Index total returns of 10.65% and monthly Moody's A-rated public utility bond yields of 6.49% from 1928 to 2020 to arrive at an equity risk premium of 4.16%.[45] I then used the same historical data to derive an equity risk premium of 6.37% based on a regression of the monthly equity risk premiums. The final S&P Utility Index holding period equity risk premium involved applying the PRPM using the historical monthly equity risk premiums from January 1928 to May 2021 to arrive at a PRPM-derived equity risk premium of 5.41% for the S&P Utility Index.

I then derived expected total returns on the S&P Utilities Index of 11.40% and 9.77% using data from *Value Line* and Bloomberg, respectively, and

45 As shown on line 1, page 12 of Exhibit___(DWD-1), Schedule 6.

subtracted the prospective Moody's A2-rated public utility bond yield of 3.95%[46], which resulted in equity risk premiums of 7.45% and 5.82%, respectively. As with the market equity risk premiums, I averaged each risk premium based on each source (*i.e.*, historical, *Value Line*, and Bloomberg) to arrive at my utility-specific equity risk premium of 5.84%.

Table 6

Summary of the Calculation of the Equity Risk Premium

Using S&P Utility Index Holding Returns[47]

Historical Spread Between Total Returns of the S&P Utilities Index and A2-Rated Utility Bond Yields (1928 – 2020)	4.16%
Regression Analysis on Historical Data	6.37%
PRPM Analysis on Historical Data	5.41%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from *Value Line* for the S&P Utilities Index Less Projected A2 Utility Bond Yields	7.45%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from Bloomberg Professional Services for the S&P Utilities Index Less Projected A2 Utility Bond Yields	5.82%
Average	5.84%

46 Derived on line 3, page 3 of Exhibit___(DWD-1), Schedule 6.

47 As shown on page 12 of Exhibit___(DWD-1), Schedule 6.

c. Authorized Return Derived Equity Risk Premium

Q. HOW DO YOU DERIVE AN EQUITY RISK PREMIUM OF 5.64% BASED ON AUTHORIZED ROEs FOR NATURAL GAS UTILITIES?

A. The equity risk premium of 5.64% shown on line 3, page 7 of Exhibit___(DWD-1), Schedule 6 is the result of a regression analysis based on regulatory awarded ROEs related to the yields on Moody's A-rated public utility bonds. That analysis is shown on page 13 of Exhibit___(DWD-1), Schedule 6. Page 13 of Exhibit___(DWD-1), Schedule 6 contains the graphical results of a regression analysis of 800 rate cases for natural gas utilities which were fully litigated during the period from January 1, 1980 through May 28, 2021. It shows the implicit equity risk premium relative to the yields on A2-rated public utility bonds immediately prior to the issuance of each regulatory decision. That is, the analysis considers the relationship between authorized returns and prevailing public utility bond yields at the time of the decision.

It is readily discernible that there is an inverse relationship between the yield on A2-rated public utility bonds and equity risk premiums. In other words, as interest rates decline, the equity risk premium rises and vice versa, a result consistent with financial literature on the subject.[48] I used the regression results to estimate the equity risk premium applicable to the projected yield on Moody's A2-rated public utility bonds. Given the expected A2-rated utility bond yield of 3.95%, it can be calculated that the

48 *See*, *e.g.*, Robert S. Harris and Felicia C. Marston, *The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts*, Journal of Applied Finance, Vol. 11, No. 1, 2001, at 11-12; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985, at 33-45.

indicated equity risk premium applicable to that bond yield is 5.64%, which is shown on line 3, page 7 of Exhibit___(DWD-1), Schedule 6.

Q. WHAT IS YOUR CONCLUSION OF AN EQUITY RISK PREMIUM FOR USE IN YOUR TOTAL MARKET APPROACH RPM ANALYSIS?

A. The equity risk premium I apply to the Utility Proxy Group is 6.50%, which is the average of the Beta-adjusted equity risk premium for the Utility Proxy Group, the S&P Utilities Index, and the authorized return utility equity risk premiums of 8.03%, 5.84%, and 5.64%, respectively.[49]

Q. WHAT IS THE INDICATED RPM COMMON EQUITY COST RATE BASED ON THE TOTAL MARKET APPROACH?

A. As shown on line 7, page 3 of Exhibit___(DWD-1), Schedule 6 and shown on Table 7, below, I calculated a common equity cost rate of 10.49% for the Utility Proxy Group based on the total market approach RPM.

Table 7

Summary of the Total Market Return Risk Premium Model[50]

Prospective Moody's A3-Rated Utility Bond Applicable to the Utility Proxy Group	3.99%
Prospective Equity Risk Premium	6.50%
Indicated Cost of Common Equity	10.49%

49 As shown on page 7 of Exhibit___(DWD-1), Schedule 6.

50 As shown on page 3 of Exhibit___(DWD-1), Schedule 6.

Q. WHAT ARE THE RESULTS OF YOUR APPLICATION OF THE PRPM AND THE TOTAL MARKET APPROACH RPM?

A. As shown on page 1 of Exhibit___(DWD-1), Schedule 6, the indicated RPM-derived common equity cost rate is 10.96%, which gives equal weight to the PRPM (11.43%) and the adjusted-market approach results (10.49%).

C. The Capital Asset Pricing Model

Q. PLEASE EXPLAIN THE THEORETICAL BASIS OF THE CAPM.

A. CAPM theory defines risk as the co-variability of a security's returns with the market's returns as measured by the Beta coefficient (β). A Beta coefficient less than 1.0 indicates lower variability than the market as a whole, while a Beta coefficient greater than 1.0 indicates greater variability than the market.

The CAPM assumes that all non-market or unsystematic risk can be eliminated through diversification. The risk that cannot be eliminated through diversification is called market, or systematic, risk. In addition, the CAPM presumes that investors only require compensation for systematic risk, which is the result of macroeconomic and other events that affect the returns on all assets. The model is applied by adding a risk-free rate of return to a market risk premium, which is adjusted proportionately to reflect the systematic risk of the individual security relative to the total market as measured by the Beta coefficient. The traditional CAPM model is expressed as:

		R_s	=	$R_f + \beta (R_m - R_f)$
Where:		R_s	=	Return rate on the common stock
		R_f	=	Risk-free rate of return
		R_m	=	Return rate on the market as a whole
		β	=	Adjusted Beta coefficient (volatility of the security relative to the market as a whole)

Numerous tests of the traditional CAPM have measured the extent to which security returns and Beta coefficients are related as predicted by the CAPM, confirming its validity. The empirical CAPM (ECAPM) reflects the reality that while the results of these tests support the notion that the Beta coefficient is related to security returns, the empirical Security Market Line (SML) described by the CAPM formula is not as steeply sloped as the predicted SML.[51]

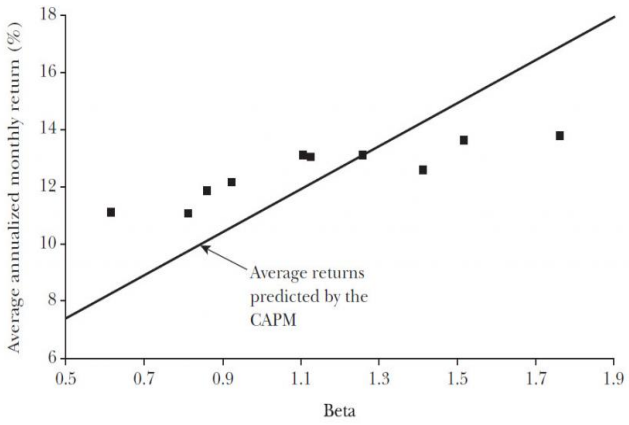
In their work on the CAPM, Fama and French clearly state regarding Figure 2, below, that "[t]he returns on the low beta portfolios are too high, and the returns on the high beta portfolios are too low."[52]

51 Morin, at 175.

52 Eugene F. Fama and Kenneth R. French, *The Capital Asset Pricing Model: Theory and Evidence*, Journal of Economic Perspectives, Vol. 18, No. 3, Summer 2004 at 33 (Fama & French).

Figure 2 http://pubs.aeaweb.org/doi/pdfplus/10.1257/0895330042162430

Average Annualized Monthly Return versus Beta for Value Weight Portfolios Formed on Prior Beta, 1928–2003



In addition, Morin observes that while the results of these tests support the notion that Beta is related to security returns, the empirical SML described by the CAPM formula is not as steeply sloped as the predicted SML. Morin states:

> With few exceptions, the empirical studies agree that … low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted.[53]
>
> * * *
>
> Therefore, the empirical evidence suggests that the expected return on a security is related to its risk by the following approximation:
>
> $$K = R_F + x\,(R_M - R_F) + (1-x)\ \beta(R_M - R_F)$$
>
> where x is a fraction to be determined empirically. The value of x that best explains the observed relationship [is] Return

53 Morin, at 175.

= 0.0829 + 0.0520 β is between 0.25 and 0.30. If x = 0.25, the equation becomes:

$$K = R_F + 0.25(R_M - R_F) + 0.75\ \beta(R_M - R_F)$$ [54]

Fama and French provide similar support for the ECAPM when they state:

> The early tests firmly reject the Sharpe-Lintner version of the CAPM. There is a positive relation between beta and average return, but it is too 'flat.'… The regressions consistently find that the intercept is greater than the average risk-free rate… and the coefficient on beta is less than the average excess market return… This is true in the early tests… as well as in more recent cross-section regressions tests, like Fama and French (1992).[55]

Finally, Fama and French further note:

> Confirming earlier evidence, the relation between beta and average return for the ten portfolios is much flatter than the Sharpe-Linter CAPM predicts. The returns on low beta portfolios are too high, and the returns on the high beta portfolios are too low. For example, the predicted return on the portfolio with the lowest beta is 8.3 percent per year; the actual return as 11.1 percent. The predicted return on the portfolio with the t beta is 16.8 percent per year; the actual is 13.7 percent.[56]

Clearly, the justification from Morin, Fama, and French, along with their reviews of other academic research on the CAPM, validate the use of the ECAPM. In view of theory and practical research, I have applied both

54 *Ibid.*, at 190.
55 Fama & French, at 32.
56 *Ibid.,* at 33.

the traditional CAPM and the ECAPM to the companies in the Utility Proxy Group and averaged the results.

Q. WHAT BETA COEFFICIENTS DID YOU USE IN YOUR CAPM ANALYSIS?

A. For the Beta coefficients in my CAPM analysis, I considered two sources: *Value Line* and Bloomberg Professional Services. While both of those services adjust their calculated (or "raw") Beta coefficients to reflect the tendency of the Beta coefficient to regress to the market mean of 1.00, *Value Line* calculates the Beta coefficient over a five-year period, while Bloomberg calculates it over a two-year period.

Q. PLEASE DESCRIBE YOUR SELECTION OF A RISK-FREE RATE OF RETURN.

A. As discussed previously, the risk-free rate adopted for both applications of the CAPM is 2.88%. This risk-free rate is based on the average of the *Blue Chip* consensus forecast of the expected yields on 30-year U.S. Treasury bonds for the six quarters ending with the third calendar quarter of 2022, and long-term projections for the years 2023 to 2027 and 2028 to 2033.

Q. PLEASE EXPLAIN THE ESTIMATION OF THE EXPECTED RISK PREMIUM FOR THE MARKET USED IN YOUR CAPM ANALYSES.

A. The basis of the market risk premium is explained in detail in note 1 on Exhibit___(DWD-1), Schedule 7. As discussed above, the market risk premium is derived from an average of three historical data-based market risk premiums, two *Value Line* data-based market risk premiums, and one Bloomberg data-based market risk premium.

The long-term income return on U.S. Government securities of 5.05% was deducted from the SBBI – 2021 monthly historical total market return of 12.20%, which results in an historical market equity risk premium of 7.15%.[57] I applied a linear OLS regression to the monthly annualized historical returns on the S&P 500 relative to historical yields on long-term U.S. Government securities from SBBI - 2021. That regression analysis yielded a market equity risk premium of 9.39%. The PRPM market equity risk premium is 10.04%, and is derived using the PRPM relative to the yields on long-term U.S. Treasury securities from January 1926 through May 2021.

The *Value Line*-derived forecasted total market equity risk premium is derived by deducting the forecasted risk-free rate of 2.88%, discussed above, from the *Value Line* projected total annual market return of 8.16%, resulting in a forecasted total market equity risk premium of 5.28%. The S&P 500 projected market equity risk premium using *Value Line* data is derived by subtracting the projected risk-free rate of 2.88% from the projected total return of the S&P 500 of 14.32%. The resulting market equity risk premium is 11.44%.

The S&P 500 projected market equity risk premium using Bloomberg data is derived by subtracting the projected risk-free rate of 2.88% from the projected total return of the S&P 500 of 16.34%. The resulting market

57 SBBI - 2020, at Appendix A-1 (1) through A-1 (3) and Appendix A-7 (19) through A-7 (21).

equity risk premium is 13.46%. These six measures, when averaged, result in an average total market equity risk premium of 9.46%.

Table 8

Summary of the Calculation of the

Market Risk Premium for Use in the CAPM[58]

Historical Spread Between Total Returns of Large Stocks and Long-Term Government Bond Yields (1926 – 2019)	7.15%
Regression Analysis on Historical Data	9.39%
PRPM Analysis on Historical Data	10.04%
Prospective Equity Risk Premium using Total Market Returns from *Value Line* Summary & Index less Projected 30-Year Treasury Bond Yields	5.28%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from *Value Line* for the S&P 500 less Projected 30-Year Treasury Bond Yields	11.44%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from Bloomberg Professional Services for the S&P 500 less Projected 30-Year Treasury Bond Yields	13.46%
Average	9.46%

Q. WHAT ARE THE RESULTS OF YOUR APPLICATION OF THE TRADITIONAL AND EMPIRICAL CAPM TO THE UTILITY PROXY GROUP?

A. As shown on page 1 of Exhibit___(DWD-1), Schedule 7, the mean result of my CAPM/ECAPM analyses is 11.81%, the median is 11.68%, and the average of the two is 11.75%. Consistent with my reliance on the average

58 As shown on page 2 of Exhibit___(DWD-1), Schedule 7.

of mean and median DCF results discussed above, the indicated common equity cost rate using the CAPM/ECAPM is 11.75%.

D. Common Equity Cost Rates for a Proxy Group of Domestic, Non-Price Regulated Companies Based on the DCF, RPM, and CAPM

Q. WHY DO YOU ALSO CONSIDER A PROXY GROUP OF DOMESTIC, NON-PRICE REGULATED COMPANIES?

A. Although I am not an attorney, my interpretation of the *Hope* and *Bluefield* cases is that they did not specify that comparable risk companies had to be utilities. Since the purpose of rate regulation is to be a substitute for marketplace competition, non-price regulated firms operating in the competitive marketplace make an excellent proxy if they are comparable in total risk to the Utility Proxy Group being used to estimate the cost of common equity. The selection of such domestic, non-price regulated competitive firms theoretically and empirically results in a proxy group which is comparable in total risk to the Utility Proxy Group, since all of these companies compete for capital in the exact same markets.

Q. HOW DID YOU SELECT NON-PRICE REGULATED COMPANIES THAT ARE COMPARABLE IN TOTAL RISK TO THE UTILITY PROXY GROUP?

A. In order to select a proxy group of domestic, non-price regulated companies similar in total risk to the Utility Proxy Group, I relied on the Beta coefficients and related statistics derived from *Value Line* regression analyses of weekly market prices over the most recent 260 weeks (*i.e.*, five

years). These selection criteria resulted in a proxy group of 48 domestic, non-price regulated firms comparable in total risk to the Utility Proxy Group. Total risk is the sum of non-diversifiable market risk and diversifiable company-specific risks. The criteria used in selecting the domestic, non-price regulated firms was:

(i) They must be covered by *Value Line* (Standard Edition);

(ii) They must be domestic, non-price regulated companies, *i.e.*, not utilities;

(iii) Their Beta coefficients must lie within plus or minus two standard deviations of the average unadjusted Beta coefficients of the Utility Proxy Group; and

(iv) The residual standard errors of the *Value Line* regressions which gave rise to the unadjusted Beta coefficients must lie within plus or minus two standard deviations of the average residual standard error of the Utility Proxy Group.

Beta coefficients measure market, or systematic, risk, which is not diversifiable. The residual standard errors of the regressions measure each firm's company-specific, diversifiable risk. Companies that have similar Beta coefficients and similar residual standard errors resulting from the same regression analyses have similar total investment risk.

Q. HAVE YOU PREPARED A SCHEDULE WHICH SHOWS THE DATA FROM WHICH YOU SELECTED THE 48 DOMESTIC, NON-PRICE REGULATED COMPANIES THAT ARE COMPARABLE IN TOTAL RISK TO THE UTILITY PROXY GROUP?

A. Yes, the basis of my selection and both proxy groups' regression statistics are shown in Exhibit___(DWD-1), Schedule 8.

Q. DID YOU CALCULATE COMMON EQUITY COST RATES USING THE DCF MODEL, RPM, AND CAPM FOR THE NON-PRICE REGULATED PROXY GROUP?

A. Yes. Because the DCF model, RPM, and CAPM have been applied in an identical manner as described above, I will not repeat the details of the rationale and application of each model. One exception is in the application of the RPM, where I did not use public utility-specific equity risk premiums, nor did I apply the PRPM to the individual non-price regulated companies.

Page 2 of Exhibit___(DWD-1), Schedule 9 derives the Constant Growth DCF model common equity cost rate. As shown, the indicated common equity cost rate is 12.83%.

Pages 3 through 5 of Exhibit___(DWD-1), Schedule 9 contain the data and calculations that support the 12.49% RPM common equity cost rate. As shown on line 1, page 3 of Exhibit___(DWD-1), Schedule 9, the consensus prospective yield on Moody's Baa-rated corporate bonds for

the six quarters ending in the third quarter of 2022, and for the years 2023 to 2027 and 2028 to 2033, is 4.46%.[59]

When the Beta-adjusted risk premium of 8.03%[60] relative to the Non-Price Regulated Proxy Group is added to the prospective Baa2-rated corporate bond yield of 4.46%, the indicated RPM common equity cost rate is 12.49%.

Page 6 of Exhibit___(DWD-1), Schedule 9 contains the inputs and calculations that support my indicated CAPM/ECAPM common equity cost rate of 11.69%.

Q. HOW IS THE COST RATE OF COMMON EQUITY BASED ON THE NON-PRICE REGULATED PROXY GROUP COMPARABLE IN TOTAL RISK TO THE UTILITY PROXY GROUP?

A. As shown on page 1 of Exhibit___(DWD-1), Schedule 9, the results of the common equity models applied to the Non-Price Regulated Proxy Group -- which is comparable in total risk to the Utility Proxy Group -- are as follows: 12.83% (DCF), 12.49% (RPM), and 11.69% (CAPM). The average of the mean and median of these models is 12.42%, which I used as the indicated common equity cost rates for the Non-Price Regulated Proxy Group.

59 *Blue Chip Financial Forecasts*, June 1, 2021, at 2, 14.
60 Derived on page 5 of Exhibit___(DWD-1), Schedule 9.

VIII. CONCLUSION OF COMMON EQUITY COST ANALYTICAL RESULTS BEFORE ADJUSTMENTS

Q. BASED ON YOUR ANALYSES, WHAT IS THE INDICATED COMMON EQUITY COST RATE BEFORE ADJUSTMENTS?

A. By applying multiple cost of common equity models to the Utility Proxy Group and the Non-Price Regulated Proxy Group, the indicated range of common equity cost rates attributable to the Utility Proxy Group before any relative risk adjustments is between 9.44% and 12.42%. I used multiple cost of common equity models as primary tools in arriving at my recommended common equity cost rate, because each of these models is theoretically sound and available to investors and because no single model is so inherently precise that it can be relied on to the exclusion of other theoretically sound models. Using multiple models adds reliability to the estimated common equity cost rate, with the prudence of using multiple cost of common equity models supported in both the financial literature and regulatory precedent.

Based on these common equity cost results, I conclude that a range of common equity cost rates between 9.44% and 12.42% is reasonable and appropriate before any adjustments for relative risk differences between the Company and the Utility Proxy Group are made.

IX. ADJUSTMENTS TO THE COMMON EQUITY COST RATE

A. Business Risk Adjustment

Q. WHAT COMPANY-SPECIFIC BUSINESS RISKS DID YOU CONSIDER IN YOUR RELATIVE RISK ANALYSIS?

A. As detailed below I considered NSP's small size and its high levels of customer growth and capital expenditures relative to the Utility Proxy Group.

Q. PLEASE COMPARE NSP'S SIZE WITH THAT OF THE UTILITY PROXY GROUP.

A. As shown on Table 9, below, NSP is smaller than the median utility in the Utility Proxy Group, as measured by market capitalization.

Table 9
Size as Measured by Market Capitalization for NSPM's Electric Operations and the Utility Proxy Group

	Market Capitalization* ($ Millions)	Times Greater than The Company
NSP ND Jurisdictional	$114.612	
Utility Proxy Group	$4,615.314	40.3x

*From page 1 of Exhibit___(DWD-1), Schedule 10.

The Company's estimated market capitalization for its North Dakota operations was $114.612 million as of May 28, 2021, compared with the

market capitalization of the average company in the Utility Proxy Group of $4,615.314 million as of May 28, 2021. The average company in the Utility Proxy Group has a market capitalization 40.3 times the size of the Company's estimated North Dakota-based market capitalization.

Q. SINCE NSP IS PART OF A LARGER COMPANY, WHY IS THE SIZE OF XEI NOT MORE APPROPRIATE TO USE WHEN DETERMINING THE SIZE ADJUSTMENT?

A. The return derived in this proceeding will not apply to XEI's operations as a whole, but only to the Company's North Dakota operations. XEI is the sum of its constituent parts, including those constituent parts' ROEs. Potential investors in the Parent are aware that it is a combination of operations in each state, and that each state's operations experience the operating risks specific to their jurisdiction. The market's expectation of XEI's return is commensurate with the realities of the Company's composite operations in each of the states in which it operates. That said, I recognize that NSP's North Dakota natural gas operations are a portion of NSP's overall operations.

Q. SHOULD THE COMPANY BE COMPARED WITH OTHER OPERATING NATURAL GAS UTILITIES IN NORTH DAKOTA TO DETERMINE ANY ADJUSTMENT TO THE PROXY GROUP-DERIVED ROE?

A. No, it shouldn't. Since the indicated ROE is determined using the market data of the Utility Proxy Group, any type of adjustment to the indicated ROE must reflect relative differences between the Company and the Utility Proxy Group. Since this is the case, the relative size of other North Dakota utilities is not relevant to determining the ROE for the Company.

Q. DOES THE COMPANY'S SMALLER SIZE RELATIVE TO THE UTILITY PROXY GROUP COMPANIES INCREASE ITS BUSINESS RISK?

A. Yes. As a preliminary matter, because I have developed my cost of common equity recommendation for the Company's North Dakota operations based on market data applied to the Utility Proxy Group of risk-comparable companies, in order to assess the Company's risk associated with its relative small size of its North Dakota operations, it is necessary to compare the Company's North Dakota-jurisdictional size relative to the Utility Proxy Group. The Company's smaller size relative to the Utility Proxy Group companies indicates greater relative business risk for the Company because, all else being equal, size has a material bearing on risk.

Size affects business risk because smaller companies generally are less able to cope with significant events that affect sales, revenues, and earnings. For example, smaller companies face more risk exposure to business cycles and economic conditions, both nationally and locally. Additionally, the loss of revenues from a few larger customers would have a greater effect on a small company than on a bigger company with a larger, more diverse, customer base. This is true for utilities, as well as for non-regulated companies.

As further evidence that smaller firms are riskier, investors generally demand greater returns from smaller firms to compensate for less marketability and liquidity of their securities. Duff & Phelps' 2020 Valuation Handbook – U.S. Guide to Cost of Capital (D&P - 2020)

discusses the nature of the small-size phenomenon, providing an indication of the magnitude of the size premium based on several measures of size. In discussing "Size as a Predictor of Equity Returns," D&P - 2020 states:

> The size effect is based on the empirical observation that companies of smaller size are associated with greater risk and, therefore, have greater cost of capital [sic]. The "size" of a company is one of the most important risk elements to consider when developing cost of equity capital estimates for use in valuing a business simply because size has been shown to be a *predictor* of equity returns. In other words, there is a significant (negative) relationship between size and historical equity returns - as size *decreases*, returns tend to *increase*, and vice versa. (footnote omitted) (emphasis in original)[61]

Furthermore, in "The Capital Asset Pricing Model: Theory and Evidence," Fama and French note size is indeed a risk factor which must be reflected when estimating the cost of common equity. On page 37, they note:

> . . . the higher average returns on small stocks and high book-to-market stocks reflect unidentified state variables that produce undiversifiable risks (covariances) in returns not captured in the market return and are priced separately from market betas.[62]

Based on this evidence, Fama and French proposed their three-factor model which includes a size variable in recognition of the effect size has on the cost of common equity.

61 Duff & Phelps Valuation Handbook – U.S. Guide to Cost of Capital, Wiley 2020, at 4-1.
62 Fama & French, at 25-43.

Also, it is a basic financial principle that the use of funds invested, and not the source of funds, is what gives rise to the risk of any investment.[63] Eugene Brigham, a well-known authority, states:

> A number of researchers have observed that portfolios of small-firms (sic) have earned consistently higher average returns than those of large-firm stocks; this is called the "small-firm effect." On the surface, it would seem to be advantageous to the small firms to provide average returns in a stock market that are higher than those of larger firms. In reality, it is bad news for the small firm; **what the small-firm effect means is that the capital market demands higher returns on stocks of small firms than on otherwise similar stocks of the large firms**. (emphasis added)[64]

Consistent with the financial principle of risk and return discussed above, increased relative risk due to small size must be considered in the allowed rate of return on common equity. Therefore, the Commission's authorization of a cost rate of common equity in this proceeding must appropriately reflect the unique risks of the Company, including its small relative size to the Utility Proxy Group, which is justified and supported above by evidence in the financial literature.

Q. EARLIER YOU EXPLAINED THAT CREDIT RATINGS CAN ACT AS A PROXY FOR A FIRM'S COMBINED BUSINESS AND FINANCIAL RISKS TO EQUITY

63 Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance (McGraw-Hill Book Company, 1996), at 204-205, 229.

64 Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition (The Dryden Press, 1989), at 623.

OWNERS. DO RATING AGENCIES ACCOUNT FOR COMPANY SIZE IN THEIR BOND RATINGS?

A. No. Neither S&P nor Moody's have minimum company size requirements for any given rating level. This means, all else equal, a relative size analysis must be conducted for equity investments in companies with similar bond ratings.

Q. PLEASE DESCRIBE THE COMPANY'S HIGH CUSTOMER GROWTH.

A. NSP's total number of retail customers has increased by approximately 4,500 (*i.e.*, 8.1%) over the past five years.[65] The increased customer growth in NSP's service territory necessitates increased capital investment.

Q. PLEASE BRIEFLY SUMMARIZE THE COMPANY'S CAPITAL INVESTMENT PLANS.

A. NSP currently plans to invest approximately $61 million of additional capital over the 2021-2022 period,[66] which represents 66.60% of its 2020 year-end net utility plant.[67] That amount includes investments required to support growth, and to maintain safe, sufficient, and reliable service in both its transmission and distribution facilities. The Company will require continued access to the capital markets, at reasonable terms, to finance its capital spending plan. As the Company moves forward with its capital spending plan, timely recovery of its capital costs is critical to mitigate the delay of capital recovery and execute its capital spending program.

65 *2020 Reports of Regulated Earnings for Xcel Energy's North Dakota Electric and Natural Gas Operations*, Case No. PU-21-159, April 30, 2021, at S-1.
66 Company provided data.
67 *Ibid.*, at G-3.

Q. DO SUBSTANTIAL CAPITAL EXPENDITURES DIRECTLY RELATE TO A UTILITY BEING ALLOWED THE OPPORTUNITY TO EARN A RETURN ADEQUATE TO ATTRACT CAPITAL AT REASONABLE TERMS?

A. Yes, they do. The allowed ROE should enable the subject utility to finance capital expenditures and working capital requirements at reasonable rates, and to maintain its financial integrity in a variety of economic and capital market conditions. As discussed throughout my direct testimony, a return adequate to attract capital at reasonable terms enables the utility to provide safe, reliable service while maintaining its financial soundness. To the extent a utility is provided the opportunity to earn its market-based cost of capital, neither customers nor shareholders should be disadvantaged. These requirements are of particular importance to a utility when it is engaged in a substantial capital expenditure program.

The ratemaking process is predicated on the principle that, for investors and companies to commit the capital needed to provide safe and reliable utility services, the utility must have the opportunity to recover the return of, and the market-required return on, invested capital. Regulatory commissions recognize that since utility operations are capital intensive, regulatory decisions should enable the utility to attract capital at reasonable terms; doing so balances the long-term interests of the utility and its ratepayers.

Further, the financial community carefully monitors the current and expected financial conditions of utility companies, as well as the regulatory

environment in which those companies operate. In that respect, the regulatory environment is one of the most important factors considered in both debt and equity investors' assessments of risk. That is especially important during periods in which the utility expects to make significant capital investments and, therefore, may require access to capital markets.

Q. DO CREDIT RATING AGENCIES RECOGNIZE RISK ASSOCIATED WITH INCREASED CAPITAL EXPENDITURES?

A. Yes, they do. From a credit perspective, the additional pressure on cash flows associated with high levels of capital expenditures exerts corresponding pressure on credit metrics and, therefore, credit ratings. S&P has noted several long-term challenges for utilities' financial health including: heavy construction programs to address demand growth; declining capacity margins; and aging infrastructure and regulatory responsiveness to mounting requests for rate increases.[68] More recently, S&P noted:

> We assume that capital spending will remain a focus of most utility managements and strain credit metrics. It provides growth when sales are diminished by ongoing demanded efficiency from regulators and other trends, and it is welcomed by policymakers that appreciate the economic stimulus and the benefits of safer, more reliable service. The speed with which the regulatory process turns the new spending into higher rates to begin to pay for it is an important factor in our assumptions and the forecast. Any extended lag between spending and recovery can exacerbate

68 Standard & Poor's, Industry Report Card: Utility Sectors in the Americas Remain Stable, While Challenges Beset European, Australian, and New Zealand Counterparts, RatingsDirect, June 27, 2008, at 4.

the negative effect on credit metrics and therefore ratings.[69]

The rating agency views noted above also are consistent with certain observations discussed in my direct testimony: (1) the benefits of maintaining a strong financial profile are significant when capital access is required and become particularly acute during periods of market instability; and (2) the Commission's decision in this proceeding will have a direct bearing on the company's credit profile and its ability to access the capital needed to fund its investments.

Q. HOW DO THE COMPANY'S EXPECTED CAPITAL EXPENDITURES COMPARE TO THE UTILITY PROXY GROUP?

A. To reasonably make that comparison, I calculated the ratio of expected capital expenditures to net plant for each company in the Utility Proxy Group. I performed that calculation using NSP's projected capital expenditures during 2021 and 2022 relative to its net plant for the year ended December 31, 2020. As shown in Exhibit___(DWD-1), Schedule 11, NSP has the highest ratio of projected capital expenditures to net plant relative to the Utility Proxy Group, approximately 41.60% higher than the Utility Proxy Group median.

Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE EFFECT OF NSP'S CAPITAL INVESTMENT PLAN ON ITS RISK PROFILE AND COST OF CAPITAL?

A. It is clear that NSP's capital investment plan relative to net plant is larger than the median of the Utility Proxy Group companies. It also is clear

69 Standard & Poor's, *Industry Top Trends 2017: Utilities*, RatingsDirect, February 16, 2017, at 4.

that equity investors and credit rating agencies recognize the additional risks associated with substantial capital expenditures.

Q. WHAT IS YOUR CONCLUSION REGARDING THE COMPANY'S RELATIVE RISK AS COMPARED TO THE UTILITY PROXY GROUP?

A. In view of the above, the Company is smaller and faces a higher level of expected capital expenditures than the Utility Proxy Group. Since the cost of capital is a comparative exercise, the Company faces relatively higher risk than the Utility Proxy Group.

Q. CAN A RELATIVE RISK ADJUSTMENT BE QUANTIFIED FOR THE COMPANY?

A. Yes. As discussed above, NSP has greater relative risk than the Utility Proxy Group. As a result, it is necessary to upwardly adjust the indicated range of common equity cost rates attributable to the Utility Proxy Group to reflect the Company's greater risk due to its greater business risk. As a proxy for the business risk adjustment, I will use the SBBI-2021 size study. The determination of the business risk adjustment is based on the size premiums for portfolios of the New York Stock Exchange, American Stock Exchange, and NASDAQ listed companies, ranked by deciles for the 1926 to 2020 period.[70] The average size premium for the Utility Proxy Group with a market capitalization of $4,615.314 million falls in the 4th decile, while the Company's estimated market capitalization of $114.612 million places it in the 10th decile. The size premium spread between the 4th decile and the 10th decile is 4.26%.[71] Even though a 4.26% upward risk

70 Source: Duff & Phelps Cost of Capital Navigator.
71 *Ibid.,* See also, Exhibit__(DWD-1), Schedule 10.

adjustment to the common cost of equity is indicated, I only applied a risk premium of 0.50% to the Company's indicated common equity cost rate to reflect that the Company's North Dakota natural gas operations are a portion of NSP's overall operations and benefit from that relationship. I believe 0.50% is a conservative adjustment due to the Company's higher relative risk.

B. Credit Risk Adjustment

Q. Please discuss your proposed credit risk adjustment.

A. NSP's long-term issuer ratings are A2 and A- from Moody's Investors Services and S&P, respectively, which are slightly less risky than the average long-term issuer ratings for the Utility Proxy Group of A2/A3 and A-, respectively.[72] Hence, a downward credit risk adjustment is necessary to reflect the higher credit rating, *i.e.,* A2, of the Company relative to the A2/A3 average Moody's bond rating of the Utility Proxy Group.[73]

An indication of the magnitude of the necessary downward adjustment to reflect the lower credit risk inherent in an A2 bond rating is one-sixth of a recent three-month average spread between Moody's Baa and A-rated public utility bond yields of 0.26%, shown on page 4 of Exhibit___(DWD-1), Schedule 6, or negative 0.04%.[74]

72 Source of Information: S&P Global Market Intelligence.

73 As shown on page 5 of Exhibit___(DWD-1), Schedule 6.

74 0.04% = 0.26% * (1/6). Moody's does not provide public utility bond yields for A3-rated bonds. As such, it was necessary to estimate the difference between A2-rated and A3-rated public utility bonds. Because there are three steps between Baa2 and A2 (Baa2 to Baa1, Baa1 to A3, and A3 to A2) I assumed an adjustment of one-sixth of the difference between the A2-rated and Baa2-rated public utility bond yield was appropriate to reflect the proxy group's average rating of A2/A3.

C. Flotation Costs

Q. WHAT ARE FLOTATION COSTS?

A. Flotation costs are those costs associated with the sale of new issuances of common stock. They include market pressure and the mandatory unavoidable costs of issuance (*e.g.*, underwriting fees and out-of-pocket costs for printing, legal, registration, etc.). For every dollar raised through debt or equity offerings, the Company receives less than one full dollar in financing.

Q. WHY IS IT IMPORTANT TO RECOGNIZE FLOTATION COSTS IN THE ALLOWED COMMON EQUITY COST RATE?

A. It is important because there is no other mechanism in the ratemaking paradigm through which such costs can be recognized and recovered. Because these costs are real, necessary, and legitimate, recovery of these costs should be permitted. As noted by Dr. Roger Morin:

> The costs of issuing these securities are just as real as operating and maintenance expenses or costs incurred to build utility plants, and fair regulatory treatment must permit recovery of these costs….
>
> The simple fact of the matter is that common equity capital is not free….[Flotation costs] must be recovered through a rate of return adjustment.[75]

75 Morin, at p. 321.

Q. DO THE COMMON EQUITY COST RATE MODELS YOU HAVE USED ALREADY REFLECT INVESTORS' ANTICIPATION OF FLOTATION COSTS?

A. No. All of these models assume no transaction costs. The literature is quite clear that these costs are not reflected in the market prices paid for common stocks. For example, Brigham and Daves confirm this and provide the methodology utilized to calculate the flotation adjustment.[76] In addition, Morin confirms the need for such an adjustment even when no new equity issuance is imminent.[77] Consequently, it is proper to include a flotation cost adjustment when using cost of common equity models to estimate the common equity cost rate.

Q. HOW DID YOU CALCULATE THE FLOTATION COST ALLOWANCE?

A. I modified the DCF calculation to provide a dividend yield that would reimburse investors for issuance costs in accordance with the method cited in literature by Brigham and Daves, as well as by Morin. The flotation cost adjustment recognizes the actual costs of issuing equity that were incurred by XEI in its equity issuances during fiscal years 2010, 2018, and 2019. Based on the issuance costs shown on page 1 of Exhibit__(DWD-1), Schedule 12, an adjustment of 0.14% is required to reflect the flotation costs applicable to the Utility Proxy Group.

76 Eugene F. Brigham and Phillip R. Daves, Intermediate Financial Management, 9th Edition, Thomson/Southwestern, at p. 342.

77 Morin, at pp. 327-30.

Q. WHAT IS THE INDICATED COST OF COMMON EQUITY AFTER YOUR COMPANY-SPECIFIC ADJUSTMENTS?

A. Applying the 0.50% business risk adjustment, the negative 0.04% credit risk adjustment, and the 0.14% flotation cost adjustment to the indicated range of common equity cost rates between 9.44% and 12.42% results in a Company-specific range of common equity rates between 10.04% and 13.02%. The wide range of model results may reflect increased uncertainty related to the COVID-19 pandemic and unknown timeframe for when economic conditions will normalize as vaccinations ramp up and the public health crises subsides. Because of this uncertainty, I recommend an ROE for the Company toward the lower end of my Company-specific range, specifically 10.50%.

X. CONCLUSION

Q. WHAT IS YOUR RECOMMENDED ROE FOR THE COMPANY?

A. Given the discussion above and the results from the analyses, I recommend that an ROE of 10.50% is appropriate for the Company at this time.

Q. IN YOUR OPINION, IS YOUR PROPOSED ROE OF 10.50% FAIR AND REASONABLE TO NSP AND ITS CUSTOMERS?

A. Yes, it is.

Q. IN YOUR OPINION, IS NSP'S PROPOSED CAPITAL STRUCTURE CONSISTING OF 52.54% COMMON EQUITY, 0.43% SHORT-TERM DEBT, AND 47.03% LONG-TERM DEBT FAIR AND REASONABLE?

A. Yes, they are.

Q. IN YOUR OPINION, ARE NSP'S PROPOSED COST OF SHORT-TERM DEBT OF 1.09% AND COST OF LONG-TERM DEBT OF 4.10% FAIR AND REASONABLE?

A. Yes, they are.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

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MANAGEMENT CONSULTANTS

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Partner

Summary

Dylan is an experienced consultant and a Certified Rate of Return Analyst (CRRA) and Certified Valuation Analyst (CVA). He has served as a consultant for investor-owned and municipal utilities and authorities for 12 years. Dylan has extensive experience in rate of return analyses, class cost of service, rate design, and valuation for regulated public utilities. He has testified as an expert witness in the subjects of rate of return, cost of service, rate design, and valuation before 30 regulatory commissions in the U.S., one Canadian province, and an American Arbitration Association panel.

He also maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured.

Areas of Specialization

- Regulation and Rates
- Utilities
- Mutual Fund Benchmarking
- Capital Market Risk
- Financial Modeling
- Valuation
- Regulatory Strategy
- Rate Case Support
- Rate of Return
- Cost of Service
- Rate Design

Recent Expert Testimony Submission/Appearances

Jurisdiction	***Topic***
Massachusetts Department of Public Utilities	Rate of Return
New Jersey Board of Public Utilities	Rate of Return
Hawaii Public Utilities Commission	Cost of Service, Rate Design
South Carolina Public Service Commission	Return on Common Equity
American Arbitration Association	Valuation

Recent Assignments

- Provided expert testimony on the cost of capital for ratemaking purposes before numerous state utility regulatory agencies
- Maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured
- Sponsored valuation testimony for a large municipal water company in front of an American Arbitration Association Board to justify the reasonability of their lease payments to the City
- Co-authored a valuation report on behalf of a large investor-owned utility company in response to a new state regulation which allowed the appraised value of acquired assets into rate base

Recent Publications and Speeches

- Co-Author of: "Decoupling, Risk Impacts and the Cost of Capital", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. The Electricity Journal, March, 2020.
- Co-Author of: "Decoupling Impact and Public Utility Conservation Investment", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. Energy Policy Journal, 130 (2019), 311-319.
- "Establishing Alternative Proxy Groups", before the Society of Utility and Regulatory Financial Analysts: 51st Financial Forum, April 4, 2019, New Orleans, LA.
- "Past is Prologue: Future Test Year", Presentation before the National Association of Water Companies 2017 Southeast Water Infrastructure Summit, May 2, 2017, Savannah, GA.
- Co-author of: "Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model", co-authored with Richard A. Michelfelder, Ph.D., Rutgers University, Pauline M. Ahern, and Frank J. Hanley, The Electricity Journal, May, 2013.
- "Decoupling: Impact on the Risk and Cost of Common Equity of Public Utility Stocks", before the Society of Utility and Regulatory Financial Analysts: 45th Financial Forum, April 17-18, 2013, Indianapolis, IN

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Sponsor	Date	Case/Applicant	Docket No.	Subject
Regulatory Commission of Alaska				
Alaska Power Company	09/20	Alaska Power Company; Goat Lake Hydro, Inc.; BBL Hydro, Inc.	Tariff Nos. TA886-2; TA6-521; TA4-573	Capital Structure
Alaska Power Company	07/16	Alaska Power Company	Docket No. TA857-2	Rate of Return
Alberta Utilities Commission				
AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	01/20	AltaLink, L.P., and EPCOR Distribution & Transmission, Inc.	2021 Generic Cost of Capital, Proceeding ID. 24110	Rate of Return
Arizona Corporation Commission				
EPCOR Water Arizona, Inc.	06/20	EPCOR Water Arizona, Inc.	Docket No. WS-01303A-20-0177	Rate of Return
Arizona Water Company	12/19	Arizona Water Company – Western Group	Docket No. W-01445A-19-0278	Rate of Return
Arizona Water Company	08/18	Arizona Water Company – Northern Group	Docket No. W-01445A-18-0164	Rate of Return
Arkansas Public Service Commission				
CenterPoint Energy Resources Corp.	05/21	CenterPoint Arkansas Gas	Docket No. 21-004-U	Return on Equity
Colorado Public Utilities Commission				
Summit Utilities, Inc.	04/18	Colorado Natural Gas Company	Docket No. 18AL-0305G	Rate of Return
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Rate of Return
Delaware Public Service Commission				
Delmarva Power & Light Co.	11/20	Delmarva Power & Light Co.	Docket No. 20-0149 (Electric)	Return on Equity
Delmarva Power & Light Co.	10/20	Delmarva Power & Light Co.	Docket No. 20-0150 (Gas)	Return on Equity
Tidewater Utilities, Inc.	11/13	Tidewater Utilities, Inc.	Docket No. 13-466	Capital Structure
Public Service Commission of the District of Columbia				
Washington Gas Light Company	09/20	Washington Gas Light Company	Formal Case No. 1162	Rate of Return
Federal Energy Regulatory Commission				
LS Power Grid California, LLC	10/20	LS Power Grid California, LLC	Docket No. ER21-195-000	Rate of Return
Florida Public Service Commission				
Tampa Electric Company	04/21	Tampa Electric Company	Docket No. 20210034-EI	Return on Equity
Peoples Gas System	09/20	Peoples Gas System	Docket No. 20200051-GU	Rate of Return
Utilities, Inc. of Florida	06/20	Utilities, Inc. of Florida	Docket No. 20200139-WS	Rate of Return
Hawaii Public Utilities Commission				
Launiupoko Irrigation Company, Inc.	12/20	Launiupoko Irrigation Company, Inc.	Docket No. 2020-0217 / Transferred to 2020-0089	Capital Structure
Lanai Water Company, Inc.	12/19	Lanai Water Company, Inc.	Docket No. 2019-0386	Cost of Service / Rate Design
Manele Water Resources, LLC	08/19	Manele Water Resources, LLC	Docket No. 2019-0311	Cost of Service / Rate Design
Kaupulehu Water Company	02/18	Kaupulehu Water Company	Docket No. 2016-0363	Rate of Return
Aqua Engineers, LLC	05/17	Puhi Sewer & Water Company	Docket No. 2017-0118	Cost of Service / Rate Design
Hawaii Resources, Inc.	09/16	Laie Water Company	Docket No. 2016-0229	Cost of Service / Rate Design
Illinois Commerce Commission				
Utility Services of Illinois, Inc.	02/21	Utility Services of Illinois, Inc.	Docket No. 21-0198	Rate of Return
Ameren Illinois Company d/b/a Ameren Illinois	07/20	Ameren Illinois Company d/b/a Ameren Illinois	Docket No. 20-0308	Return on Equity

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Sponsor	Date	Case/Applicant	Docket No.	Subject
Utility Services of Illinois, Inc.	11/17	Utility Services of Illinois, Inc.	Docket No. 17-1106	Cost of Service / Rate Design
Aqua Illinois, Inc.	04/17	Aqua Illinois, Inc.	Docket No. 17-0259	Rate of Return
Utility Services of Illinois, Inc.	04/15	Utility Services of Illinois, Inc.	Docket No. 14-0741	Rate of Return
Indiana Utility Regulatory Commission				
Aqua Indiana, Inc.	03/16	Aqua Indiana, Inc. Aboite Wastewater Division	Docket No. 44752	Rate of Return
Twin Lakes, Utilities, Inc.	08/13	Twin Lakes, Utilities, Inc.	Docket No. 44388	Rate of Return
Kansas Corporation Commission				
Atmos Energy	07/19	Atmos Energy	19-ATMG-525-RTS	Rate of Return
Kentucky Public Service Commission				
Duke Energy Kentucky, Inc.	06/21	Duke Energy Kentucky, Inc.	2021-00190	Return on Equity
Bluegrass Water Utility Operating Company	10/20	Bluegrass Water Utility Operating Company	2020-00290	Return on Equity
Louisiana Public Service Commission				
Southwestern Electric Power Company	12/20	Southwestern Electric Power Company	Docket No. U-35441	Return on Equity
Atmos Energy	04/20	Atmos Energy	Docket No. U-35535	Rate of Return
Louisiana Water Service, Inc.	06/13	Louisiana Water Service, Inc.	Docket No. U-32848	Rate of Return
Maryland Public Service Commission				
Washington Gas Light Company	08/20	Washington Gas Light Company	Case No. 9651	Rate of Return
FirstEnergy, Inc.	08/18	Potomac Edison Company	Case No. 9490	Rate of Return
Massachusetts Department of Public Utilities				
Unitil Corporation	12/19	Fitchburg Gas & Electric Co. (Elec.)	D.P.U. 19-130	Rate of Return
Unitil Corporation	12/19	Fitchburg Gas & Electric Co. (Gas)	D.P.U. 19-131	Rate of Return
Liberty Utilities	07/15	Liberty Utilities d/b/a New England Natural Gas Company	Docket No. 15-75	Rate of Return
Minnesota Public Utilities Commission				
Northern States Power Company	11/20	Northern States Power Company	Docket No. E002/GR-20-723	Rate of Return
Mississippi Public Service Commission				
Atmos Energy	03/19	Atmos Energy	Docket No. 2015-UN-049	Capital Structure
Atmos Energy	07/18	Atmos Energy	Docket No. 2015-UN-049	Capital Structure
Missouri Public Service Commission				
Spire Missouri, Inc.	12/20	Spire Missouri, Inc.	Case No. GR-2021-0108	Return on Equity
Indian Hills Utility Operating Company, Inc.	10/17	Indian Hills Utility Operating Company, Inc.	Case No. SR-2017-0259	Rate of Return
Raccoon Creek Utility Operating Company, Inc.	09/16	Raccoon Creek Utility Operating Company, Inc.	Docket No. SR-2016-0202	Rate of Return
Public Utilities Commission of Nevada				
Southwest Gas Corporation	08/20	Southwest Gas Corporation	Docket No. 20-02023	Return on Equity
New Hampshire Public Utilities Commission				
Aquarion Water Company of New Hampshire, Inc.	12/20	Aquarion Water Company of New Hampshire, Inc.	Docket No. DW 20-184	Rate of Return
New Jersey Board of Public Utilities				
Middlesex Water Company	05/21	Middlesex Water Company	Docket No. WR21050813	Rate of Return
Atlantic City Electric Company	12/20	Atlantic City Electric Company	Docket No. ER20120746	Return on Equity

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Sponsor	Date	Case/Applicant	Docket No.	Subject
FirstEnergy	02/20	Jersey Central Power & Light Co.	Docket No. ER20020146	Rate of Return
Aqua New Jersey, Inc.	12/18	Aqua New Jersey, Inc.	Docket No. WR18121351	Rate of Return
Middlesex Water Company	10/17	Middlesex Water Company	Docket No. WR17101049	Rate of Return
Middlesex Water Company	03/15	Middlesex Water Company	Docket No. WR15030391	Rate of Return
The Atlantic City Sewerage Company	10/14	The Atlantic City Sewerage Company	Docket No. WR14101263	Cost of Service / Rate Design
Middlesex Water Company	11/13	Middlesex Water Company	Docket No. WR1311059	Capital Structure
New Mexico Public Regulation Commission				
Southwestern Public Service Company	01/21	Southwestern Public Service Company	Case No. 20-00238-UT	Return on Equity
North Carolina Utilities Commission				
Piedmont Natural Gas Co.Inc.	03/21	Piedmont Natural Gas Co., Inc.	Docket No. G-9, Sub 781	Return on Equity
Duke Energy Carolinas, LLC	07/20	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1214	Return on Equity
Duke Energy Progress, LLC	07/20	Duke Energy Progress, LLC	Docket No. E-2, Sub 1219	Return on Equity
Aqua North Carolina, Inc.	12/19	Aqua North Carolina, Inc.	Docket No. W-218 Sub 526	Rate of Return
Carolina Water Service, Inc.	06/19	Carolina Water Service, Inc.	Docket No. W-354 Sub 364	Rate of Return
Carolina Water Service, Inc.	09/18	Carolina Water Service, Inc.	Docket No. W-354 Sub 360	Rate of Return
Aqua North Carolina, Inc.	07/18	Aqua North Carolina, Inc.	Docket No. W-218 Sub 497	Rate of Return
North Dakota Public Service Commission				
Northern States Power Company	11/20	Northern States Power Company	Case No. PU-20-441	Rate of Return
Public Utilities Commission of Ohio				
Aqua Ohio, Inc.	05/16	Aqua Ohio, Inc.	Docket No. 16-0907-WW-AIR	Rate of Return
Pennsylvania Public Utility Commission				
Vicinity Energy Philadelphia, Inc.	04/21	Vicinity Energy Philadelphia, Inc.	Docket No. R-2021-3024060	Rate of Return
Delaware County Regional Water Control Authority	02/20	Delaware County Regional Water Control Authority	Docket No. A-2019-3015173	Valuation
Valley Energy, Inc.	07/19	C&T Enterprises	Docket No. R-2019-3008209	Rate of Return
Wellsboro Electric Company	07/19	C&T Enterprises	Docket No. R-2019-3008208	Rate of Return
Citizens' Electric Company of Lewisburg	07/19	C&T Enterprises	Docket No. R-2019-3008212	Rate of Return
Steelton Borough Authority	01/19	Steelton Borough Authority	Docket No. A-2019-3006880	Valuation
Mahoning Township, PA	08/18	Mahoning Township, PA	Docket No. A-2018-3003519	Valuation
SUEZ Water Pennsylvania Inc.	04/18	SUEZ Water Pennsylvania Inc.	Docket No. R-2018-000834	Rate of Return
Columbia Water Company	09/17	Columbia Water Company	Docket No. R-2017-2598203	Rate of Return
Veolia Energy Philadelphia, Inc.	06/17	Veolia Energy Philadelphia, Inc.	Docket No. R-2017-2593142	Rate of Return
Emporium Water Company	07/14	Emporium Water Company	Docket No. R-2014-2402324	Rate of Return
Columbia Water Company	07/13	Columbia Water Company	Docket No. R-2013-2360798	Rate of Return
Penn Estates Utilities, Inc.	12/11	Penn Estates, Utilities, Inc.	Docket No. R-2011-2255159	Capital Structure / Long-Term Debt Cost Rate
South Carolina Public Service Commission				
Blue Granite Water Co.	12/19	Blue Granite Water Company	Docket No. 2019-292-WS	Rate of Return
Carolina Water Service, Inc.	02/18	Carolina Water Service, Inc.	Docket No. 2017-292-WS	Rate of Return
Carolina Water Service, Inc.	06/15	Carolina Water Service, Inc.	Docket No. 2015-199-WS	Rate of Return
Carolina Water Service, Inc.	11/13	Carolina Water Service, Inc.	Docket No. 2013-275-WS	Rate of Return
United Utility Companies, Inc.	09/13	United Utility Companies, Inc.	Docket No. 2013-199-WS	Rate of Return

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Sponsor	Date	Case/Applicant	Docket No.	Subject
Utility Services of South Carolina, Inc.	09/13	Utility Services of South Carolina, Inc.	Docket No. 2013-201-WS	Rate of Return
Tega Cay Water Services, Inc.	11/12	Tega Cay Water Services, Inc.	Docket No. 2012-177-WS	Capital Structure
Tennessee Public Utility Commission				
Piedmont Natural Gas Company	07/20	Piedmont Natural Gas Company	Docket No. 20-00086	Return on Equity
Public Utility Commission of Texas				
Southwestern Public Service Company	02/21	Southwestern Public Service Company	Docket No. 51802	Return on Equity
Southwestern Electric Power Company	10/20	Southwestern Electric Power Company	Docket No. 51415	Rate of Return
Virginia State Corporation Commission				
Virginia Natural Gas, Inc.	04/21	Virginia Natural Gas, Inc.	PUR-2020-00095	Return on Equity
Massanutten Public Service Corporation	12/20	Massanutten Public Service Corporation	PUE-2020-00039	Return on Equity
Aqua Virginia, Inc.	07/20	Aqua Virginia, Inc.	PUR-2020-00106	Rate of Return
WGL Holdings, Inc.	07/18	Washington Gas Light Company	PUR-2018-00080	Rate of Return
Atmos Energy Corporation	05/18	Atmos Energy Corporation	PUR-2018-00014	Rate of Return
Aqua Virginia, Inc.	07/17	Aqua Virginia, Inc.	PUR-2017-00082	Rate of Return
Massanutten Public Service Corp.	08/14	Massanutten Public Service Corp.	PUE-2014-00035	Rate of Return / Rate Design

Northern States Power Company
Recommended Capital Structure and Cost Rates
for Ratemaking Purposes

Type Of Capital	Ratios (1)	Cost Rate	Weighted Cost Rate
Long-Term Debt	47.03%	4.10% (1)	1.93%
Short-Term Debt	0.43%	1.09% (1)	0.00%
Common Equity	52.54%	10.50% (2)	5.52%
Total	100.00%		7.45%

Notes:

(1) Company-provided.
(2) From page 2 of this Schedule.

Northern States Power Company
Brief Summary of Common Equity Cost Rate

Line No.	Principal Methods	Proxy Group of Seven Natural Gas Distribution Companies
1.	Discounted Cash Flow Model (DCF) (1)	9.44%
2.	Risk Premium Model (RPM) (2)	10.96%
3.	Capital Asset Pricing Model (CAPM) (3)	11.75%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	12.42%
5.	Range of Common Equity Model Results	9.44% - 12.42%
6.	Business Risk Adjustment (5)	0.50%
7.	Credit Risk Adjustment (6)	-0.04%
8.	Flotation Cost Adjustment (7)	0.14%
9.	Indicated Range of Common Equity Cost Rates after Adjustment	10.04% - 13.02%
10.	Recommended Common Equity Cost Rate	10.50%

Notes:
(1) From page 1 of Schedule DWD-5.
(2) From page 1 of Schedule DWD-6.
(3) From page 1 of Schedule DWD-7.
(4) From page 1 of Schedule DWD-9.
(5) Adjustment to reflect the Company's greater business risk relative to the Utility Proxy Group as detailed in Mr. D'Ascendis' direct testimony.
(6) Company-specific risk adjustment to reflect the Company's lower risk due to a higher long-term issuer rating relative to the proxy group as detailed in Mr. D'Ascendis' direct testimony.
(7) From page 1 of Schedule DWD-12.

Northern States Power Company

Northern States Power Company
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2015 - 2020, Inclusive

	2020	2019	2018	2017	2016	5 YEAR AVERAGE
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$ 12,673.000	$ 11,603.100	$ 10,510.300	$ 10,408.588	$ 10,198.734	
SHORT-TERM DEBT	179.000	30.000	150.000	20.000	85.000	
TOTAL-CAPITAL EMPLOYED	$ 12,852.000	$ 11,633.100	$ 10,660.300	$ 10,428.588	$ 10,283.734	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	4.28 %	4.38 %	4.51 %	4.61 %	4.69 %	
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	46.59 %	47.58 %	46.97 %	47.39 %	47.49 %	47.20 %
PREFERRED STOCK	-	-	-	-	-	-
COMMON EQUITY	53.41	52.42	53.03	52.61	52.51	52.80
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	47.33 %	47.72 %	47.72 %	47.49 %	47.92 %	47.64 %
PREFERRED STOCK	-	-	-	-	-	-
COMMON EQUITY	52.67	52.28	52.28	52.51	52.08	52.36
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
DIVIDEND PAYOUT RATIO	69.04 %	85.99 %	92.69 %	103.36 %	81.00 %	86.42 %
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	9.20 %	9.31 %	8.91 %	9.05 %	9.29 %	9.15 %
TOTAL DEBT / EBITDA (3)	3.69 x	3.46 x	3.45 x	3.09 x	3.23 x	3.38 x
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	15.52 %	17.70 %	31.94 %	22.53 %	25.64 %	22.67 %
TOTAL DEBT / TOTAL CAPITAL	47.33 %	47.72 %	47.72 %	47.49 %	47.92 %	47.64 %

Notes:
(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual
(2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt
(3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).
(4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less

Source of Information: Company audited financial statements

Northern States Power Company,
Calculation of 2022 Balances of Long-Term Debt, Short-Term Debt
and Common Equity (1)

Long-Term Debt		Short-Term Debt		Common Equity		Total Capital
First Mortgage Bonds	2022 Average Balance	Month	Balance	Month	Balance	
Series due July 1, 2025 (FMB)	$ 249,583	2022 Jan	$ 180,563	2021 Dec	$ 7,578,504	
Series due March 1, 2028 (FMB)	149,393	2022 Feb	93,416	2022 Jan	7,649,446	
Series Due July 15, 2035 (FMB)	248,475	2022 Mar	63,070	2022 Feb	7,689,095	
Series Due June 1, 2036 (FMB)	404,657	2022 Apr	75,327	2022 Mar	7,630,096	
Series Due July 1, 2037 (FMB)	346,848	2022 May	187,626	2022 Apr	7,662,038	
Series Due November 1, 2039 (FMB)	295,421	2022 June	-	2022 May	7,690,358	
Series Due August 15, 2040 (FMB)	247,754	2022 Jul	-	2022 Jun	7,641,548	
Series Due August 15, 2022 (FMB)	174,940	2022 Aug	-	2022 Jul	7,734,830	
Series Due August 15, 2042 (FMB)	463,174	2022 Sep	-	2022 Aug	7,819,061	
Series Due May 15, 2023 (FMB)	399,564	2022 Oct	60,185	2022 Sep	7,765,614	
Series Due May 15, 2044 (FMB)	296,583	2022 Nov	44,644	2022 Oct	7,801,061	
Series Due Aug 15, 2045 (FMB)	293,233	2022 Dec	61,127	2022 Nov	7,835,762	
Series Due May 15, 2046 (FMB)	344,033			2022 Dec	7,781,872	
Series Due Sep 15, 2047 (FMB)	580,579					
Series Due Mar 1, 2050 (FMB)	581,592					
Series Due Jun 1, 2051 (FMB)	678,582					
Series Due Mar 29, 2031 (FMB)	419,454					
Series Due Mar 29, 2051 (FMB)	418,901					
Series Due Jun 1, 2052 (FMB)	316,074					
Right of Way Notes	486					
Unamortized Loss on Reacquired Debt	(4,529)					
Total	$ 6,904,800	Avg. Balance	$ 63,830	Avg. Balance	$ 7,713,791	$ 14,682,421
Percent of Total Capital	47.03%		0.43%		52.54%	100.00%

Notes:
(1) Company-provided data.

Northern States Power Company

Proxy Group of Seven Natural Gas Distribution Companies
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2016 - 2020, Inclusive

	2020	2019	2018	2017	2016	
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$5,167.601	$4,449.970	$4,008.781	$3,441.727	$3,183.771	
SHORT-TERM DEBT	$314.214	$422.695	$317.279	$309.051	$263.516	
TOTAL CAPITAL EMPLOYED	$5,481.815	$4,872.665	$4,326.060	$3,750.778	$3,447.287	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	3.34 %	3.66 %	3.70 %	3.79 %	3.57 %	
PREFERRED STOCK	6.12	2.81				
CAPITAL STRUCTURE RATIOS						5 YEAR AVERAGE
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	50.44 %	47.91 %	48.37 %	47.45 %	46.11 %	48.06 %
PREFERRED STOCK	0.69	0.74	-	-	-	0.28
COMMON EQUITY	48.87	51.35	51.63	52.55	53.89	51.66
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	53.98 %	52.38 %	52.43 %	51.86 %	49.66 %	52.06 %
PREFERRED STOCK	0.61	0.64	-	-	-	0.25
COMMON EQUITY	45.41	46.98	47.57	48.14	50.34	47.69
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	4.85 %	3.92 %	4.60 %	4.61 %	4.73 %	4.54 %
MARKET / AVERAGE BOOK RATIO	179.50	218.48	211.77	218.10	196.09	204.79
DIVIDEND YIELD	3.34	2.74	2.86	2.75	2.94	2.93
DIVIDEND PAYOUT RATIO	77.37	73.87	54.17	55.23	62.20	64.57
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	8.77 %	8.62 %	9.88 %	8.28 %	9.29 %	8.97 %
TOTAL DEBT / EBITDA (3)	5.48 x	5.35 x	5.49 x	7.72 x	4.00 x	5.61 x
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	14.20 %	13.18 %	23.75 %	16.76 %	21.91 %	17.96 %
TOTAL DEBT / TOTAL CAPITAL	53.98 %	52.38 %	52.43 %	51.86 %	49.66 %	52.06 %

Notes:

(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.

(2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.

(3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).

(4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Source of Information: Company Annual Forms 10-K

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Seven Natural Gas Distribution Companies
2016 - 2020, Inclusive

	2020	2019	2018	2017	2016	5 YEAR AVERAGE
Atmos Energy Corporation						
Long-Term Debt	40.02 %	36.22 %	36.47 %	41.37 %	36.23 %	38.06 %
Short-Term Debt	-	4.77	6.84	6.04	12.33	6.00
Preferred Stock	-	-	-	-	-	0.00
Common Equity	59.98	59.01	56.69	52.59	51.44	55.94
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
New Jersey Resources Corporation						
Long-Term Debt	53.72 %	49.70 %	45.36 %	43.62 %	46.62 %	47.80 %
Short-Term Debt	2.94	0.81	5.29	9.98	5.04	4.81
Preferred Stock	-	-	-	-	-	0.00
Common Equity	43.34	49.48	49.35	46.40	48.34	47.38
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Northwest Natural Holding Company						
Long-Term Debt	44.47 %	46.47 %	42.89 %	49.46 %	44.32 %	45.52 %
Short-Term Debt	14.17	7.86	12.68	3.44	3.28	8.29
Preferred Stock	-	-	-	-	-	0.00
Common Equity	41.36	45.67	44.43	47.10	52.40	46.19
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
ONE Gas, Inc.						
Long-Term Debt	37.65 %	32.71 %	35.44 %	33.99 %	36.97 %	35.35 %
Short-Term Debt	9.83	13.14	8.26	10.18	4.50	9.18
Preferred Stock	-	-	-	-	-	0.00
Common Equity	52.51	54.16	56.31	55.84	58.54	55.47
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
South Jersey Industries, Inc.						
Long-Term Debt	56.33 %	52.76 %	64.88 %	43.54 %	39.61 %	51.42 %
Short-Term Debt	11.51	17.64	6.18	12.71	11.28	11.86
Preferred Stock	-	-	-	-	-	0.00
Common Equity	32.16	29.60	28.94	43.75	49.11	36.71
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Southwest Gas Holdings, Inc.						
Long-Term Debt	49.91 %	47.56 %	47.10 %	46.66 %	49.06 %	48.06 %
Short-Term Debt	1.93	4.07	3.35	5.65	-	3.00
Preferred Stock	-	-	-	-	-	0.00
Common Equity	48.16	48.37	49.55	47.69	50.94	48.94
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Spire Inc.						
Long-Term Debt	43.93 %	39.24 %	40.57 %	45.91 %	49.02 %	43.73 %
Short-Term Debt	11.46	13.74	11.71	10.46	9.38	11.35
Preferred Stock	4.28	4.47	-	-	-	1.75
Common Equity	40.33	42.54	47.72	43.63	41.60	43.16
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Seven Natural Gas Distribution Companies						
Long-Term Debt	46.57 %	43.52 %	44.67 %	43.51 %	43.12 %	44.28 %
Short-Term Debt	7.41	8.86	7.76	8.35	6.54	7.78
Preferred Stock	0.61	0.64	-	-	-	0.25
Common Equity	45.41	46.98	47.57	48.14	50.34	47.68
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information
Annual Forms 10-K

Northern States Power Company
Operating Subsidiary Company Capital Structures of the
Proxy Group of Seven Natural Gas Distribution Companies

		2020			
Company Name	Parent Company Ticker	Common Equity	Long-Term Debt	Short-Term Debt	Total Capital
Atmos Energy Corporation	ATO	58.75%	41.25%	0.00%	100.00%
New Jersey Natural Gas Company	NJR	53.09%	46.91%	0.00%	100.00%
Northwest Natural Gas Company	NWN	40.43%	48.36%	11.21%	100.00%
ONE Gas, Inc.	OGS	52.28%	37.93%	9.79%	100.00%
Elizabethtown Gas Company	SJI	NA	NA	NA	NA
South Jersey Gas Company	SJI	53.87%	44.17%	1.96%	100.00%
Southwest Gas Corporation	SWX	47.21%	51.59%	1.20%	100.00%
Missouri Gas Energy	SR	NA	NA	NA	NA
Spire Alabama Inc.	SR	58.68%	32.96%	8.36%	100.00%
Spire Gulf Inc.	SR	NA	NA	NA	NA
Spire Mississippi Inc.	SR	NA	NA	NA	NA
Spire Missouri Inc.	SR	50.71%	38.65%	10.64%	100.00%
	Mean	51.88%	42.73%	5.40%	100.00%

Source: S&P Global Market Intelligence

Northern States Power Company
Composite Cost of Long-Term Debt

Description	Coupon Rate	Issue Date	Maturity Date	Amount	Premium or Hedge Gain/(Loss)	Bond Discount	Bond Expense	LRD Expense	(4) Capital Employed	Total Bond Cost (5) Interest Charge	Premium/ Hedge Amortization	Discount Amortization	Expense Amortization	LRD Amortization	Cost of Capital	Capital Cost %
First Mortgage Bonds																
Series due July 1, 2025 (FMB)	7.1250	Jul-95	Jul-25	250,000	-	230	187		249,583	17,813	-	78	63		17,953	7.19%
Series due March 1, 2028 (FMB)	6.5000	Mar-98	Mar-28	150,000	-	330	277		149,393	9,750	-	59	49		9,858	6.60%
Series Due July 15, 2035 (FMB)	5.2500	Jul-05	Jul-35	250,000	-	210	1,314		248,475	13,125	-	16	101		13,242	5.33%
Series Due June 1, 2036 (FMB)	6.2500	May-06	Jun-36	400,000	7,561	649	2,255		404,657	25,000	545	47	162		24,665	6.10%
Series Due July 1, 2037 (FMB)	6.2000	Jun-07	Jul-37	350,000	-	991	2,162		346,848	21,700	-	66	144		21,911	6.32%
Series Due November 1, 2039 (FMB)	5.3500	Nov-09	Nov-39	300,000	(1,851)	329	2,398		295,421	16,050	(107)	19	139		16,315	5.52%
Series Due August 15, 2040 (FMB)	4.8500	Aug-10	Aug-40	250,000	-	426	1,819		247,754	12,125	-	24	101		12,249	4.94%
Series Due August 15, 2022 (FMB) (2)	2.1500	Aug-12	Aug-22	175,000	-	8	52		174,940	3,763	-	28	191		3,982	2.28%
Series Due August 15, 2042 (FMB)	3.4000	Aug-12	Aug-42	500,000	(30,069)	2,556	4,200		463,174	17,000	(1,496)	127	209		18,833	4.07%
Series Due May 15, 2023 (FMB)	2.6000	May-13	May-23	400,000	-	61	375		399,564	10,400	-	73	453		10,927	2.73%
Series Due May 15, 2044 (FMB)	4.1250	May-14	May-44	300,000	-	635	2,782		296,583	12,375	-	29	127		12,531	4.23%
Series Due Aug 15, 2045 (FMB)	4.0000	Aug-15	Aug-45	300,000	-	3,767	2,999		293,233	12,000	-	163	130		12,293	4.19%
Series Due May 15, 2046 (FMB)	3.6000	May-16	May-46	350,000	-	1,665	4,302		344,033	12,600	-	70	180		12,850	3.74%
Series Due Sep 15, 2047 (FMB)	3.7000	Sep-17	Sep-47	600,000	-	5,017	7,381	7,023	580,579	22,200	-	199	293	279	22,971	3.96%
Series Due Mar 1, 2050 (FMB)	2.9000	Sep-19	Mar-50	600,000	-	10,492	7,916		581,592	17,400	-	380	286		18,066	3.11%
Series Due Jun 1, 2051 (FMB)	2.6000	Jun-20	Jun-51	700,000	-	12,286	9,132		678,582	18,200	-	425	316		18,941	2.79%
Series Due Mar 29, 2031 (FMB)	2.1500	Mar-21	Mar-31	425,000	-	-	5,546		419,454	9,138	-	-	637		9,775	2.33%
Series Due Mar 29, 2051 (FMB)	3.1500	Mar-21	Mar-51	425,000	-	-	6,099		418,901	13,388	-	-	212		13,600	3.25%
Series Due Jun 1, 2052 (FMB) (1)	3.2000	Jun-22	Jun-52	320,833	-	-	4,759		316,074	10,267	-	-	161		10,428	3.30%
Other Debt																
Right of Way Notes	var	var	var	486	-	-	-		486	-	-	-	-		-	0.00%
TOTAL DEBT				7,046,319	(24,360)	39,652	65,955	7,023	6,909,329	274,292	(1,059)	1,803	3,957	279	281,389	4.07%
Unamortized Loss on Reacquired Debt									(4,529)						1,020	
Fees on 5-year Credit Facility (3)									-						379	
GRAND TOTAL and COST OF DEBT									6,904,800						282,788	4.10%

Notes:
(1) NSPM 2022 issuance of $550M 30 year bond, balance is 7 of 12 months.
(2) NSPM 2012 issuance of $300M 10 year bond, balance is 7 of 12 months.
(3) Fees associated with the 5 Year Credit Facility are amortized over the life of the facility and are incorporated into the long-term debt rate.
(4) Capital Employed is based on the Premium / Discount / Expense Balances representing average declining balances. New and Maturing Debt averaged on number of months in the year.
(5) Interest Expense is a Straight Interest Expense calculation.

Northern States Power Company
Calculation of Short-Term Debt Cost Rate

		Cost of Short Term Debt			
	Month End Short Term Debt NSPM (1)	Average of Daily Balances (2)	Monthly Interest Expense (3)	Monthly Fees Expense (4)	Average Short Term Debt Cost
2022 Jan	$180,562,536	$141,809,189	$33,903	$43,476	
2022 Feb	$93,416,195	$136,989,366	$29,581	$39,390	
2022 Mar	$63,070,330	$78,243,263	$18,706	$43,476	
2022 Apr	$75,326,726	$69,198,528	$18,158	$42,114	
2022 May	$187,626,231	$131,476,478	$35,651	$43,476	
2022 June	$0	$93,813,115	$24,618	$42,114	
2022 Jul	$0	$0	$0	$43,476	
2022 Aug	$0	$0	$0	$43,476	
2022 Sep	$0	$0	$0	$42,114	
2022 Oct	$60,184,895	$30,092,447	$9,567	$43,476	
2022 Nov	$44,644,469	$52,414,682	$16,126	$42,114	
2022 Dec	$61,127,485	$52,885,977	$16,813	$43,476	
Average	$63,829,906	$65,576,920			
Total			$ 203,123	$ 512,179	
			0.31%	0.78%	1.09%

Notes:

(1) Month-end Balances. Includes commercial paper, utility money pool or direct borrowings under the credit facility.

(2) 12 month average of average daily balances

(3) Monthly Interest Expense is based on the weighted average of short term debt outstanding.

(4) Ongoing fees for NSP-MN's five-year credit facility that was re-syndicated on June 7, 2019.
This expense represents the monthly cost of NSP-MN unused portion of the credit facility. Credit facility is used primarily as back up for commercial paper and letters of credit. (Upfront expenses for the five year credit facility are amortized over the life of the facility and are included in the cost of long term debt.)

Northern States Power Company
Cost of Long-Term Debt Comparison

Issue	Initial Offering	Date of Offering	Date of Maturity	Years to Maturity	Coupon	Net Issuance Costs	Net Proceeds	Annual Interest Expense	Annual Net Amortization	Total Expense	Yield	Bloomberg Fair Value Curve BFV Term	Utility A-Rated	Utility BBB-Rated
Series due July 1, 2025 (FMB)	$ 250,000	7/7/1995	7/1/2025	30	7.125%	$ 417	$ 249,583	$ 17,813	$ 141	$ 17,953	7.19%	30	7.42%	7.50%
Series due March 1, 2028 (FMB)	$ 150,000	3/11/1998	3/1/2028	30	6.500%	$ 607	$ 149,393	$ 9,750	$ 108	$ 9,858	6.60%	30	6.86%	7.07%
Series Due July 15, 2035 (FMB)	$ 250,000	7/21/2005	7/15/2035	30	5.250%	$ 1,525	$ 248,475	$ 13,125	$ 117	$ 13,242	5.33%	30	5.18%	5.55%
Series Due June 1, 2036 (FMB)	$ 400,000	5/25/2006	6/1/2036	30	6.250%	$ (4,657)	$ 404,657	$ 25,000	$ (335)	$ 24,665	6.10%	30	6.27%	6.59%
Series Due July 1, 2037 (FMB)	$ 350,000	6/1/2007	7/1/2037	30	6.200%	$ 3,152	$ 346,848	$ 21,700	$ 211	$ 21,911	6.32%	30	6.09%	6.24%
Series Due November 1, 2039 (FMB)	$ 300,000	11/17/2009	11/1/2039	30	5.350%	$ 4,579	$ 295,421	$ 16,050	$ 265	$ 16,315	5.52%	30	5.57%	6.23%
Series Due August 15, 2040 (FMB)	$ 250,000	8/11/2010	8/15/2040	30	4.850%	$ 2,246	$ 247,754	$ 12,125	$ 124	$ 12,249	4.94%	30	5.25%	5.76%
Series Due August 15, 2022 (FMB) (2)	$ 175,000	8/13/2012	8/15/2022	10	2.150%	$ 60	$ 174,940	$ 3,763	$ 220	$ 3,982	2.28%	10	2.78%	3.53%
Series Due August 15, 2042 (FMB)	$ 500,000	8/13/2012	8/15/2042	30	3.400%	$ 36,826	$ 463,174	$ 17,000	$ 1,833	$ 18,833	4.07%	30	3.74%	4.19%
Series Due May 15, 2023 (FMB)	$ 400,000	5/20/2013	5/15/2023	10	2.600%	$ 436	$ 399,564	$ 10,400	$ 527	$ 10,927	2.73%	10	2.81%	3.38%
Series Due May 15, 2044 (FMB)	$ 300,000	5/13/2014	5/15/2044	30	4.125%	$ 3,417	$ 296,583	$ 12,375	$ 156	$ 12,531	4.23%	30	4.35%	4.72%
Series Due Aug 15, 2045 (FMB)	$ 300,000	8/11/2015	8/15/2045	30	4.000%	$ 6,767	$ 293,233	$ 12,000	$ 293	$ 12,293	4.19%	30	4.37%	4.77%
Series Due May 15, 2046 (FMB)	$ 350,000	5/31/2016	5/15/2046	30	3.600%	$ 5,967	$ 344,033	$ 12,600	$ 250	$ 12,850	3.74%	30	3.95%	4.42%
Series Due Sep 15, 2047 (FMB)	$ 600,000	9/13/2017	9/15/2047	30	3.700%	$ 19,421	$ 580,579	$ 22,200	$ 771	$ 22,971	3.96%	30	3.85%	4.17%
Series Due Mar 1, 2050 (FMB)	$ 600,000	9/10/2019	3/1/2050	30	2.900%	$ 18,408	$ 581,592	$ 17,400	$ 666	$ 18,066	3.11%	30	3.29%	3.66%
Series Due Jun 1, 2051 (FMB)	$ 700,000	6/15/2020	6/1/2051	31	2.600%	$ 21,418	$ 678,582	$ 18,200	$ 741	$ 18,941	2.79%	31	3.12%	3.55%
Series Due Mar 29, 2031 (FMB)	$ 425,000	3/29/2021	3/29/2031	10	2.150%	$ 5,546	$ 419,454	$ 9,138	$ 637	$ 9,775	2.33%	10	2.32%	2.53%
Series Due Mar 29, 2051 (FMB)	$ 425,000	3/29/2021	3/29/2051	30	3.150%	$ 6,099	$ 418,901	$ 13,388	$ 212	$ 13,600	3.25%	30	3.35%	3.65%

												Bloomberg Fair Value Curve A-Rated	BBB-Rated
TOTAL	$ 6,725,000		Weighted Averages:		3.93%						4.10%	4.19%	4.57%

Notes:
Sources: Company provided data and Bloomberg Professional.
Fair Value Curve yields are 30-day averages from Bloomberg Professional.

Northern States Power Company
Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for the
Proxy Group of Seven Natural Gas Distribution Companies

Proxy Group of Seven Natural Gas Distribution Companies	[1] Average Dividend Yield (1)	[2] Value Line Projected Five Year Growth in EPS (2)	[3] Zack's Five Year Projected Growth Rate in EPS	[4] Bloomberg's Five Year Projected Growth Rate in EPS	[5] Yahoo! Finance Projected Five Year Growth in EPS	[6] Average Projected Five Year Growth in EPS (3)	[7] Adjusted Dividend Yield (4)	[8] Indicated Common Equity Cost Rate (5)
Atmos Energy Corporation	2.54 %	7.00 %	7.30 %	7.10 %	7.17 %	7.14 %	2.63 %	9.77 %
New Jersey Resources Corporation	3.19	2.00	7.10	7.33	6.00	5.61	3.28	8.89
Northwest Natural Holding Company	3.57	5.50	3.90	4.42	3.80	4.41	3.65	8.06
ONE Gas, Inc.	3.02	6.50	5.00	5.67	5.00	5.54	3.10	8.64
South Jersey Industries, Inc.	4.84	11.50	5.40	4.93	4.80	6.66	5.00	11.66
Southwest Gas Holdings, Inc.	3.45	9.00	5.50	4.50	4.00	5.75	3.55	9.30
Spire Inc.	3.49	10.00	5.50	5.33	7.31	7.04	3.61	10.65
							Average	9.57 %
							Median	9.30 %
							Average of Mean and Median	9.44 %

NA= Not Available
NMF= Not Meaningful Figure

Notes:

(1) Indicated dividend at 05/28/2021 divided by the average closing price of the last 60 trading days ending 05/28/2021 for each company.

(2) From pages 2 through 8 of this Schedule.

(3) Average of columns 2 through 5 excluding negative growth rates.

(4) This reflects a growth rate component equal to one-half the conclusion of growth rate (from column 6) x column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for Atmos Energy Corporation, 2.54% x (1+(1/2 x 7.14%)) = 2.63%.

(5) Column 6 + column 7.

Source of Information:

Value Line Investment Survey
www.zacks.com Downloaded on 05/28/2021
www.yahoo.com Downloaded on 05/28/2021
Bloomberg Professional Services

ATMOS ENERGY CORP. NYSE-ATO

RECENT PRICE **98.51** | P/E RATIO **18.9** (Trailing: 18.5 Median: 19.0) | RELATIVE P/E RATIO **0.87** | DIV'D YLD **2.7%** | **VALUE LINE**

TIMELINESS 3 Lowered 4/2/21
SAFETY 1 Raised 6/6/14
TECHNICAL 5 Lowered 4/9/21
BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$75-$159	$117 (20%)

2024-26 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	160	(+60%)	*15%*
Low	130	(+30%)	*10%*

Institutional Decisions

	2Q2020	3Q2020	4Q2020
to Buy	233	256	280
to Sell	262	231	228
Hld's(000)	108597	108898	107949

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
High:	32.0	35.6	37.3	47.4	58.2	64.8	82.0	93.6	100.8	115.2	121.1	105.0						
Low:	25.9	28.5	30.4	34.9	44.2	50.8	60.0	72.5	76.5	89.2	77.9	84.6						

LEGENDS
0.50 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2024 2025 2026

Percent shares traded 24 16 8

% TOT. RETURN 4/21

	THIS STOCK	VL ARITH.* INDEX
1 yr.	4.1	75.2
3 yr.	26.8	56.1
5 yr.	58.9	103.5

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	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Revenues per sh [A]	61.75	75.27	66.03	79.52	53.69	53.12	48.15	38.10	42.88	49.22	40.82	32.23	26.01	28.00	24.32	22.41	*24.50*	*25.05*
"Cash Flow" per sh	3.90	4.26	4.14	4.19	4.29	4.64	4.72	4.76	5.14	5.42	5.81	6.19	6.62	7.24	7.57	8.03	*8.55*	*9.10*
Earnings per sh [AB]	1.72	2.00	1.94	2.00	1.97	2.16	2.26	2.10	2.50	2.96	3.09	3.38	3.60	4.00	4.35	4.72	*5.10*	*5.45*
Div'ds Decl'd per sh [C■]	1.24	1.26	1.28	1.30	1.32	1.34	1.36	1.38	1.40	1.48	1.56	1.68	1.80	1.94	2.10	2.30	*2.50*	*2.70*
Cap'l Spending per sh	4.14	5.20	4.39	5.20	5.51	6.02	6.90	8.12	9.32	8.32	9.61	10.46	10.72	13.19	14.19	15.38	*15.80*	*15.75*
Book Value per sh	19.90	20.16	22.01	22.60	23.52	24.16	24.98	26.14	28.47	30.74	31.48	33.32	36.74	42.87	48.18	53.95	*62.15*	*70.25*
Common Shs Outst'g [D]	80.54	81.74	89.33	90.81	92.55	90.16	90.30	90.24	90.64	100.39	101.48	103.93	106.10	111.27	119.34	125.88	*133.00*	*137.00*
Avg Ann'l P/E Ratio	16.1	13.5	15.9	13.6	12.5	13.2	14.4	15.9	15.9	16.1	17.5	20.8	22.0	21.7	23.2	22.3		
Relative P/E Ratio	.86	.73	.84	.82	.83	.84	.90	1.01	.89	.85	.88	1.09	1.11	1.17	1.24	1.13		
Avg Ann'l Div'd Yield	4.5%	4.7%	4.2%	4.8%	5.3%	4.7%	4.2%	4.1%	3.5%	3.1%	2.9%	2.4%	2.3%	2.2%	2.1%	2.2%		

Bold figures are Value Line estimates

CAPITAL STRUCTURE as of 3/31/21
Total Debt $7316.6 mill. **Due in 5 Yrs** $410.0 mill.
LT Debt $7316.4 mill. **LT Interest** $370.0 mill.
(LT interest earned: 9.5x; total interest coverage: 9.5x)
Leases, Uncapitalized Annual rentals $20.4 mill.

Pfd Stock None

Pension Assets-9/20 $528.9 mill.
Oblig. $604.2 mill.
Common Stock 130,671,944 shs.
as of 4/30/21

MARKET CAP: $12.9 billion (Large Cap)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Revenues ($mill) [A]	4347.6	3438.5	3886.3	4940.9	4142.1	3349.9	2759.7	3115.5	2901.8	2821.1	*3260*	*3430*						
Net Profit ($mill)	199.3	192.2	230.7	289.8	315.1	350.1	382.7	444.3	511.4	580.5	*665*	*735*						
Income Tax Rate	36.4%	33.8%	38.2%	39.2%	38.3%	36.4%	36.6%	27.0%	21.4%	19.5%	*20.5%*	*21.5%*						
Net Profit Margin	4.6%	5.6%	5.9%	5.9%	7.6%	10.5%	13.9%	14.3%	17.6%	20.6%	*20.4%*	*21.4%*						
Long-Term Debt Ratio	49.4%	45.3%	48.8%	44.3%	43.5%	38.7%	44.0%	34.3%	38.0%	40.0%	*48.0%*	*45.0%*						
Common Equity Ratio	50.6%	54.7%	51.2%	55.7%	56.5%	61.3%	56.0%	65.7%	62.0%	60.0%	*52.0%*	*55.0%*						
Total Capital ($mill)	4461.5	4315.5	5036.1	5542.2	5650.2	5651.8	6965.7	7263.6	9279.7	11323	*15900*	*17500*						
Net Plant ($mill)	5147.9	5475.6	6030.7	6725.9	7430.6	8280.5	9259.2	10371	11788	13355	*14500*	*15650*						
Return on Total Cap'l	6.1%	6.1%	5.9%	6.4%	6.6%	7.2%	6.4%	6.9%	6.1%	5.5%	*5.5%*	*5.5%*						
Return on Shr. Equity	8.8%	8.1%	8.9%	9.4%	9.9%	10.1%	9.8%	9.3%	8.9%	8.6%	*8.0%*	*7.5%*						
Return on Com Equity	8.8%	8.1%	8.9%	9.4%	9.9%	10.1%	9.8%	9.3%	8.9%	8.6%	*8.0%*	*7.5%*						
Retained to Com Eq	3.3%	2.8%	4.0%	4.7%	4.9%	5.1%	4.9%	4.8%	4.6%	4.4%	*4.0%*	*4.0%*						
All Div'ds to Net Prof	62%	65%	56%	50%	51%	50%	50%	48%	48%	49%	*50%*	*50%*						

CURRENT POSITION ($MILL.)

	2019	2020	3/31/21
Cash Assets	24.5	20.8	865.3
Other	433.5	450.5	755.1
Current Assets	458.0	471.3	1620.4
Accts Payable	265.0	235.8	263.6
Debt Due	464.9	.2	.2
Other	479.5	546.4	607.5
Current Liab.	1209.4	782.4	871.3
Fix. Chg. Cov.	990%	1306%	1320%

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '18-'20 to '24-'26
Revenues	-8.5%	-11.0%	*6.0%*
"Cash Flow"	5.5%	7.0%	*5.0%*
Earnings	8.0%	9.0%	*7.0%*
Dividends	5.0%	7.5%	*7.5%*
Book Value	7.5%	10.0%	*10.5%*

QUARTERLY REVENUES ($ mill.) [A]

Fiscal Year Ends	Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2018	889.2	1219.4	562.2	444.7	3115.5
2019	877.8	1094.6	485.7	443.7	2901.8
2020	875.6	977.6	493.0	474.9	2821.1
2021	914.5	1319.1	*525.9*	*500.5*	*3260*
2022	*960*	*1405*	*545*	*520*	*3430*

EARNINGS PER SHARE [A B E]

Fiscal Year Ends	Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2018	1.40	1.57	.64	.41	4.00
2019	1.38	1.82	.68	.49	4.35
2020	1.47	1.95	.79	.53	4.72
2021	1.71	2.30	*.67*	*.42*	*5.10*
2022	*1.82*	*2.27*	*.80*	*.56*	*5.45*

QUARTERLY DIVIDENDS PAID [C■]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.45	.45	.45	.485	1.84
2018	.485	.485	.485	.525	1.98
2019	.525	.525	.525	.575	2.15
2020	.575	.575	.575	.625	2.35
2021	.625	.625			

BUSINESS: Atmos Energy Corporation is engaged primarily in the distribution and sale of natural gas to over three million customers through six regulated natural gas utility operations: Louisiana Division, West Texas Division, Mid-Tex Division, Mississippi Division, Colorado-Kansas Division, and Kentucky/Mid-States Division. Gas sales breakdown for fiscal 2020: 68.6%, residential; 26.2%, commercial; 3.6%, industrial; and 1.6% other. The company sold Atmos Energy Marketing, 1/17. Officers and directors own approximately 1.2% of common stock (12/20 Proxy). President and Chief Executive Officer: Kevin Akers. Incorporated: Texas. Address: Three Lincoln Centre, Suite 1800, 5430 LBJ Freeway, Dallas, Texas 75240. Telephone: 972-934-9227. Internet: www.atmosenergy.com.

Atmos Energy shined during the first half of fiscal 2021 (which concludes on September 30th). Earnings per share jumped 17%, to $4.01, relative to the previous-year total of $3.42. One contributor was the natural gas distribution unit, which benefited from higher rates, primarily in the Mid-Tex, Mississippi, Louisiana, and West Texas divisions. Customer growth, mainly in the Mid-Tex unit, and a decrease in operating expenses also helped. Meanwhile, the performance of the pipeline and storage business got a lift from a GRIP filing approved in May, 2020 plus diminished system maintenance costs. Although the coronavirus has not gone away, full-year profits might increase around 8%, to $5.10 a share, compared to last year's $4.72 figure. Regarding fiscal 2022, we look for share net to rise at a similar percentage rate, to $5.45, assuming that operating margins widen further.

A powerful storm hit the service area, particularly Texas, in February. Consequently, the company experienced unprecedented market pricing for natural gas costs, resulting in total gas purchases during that month of $2.3 billion. To help pay for those expenses, it issued $2.2 billion in long-term debt. Leadership adds that it is working with regulators to recover these costs. Even though finances are now more leveraged, we believe these actions make sense.

Good things appear to be in store over the 2024-2026 time frame. Atmos ranks as one of the country's largest natural gas-only distributors, boasting more than three million customers across several states, including Texas, Louisiana, and Mississippi. Furthermore, it appears that the pipeline and storage unit has promising overall expansion opportunities, since it operates in one of the most-active drilling regions in the world. Finally, the balance sheet remains adequate. In the company's present configuration, annual earnings advances might be between 6% and 8% during the 3- to 5-year period.

The stock holds decent, risk-adjusted total return potential. Long-term capital appreciation possibilities are solid, even after taking recent price strength into account. Consider, too, the healthy dividend growth prospects.

Frederick L. Harris, III *May 28, 2021*

(A) Fiscal year ends Sept. 30th. **(B)** Diluted shrs. Excl. nonrec. gains (loss): '10, 5¢; '11, (1¢); '18, $1.43; '20, 17¢. Excludes discontinued operations: '11, 10¢; '12, 27¢; '13, 14¢; '17, 13¢. Next egs. rpt. due early Aug. **(C)** Dividends historically paid in early March, June, Sept., and Dec. ■ Div. reinvestment plan. Direct stock purchase plan avail. **(D)** In millions. **(E)** Qtrs may not add due to change in shrs outstanding.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	90
Earnings Predictability	100

NEW JERSEY RES. NYSE-NJR

RECENT PRICE 42.59 | P/E RATIO 19.4 (Trailing: 15.5 Median: 17.0) | RELATIVE P/E RATIO 0.89 | DIV'D YLD 3.1% | VALUE LINE

TIMELINESS 3 Raised 5/21/21
SAFETY 2 Lowered 4/17/20
TECHNICAL 3 Raised 4/16/21
BETA 1.00 (1.00 = Market)

18-Month Target Price Range

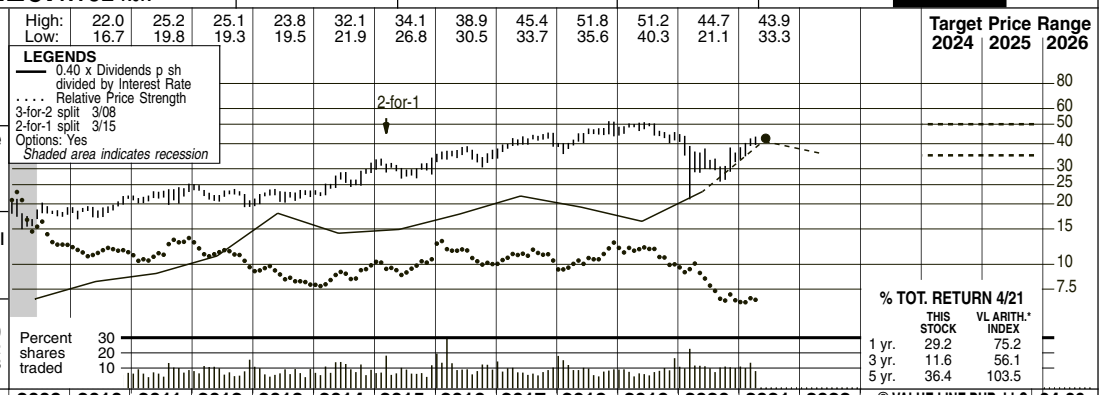
Low-High	Midpoint (% to Mid)
$16-$52	$34 (-20%)

2024-26 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(+15%)	7%
Low	35	(-20%)	-1%

Institutional Decisions

	2Q2020	3Q2020	4Q2020
to Buy	139	129	132
to Sell	97	105	118
Hld's(000)	67573	69155	71013



2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	© VALUE LINE PUB. LLC	24-26
38.10	39.81	36.31	45.37	31.17	32.05	36.30	27.08	38.38	44.40	32.09	21.90	26.28	33.24	29.01	20.39	*24.75*	*26.55*	Revenues per sh [A]	*28.40*
1.31	1.37	1.22	1.81	1.58	1.63	1.70	1.86	1.93	2.73	2.52	2.46	2.68	3.72	2.99	3.30	*3.45*	*3.75*	"Cash Flow" per sh	*4.00*
.88	.93	.78	1.35	1.20	1.23	1.29	1.36	1.37	2.08	1.78	1.61	1.73	2.72	1.96	2.07	*2.15*	*2.40*	Earnings per sh [B]	*2.55*
.45	.48	.51	.56	.62	.68	.72	.77	.81	.86	.93	.98	1.04	1.11	1.19	1.27	*1.34*	*1.42*	Div'ds Decl'd per sh [C]■	*1.65*
.64	.64	.73	.86	.90	1.05	1.13	1.26	1.33	1.52	3.76	4.15	3.80	4.39	5.83	4.65	*4.10*	*4.10*	Cap'l Spending per sh	*4.00*
5.30	7.50	7.75	8.64	8.29	8.81	9.36	9.80	10.65	11.48	12.99	13.58	14.33	16.18	17.37	19.26	*20.30*	*21.50*	Book Value per sh [D]	*24.60*
82.64	82.88	83.22	84.12	83.17	82.35	82.89	83.05	83.32	84.20	85.19	85.88	86.32	87.69	89.34	95.80	*97.00*	*98.00*	Common Shs Outst'g [E]	*100.00*
16.8	16.1	21.6	12.3	14.9	15.0	16.8	16.8	16.0	11.7	16.6	21.3	22.4	15.6	24.3	17.7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.0*
.89	.87	1.15	.74	.99	.95	1.05	1.07	.90	.62	.84	1.12	1.13	.84	1.29	.91			Relative P/E Ratio	*.95*
3.1%	3.2%	3.0%	3.3%	3.5%	3.7%	3.3%	3.4%	3.7%	3.5%	3.1%	2.9%	2.7%	2.6%	2.5%	3.5%			Avg Ann'l Div'd Yield	*3.7%*
3009.2	2248.9	3198.1	3738.1	2734.0	1880.9	2268.6	2915.1	2592.0	1953.7	*2400*	*2600*	Revenues ($mill) [A]	*2840*
106.5	112.4	113.7	176.9	153.7	138.1	149.4	240.5	175.0	196.2	*210*	*235*	Net Profit ($mill)	*260*
30.2%	7.1%	25.4%	30.2%	26.3%	15.5%	17.2%	--	NMF	5.0%	*5.0%*	*5.0%*	Income Tax Rate	*5.0%*
3.5%	5.0%	3.6%	4.7%	5.6%	7.3%	6.6%	8.2%	6.7%	10.0%	*8.7%*	*9.1%*	Net Profit Margin	*9.1%*
35.5%	39.2%	36.6%	38.2%	43.2%	47.7%	44.6%	45.4%	49.8%	55.1%	*54.0%*	*54.5%*	Long-Term Debt Ratio	*53.0%*
64.5%	60.8%	63.4%	61.8%	56.8%	52.3%	55.4%	54.6%	50.2%	44.9%	*46.0%*	*45.5%*	Common Equity Ratio	*47.0%*
1203.1	1339.0	1400.3	1564.4	1950.6	2230.1	2233.7	2599.6	3088.9	4104.2	*4270*	*4605*	Total Capital ($mill)	*5260*
1295.9	1484.9	1643.1	1884.1	2128.3	2407.7	2609.7	2651.0	3041.2	3983.0	*4065*	*4145*	Net Plant ($mill)	*4400*
9.7%	9.2%	9.0%	12.1%	8.6%	6.9%	7.7%	10.1%	6.4%	5.6%	*6.0%*	*6.0%*	Return on Total Cap'l	*6.0%*
13.7%	13.8%	12.8%	18.3%	13.9%	11.8%	12.1%	16.9%	11.3%	10.6%	*10.5%*	*11.0%*	Return on Shr. Equity	*10.5%*
13.7%	13.8%	12.8%	18.3%	13.9%	11.8%	12.1%	16.9%	11.3%	10.6%	*10.5%*	*11.0%*	Return on Com Equity	*10.5%*
6.2%	6.2%	5.2%	11.0%	7.0%	4.8%	5.0%	10.2%	4.6%	4.3%	*4.0%*	*4.5%*	Retained to Com Eq	*3.5%*
55%	55%	59%	40%	50%	60%	59%	40%	59%	60%	*62%*	*59%*	All Div'ds to Net Prof	*64%*

CAPITAL STRUCTURE as of 3/31/21
Total Debt $2296.3 mill. **Due in 5 Yrs** $420.5 mill.
LT Debt $2265.2 mill. **LT Interest** $47.1 mill.
Incl. $54.9 mill. capitalized leases.
(LT interest earned: 5.0x; total interest coverage: 5.0x)
Pension Assets-9/20 $404.4 mill.
Oblig. $643.0 mill.
Pfd Stock None

Common Stock 96,339,849 shs.
as of 5/3/21
MARKET CAP: $4.1 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2019	2020	3/31/21
Cash Assets	2.7	117.0	57.7
Other	508.9	505.3	477.5
Current Assets	511.6	622.3	535.2
Accts Payable	295.9	270.1	288.2
Debt Due	46.9	152.6	31.1
Other	103.6	111.0	96.8
Current Liab.	446.4	533.7	416.1
Fix. Chg. Cov.	545%	545%	550%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '18-'20 to '24-'26
Revenues	-2.5%	-6.5%	*.5%*
"Cash Flow"	7.0%	7.0%	*3.0%*
Earnings	6.0%	5.5%	*2.0%*
Dividends	7.0%	6.5%	*5.5%*
Book Value	7.5%	8.5%	*5.5%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.) [A] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2018	705.3	1019.1	543.4	647.3	2915.1
2019	811.8	866.2	434.9	479.1	2592.0
2020	615.0	639.6	299.0	400.1	1953.7
2021	454.3	802.2	*525*	*618.5*	*2400*
2022	*505*	*850*	*575*	*670*	*2600*

Fiscal Year Ends	EARNINGS PER SHARE [A B] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2018	1.53	1.61	d.09	d.33	2.72
2019	.61	1.27	d.20	.29	1.96
2020	.44	1.12	d.06	.57	2.07
2021	.46	1.77	*d.20*	*.12*	*2.15*
2022	*.50*	*1.85*	*d.13*	*.18*	*2.40*

Cal-endar	QUARTERLY DIVIDENDS PAID [C]■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.255	.255	.255	.273	1.04
2018	.273	.273	.273	.2925	1.11
2019	.2925	.2925	.2925	.3125	1.19
2020	.3125	.3125	.3125	.3325	1.27
2021	.3325	.3325			

BUSINESS: New Jersey Resources Corp. is a holding company providing retail/wholesale energy svcs. to customers in NJ, and in states from the Gulf Coast to New England, and Canada. New Jersey Natural Gas had 558,000 cust. at 9/30/20. Fiscal 2020 volume: 215 bill. cu. ft. (14% interruptible, 21% res., 10% commercial & elec. utility, 55% capacity release programs). N.J. Natural Energy subsidiary provides unregulated retail/wholesale natural gas and related energy svcs. 2020 dep. rate: 2.8%. Has 1,156 empls. Off./dir. own 1.3% of common; BlackRock, 14.3%; Vanguard, 10.6% (12/20 Proxy). CEO, President & Director: Steven D. Westhoven. Incorporated: New Jersey. Address: 1415 Wyckoff Road, Wall, NJ 07719. Telephone: 732-938-1480. Web: www.njresources.com.

Since our February review, shares of New Jersey Resources have advanced nicely. The company's stock price increased about 15% over that time frame. This uptick likely reflected the better-than-expected financial results, of late.

The retailer and wholesaler of energy services posted solid results for the March quarter. To that point, revenues increased 25.4%, to $802.2 million, thanks to double-digit gains of nonutility volumes of nearly 44% and to a lesser extent a 4% rise in utility volumes. Meanwhile, on the profitability front, overall expenses fell 970 basis points, as a percentage of the top line. All told, these factors drove the bottom line 58% higher, to $1.77 per share. This was markedly better than our call for earnings of $0.90.

We have raised our fiscal 2021 (ends September 30th) share-net estimate by $0.50, bringing that figure to $2.15. Our revised figure would represent a year-over-year gain of about 4%, and falls at the top end of management's recently increased guidance range of $2.05 to $2.15. The primary driver of this year's results will largely be the Energy Services division that has been able to take advantage of the increased volatility affecting commodity prices these days. At the same time, the New Jersey Natural Gas (NJNG) regulated utility segment has added roughly 3,700 new customer accounts in the first six months of this year. Combined, we look for New Jersey Resources annual revenues to advance more than 20% this year, to $2.4 billion. That said, the industry's operating environment has been experiencing elevated uncertainty due to the COVID-19 pandemic; volatility surrounding commodity prices; a slump in end-user demand; and now fossil fuels transportation factors.

We look for this steady momentum to continue into next year, as well. The NJNG unit is on pace to add 28,000-30,000 new customers from 2021-2023. At the same time, the regulated utility business filed for a base rate case increase of about $165 million, which would help to return some of its investments in capital expansion projects.

Steady dividend growth aside, these shares appear richly valued.

Bryan J. Fong *May 28, 2021*

(A) Fiscal year ends Sept. 30th.
(B) Diluted earnings. Qtly. revenues and egs. may not sum to total due to rounding and change in shares outstanding. Next earnings report due early Aug.
(C) Dividends historically paid in early Jan., April, July, and October. ■ Dividend reinvestment plan available.
(D) Includes regulatory assets in 2020: $527.5 million, $5.51/share.
(E) In millions, adjusted for splits.

Company's Financial Strength	A+
Stock's Price Stability	80
Price Growth Persistence	60
Earnings Predictability	55

N.W. NATURAL NYSE-NWN

RECENT PRICE **54.22** | P/E RATIO **21.3** (Trailing: 20.4 Median: 24.0) | RELATIVE P/E RATIO **0.98** | DIV'D YLD **3.5%** | **VALUE LINE**

TIMELINESS 3 Raised 11/20/20
SAFETY 3 Lowered 3/19/21
TECHNICAL 4 Raised 5/7/21
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$27-$71	$49 (-10%)

2024-26 PROJECTIONS

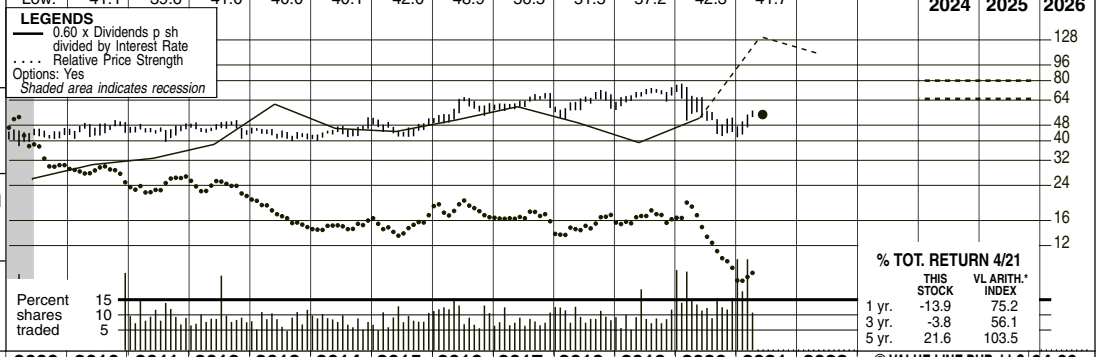
	Price	Gain	Ann'l Total Return
High	90	(+65%)	*15%*
Low	60	(+10%)	*6%*

Institutional Decisions

	2Q2020	3Q2020	4Q2020
to Buy	73	92	99
to Sell	103	94	85
Hld's(000)	21936	21896	22201

	50.9	49.0	50.8	46.6	52.6	52.3	66.2	69.5	71.8	74.1	77.3	56.8
High:	41.1	39.6	41.0	40.0	40.1	42.0	48.9	56.5	51.5	57.2	42.3	41.7
Low:												

LEGENDS
0.60 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded area indicates recession



% TOT. RETURN 4/21

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-13.9	75.2
3 yr.	-3.8	56.1
5 yr.	21.6	103.5

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	© VALUE LINE PUB. LLC	24-26
33.01	37.20	39.13	39.16	38.17	30.56	31.72	27.14	28.02	27.64	26.39	23.61	26.52	24.45	24.49	25.29	*26.80*	*27.80*	Revenues per sh	*31.05*
4.34	4.76	5.41	5.31	5.20	5.18	5.00	4.94	5.04	5.05	4.91	4.93	1.04	5.28	5.15	5.69	*5.80*	*6.05*	"Cash Flow" per sh	*6.85*
2.11	2.35	2.76	2.57	2.83	2.73	2.39	2.22	2.24	2.16	1.96	2.12	d1.94	2.33	2.19	2.30	*2.55*	*2.65*	Earnings per sh [A]	*3.10*
1.32	1.39	1.44	1.52	1.60	1.68	1.75	1.79	1.83	1.85	1.86	1.87	1.88	1.89	1.90	1.91	*1.92*	*1.93*	Div'ds Decl'd per sh [B]■	*1.96*
3.48	3.56	4.48	3.92	5.09	9.35	3.76	4.91	5.13	4.40	4.37	4.87	7.43	7.43	7.95	9.18	*8.40*	*8.70*	Cap'l Spending per sh	*9.40*
21.28	22.01	22.52	23.71	24.88	26.08	26.70	27.23	27.77	28.12	28.47	29.71	25.85	26.41	28.42	29.05	*33.85*	*37.10*	Book Value per sh [D]	*45.30*
27.58	27.24	26.41	26.50	26.53	26.58	26.76	26.92	27.08	27.28	27.43	28.63	28.74	28.88	30.47	30.59	*31.00*	*31.00*	Common Shs Outst'g [C]	*32.00*
17.0	15.9	16.7	18.1	15.2	17.0	19.0	21.1	19.4	20.7	23.7	26.9	- -	26.6	30.9	25.0	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*24.0*
.91	.86	.89	1.09	1.01	1.08	1.19	1.34	1.09	1.09	1.19	1.41	- -	1.44	1.65	1.30			Relative P/E Ratio	*1.35*
3.7%	3.7%	3.1%	3.3%	3.7%	3.6%	3.9%	3.8%	4.2%	4.1%	4.0%	3.3%	3.0%	3.0%	2.8%	3.3%			Avg Ann'l Div'd Yield	*2.6%*
848.8	730.6	758.5	754.0	723.8	676.0	762.2	706.1	746.4	773.7	*830*	*860*	Revenues ($mill)	*995*
63.9	59.9	60.5	58.7	53.7	58.9	d55.6	67.3	65.3	70.3	*79.0*	*82.0*	Net Profit ($mill)	*120*
40.4%	42.4%	40.8%	41.5%	40.0%	40.9%	- -	26.4%	16.2%	23.1%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
7.5%	8.2%	8.0%	7.8%	7.4%	8.7%	NMF	9.5%	8.8%	9.1%	*9.5%*	*9.5%*	Net Profit Margin	*10.0%*
47.3%	48.5%	47.6%	44.8%	42.5%	44.4%	47.9%	48.1%	48.2%	49.2%	*49.0%*	*46.5%*	Long-Term Debt Ratio	*43.0%*
52.7%	51.5%	52.4%	55.2%	57.5%	55.6%	52.1%	51.9%	51.8%	50.8%	*51.0%*	*53.5%*	Common Equity Ratio	*57.0%*
1356.2	1424.7	1433.6	1389.0	1357.7	1529.8	1426.0	1468.9	1672.0	1748.8	*2050*	*2150*	Total Capital ($mill)	*2550*
1893.9	1973.6	2062.9	2121.6	2182.7	2260.9	2255.0	2421.4	2438.9	2654.8	*2640*	*2750*	Net Plant ($mill)	*3105*
6.2%	5.7%	5.8%	5.8%	5.5%	5.1%	NMF	5.8%	5.2%	5.2%	*4.0%*	*4.0%*	Return on Total Cap'l	*4.0%*
8.9%	8.2%	8.1%	7.6%	6.9%	6.9%	NMF	8.8%	7.5%	7.9%	*7.5%*	*7.0%*	Return on Shr. Equity	*7.0%*
8.9%	8.2%	8.1%	7.6%	6.9%	6.9%	NMF	8.8%	7.5%	7.9%	*7.5%*	*7.0%*	Return on Com Equity	*7.0%*
2.4%	1.6%	1.5%	1.1%	.6%	.9%	NMF	2.1%	1.4%	1.7%	*2.0%*	*2.0%*	Retained to Com Eq	*2.5%*
73%	80%	81%	85%	92%	87%	NMF	76%	82%	79%	*75%*	*73%*	All Div'ds to Net Prof	*63%*

CAPITAL STRUCTURE as of 3/31/21
Total Debt $1192.2 mill. **Due in 5 Yrs** $360.2 mill.
LT Debt $860.7 mill. **LT Interest** $43.1 mill.

(Total interest coverage: 3.1x)

Pension Assets-12/20 $373.9 mill.
Oblig. $595.2 mill.

Pfd Stock None

Common Stock 30,656,006 shares
as of 4/26/21

MARKET CAP $1.7 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2019	2020	3/31/21
Cash Assets	9.6	30.2	17.9
Other	284.1	293.0	284.9
Current Assets	293.7	323.2	302.8
Accts Payable	113.4	97.9	88.6
Debt Due	224.2	399.9	331.5
Other	144.6	129.3	165.6
Current Liab.	482.2	627.1	585.7
Fix. Chg. Cov.	336%	335%	312%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '18-'20 to '24-'26
Revenues	-3.5%	-2.0%	*4.0%*
"Cash Flow"	0.5%	1.5%	*4.0%*
Earnings	-1.5%	1.5%	*5.5%*
Dividends	1.5%	0.5%	*.5%*
Book Value	1.0%	- -	*8.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	264.7	124.6	91.2	226.7	706.1
2019	285.4	123.4	90.3	247.3	746.4
2020	285.2	135.0	93.3	260.2	773.7
2021	315.9	*145*	*110*	*259.1*	*830*
2022	*320*	*150*	*120*	*270*	*860*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	1.46	d.01	d.39	1.27	2.33
2019	1.50	.07	d.61	1.26	2.19
2020	1.58	d.17	d.61	1.50	2.30
2021	1.94	*d.10*	*d.60*	*1.31*	*2.55*
2022	*1.96*	*d.08*	*d.58*	*1.35*	*2.65*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.47	.47	.47	.4725	1.88
2018	.4725	.4725	.4725	.475	1.89
2019	.475	.475	.475	.4775	1.90
2020	.4775	.4775	.4775	.48	1.91
2021	.48	.48			

BUSINESS: Northwest Natural Holding Co. distributes natural gas to 1000 communities, 775,000 customers, in Oregon (89% of customers) and in southwest Washington state. Principal cities served: Portland and Eugene, OR; Vancouver, WA. Service area population: 3.7 mill. (77% in OR). Company buys gas supply from Canadian and U.S. producers; has transportation rights on Northwest Pipeline system. Owns local underground storage. Rev. breakdown: residential, 37%; commercial, 22%; industrial, gas transportation, 41%. Employs 1,167. BlackRock Inc. owns 16.4% of shares; State Street, 15.4%; Off./Dir., 1.03% (4/21 proxy). CEO: David H. Anderson. Inc.: Oregon. Address: 220 NW 2nd Ave., Portland, OR 97209. Tel.: 503-226-4211. Internet: www.nwnatural.com.

Since our February review, shares of Northwest Natural Holding Co. are trading markedly higher. In fact, over that time frame, the stock's price climbed approximately 17%. While this is encouraging, investors should recall that NWN shares did sell off from the highs experienced in 2020. In fact, the stock lost more than 45% of its value through the lows that were hit earlier this year.

Meanwhile, the company posted solid financial results for the March quarter. This is evident in revenues advancing 10.8%, to $315.9 million, thanks to new rate increases in Oregon, customer growth, and asset management benefits. In fact, the regulated utility business added 11,000 natural gas meters over the past 12 months. Additionally, the colder-than-normal weather patterns across NWN's service territory helped to drive end-use consumer demand. Those benefits were partially offset by ongoing challenges stemming from the COVID-19 pandemic. However, with vaccines rolling out, it appears that there is a light at the end of that tunnel. On the margin front, overall expenses decreased 320 basis points, as a percentage of the top line. Combined, these factors drove the bottom line 22.8% higher, to $1.94 a share. This bested our call of $1.60.

We have raised our 2021 revenue and earnings estimate by $10 million and $0.05, to $830 million and $2.55 a share, respectively. Our revised figure would represent a more-than-10% year-over-year share-net advance. This should be supported by an estimated 7.5% rise in sales, thanks to new customer accounts at the Natural Gas Distribution business. At the same time, the Other business segment has been getting a boost from acquisitions. The NW Natural Water Company continues to purchase water and waste water utilities, thereby expanding its geographic footprint and providing clean, reliable service to its customers.

Neutrally ranked shares of Northwest Natural may appeal to income-seeking patient investors. Indeed, the stock's above-average dividend yield is enticing and well covered. What's more, NWN offers worthwhile recovery potential for the pull to 2024-2026.

Bryan J. Fong *May 28, 2021*

(A) Diluted earnings per share. Excludes nonrecurring items: '06, ($0.06); '08, ($0.03); '09, $0.06; May not sum due to rounding. Next earnings report due in early Aug.
(B) Dividends historically paid in mid-February, May, August, and November.
■ Dividend reinvestment plan available.
(C) In millions.
(D) Includes intangibles. In 2020: $69.2 million, $2.26/share.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	30
Earnings Predictability	5

ONE GAS, INC. NYSE-OGS

RECENT PRICE 74.20 | P/E RATIO 19.5 (Trailing: 19.8 Median: NMF) | RELATIVE P/E RATIO 0.90 | DIV'D YLD 3.2% | VALUE LINE

TIMELINESS 3 Raised 3/26/21
SAFETY 2 New 6/2/17
TECHNICAL 4 Raised 5/28/21
BETA .80 (1.00 = Market)

18-Month Target Price Range

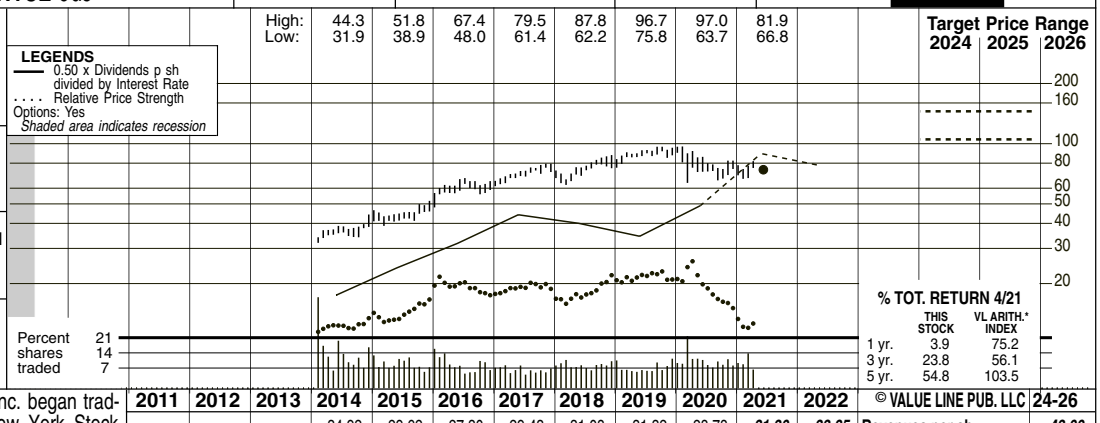
Low-High	Midpoint (% to Mid)
$60-$121	$91 (20%)

2024-26 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	145	(+95%)	*20%*
Low	105	(+40%)	*12%*

Institutional Decisions

	2Q2020	3Q2020	4Q2020
to Buy	142	130	123
to Sell	137	151	163
Hld's(000)	42060	42057	42726



The shares of ONE Gas, Inc. began trading "regular-way" on the New York Stock Exchange on February 3, 2014. That happened as a result of the separation of ONEOK's natural gas distribution operation. Regarding the details of the spinoff, on January 31, 2014, ONEOK distributed one share of OGS common stock for every four shares of ONEOK common stock held by ONEOK shareholders of record as of the close of business on January 21. It should be mentioned that ONEOK did not retain any ownership interest in the new company.

CAPITAL STRUCTURE as of 3/31/21
Total Debt $4529.7 mill. **Due in 5 Yrs** $1020.0 mill.
LT Debt $4082.7 mill. **LT Interest** $150.0 mill.
(LT interest earned: 4.8x; total interest coverage: 4.8x)
Leases, Uncapitalized Annual rentals $7.9 mill.
Pfd Stock None
Pension Assets-12/20 $987.6 mill.
Oblig. $1077.6 mill.
Common Stock 53,245,144 shs.
as of 4/26/21
MARKET CAP: $4.0 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2019	2020	3/31/21
Cash Assets	17.9	8.0	704.9
Other	488.3	531.9	453.8
Current Assets	506.2	539.9	1158.7
Accts Payable	120.5	152.3	228.0
Debt Due	516.5	418.2	447.0
Other	235.7	226.6	204.0
Current Liab.	872.7	797.1	879.0
Fix. Chg. Cov.	567%	587%	595%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '18-'20 to '24-'26
Revenues	--	-1.0%	*6.0%*
"Cash Flow"	--	8.0%	*6.0%*
Earnings	--	10.0%	*6.5%*
Dividends	--	14.5%	*7.0%*
Book Value	--	3.0%	*10.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	638.5	292.5	238.3	464.4	1633.7
2019	661.0	290.6	248.6	452.5	1652.7
2020	528.2	273.3	244.6	484.2	1530.3
2021	625.3	*320*	*257*	*472.7*	*1675*
2022	*650*	*355*	*300*	*505*	*1810*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	1.72	.39	.31	.83	3.25
2019	1.76	.46	.33	.96	3.51
2020	1.72	.48	.39	1.09	3.68
2021	1.79	*.51*	*.42*	*1.08*	*3.80*
2022	*1.85*	*.55*	*.47*	*1.13*	*4.00*

Calendar	QUARTERLY DIVIDENDS PAID [B] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.42	.42	.42	.42	1.68
2018	.46	.46	.46	.46	1.84
2019	.50	.50	.50	.50	2.00
2020	.54	.54	.54	.54	2.16
2021	.58	.58			

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	© VALUE LINE PUB. LLC	24-26
	--	--	--	34.92	29.62	27.30	29.43	31.08	31.32	28.78	*31.30*	*33.85*	Revenues per sh	*43.00*
	--	--	--	4.52	4.82	5.43	5.96	6.32	6.96	7.36	*7.75*	*8.20*	"Cash Flow" per sh	*9.75*
	--	--	--	2.07	2.24	2.65	3.02	3.25	3.51	3.68	*3.80*	*4.00*	Earnings per sh [A]	*5.00*
	--	--	--	.84	1.20	1.40	1.68	1.84	2.00	2.16	*2.32*	*2.48*	Div'ds Decl'd per sh [B]■	*2.95*
	--	--	--	5.70	5.63	5.91	6.81	7.50	7.91	8.87	*9.00*	*9.20*	Cap'l Spending per sh	*9.75*
	--	--	--	34.45	35.24	36.12	37.47	38.86	40.35	42.01	*44.40*	*48.45*	Book Value per sh	*74.40*
	--	--	--	52.08	52.26	52.28	52.31	52.57	52.77	53.17	*53.50*	*53.50*	Common Shs Outst'g [C]	*57.00*
	--	--	--	17.8	19.8	22.7	23.5	23.1	25.3	21.7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*25.0*
	--	--	--	.94	1.00	1.19	1.18	1.25	1.35	1.11			Relative P/E Ratio	*1.40*
	--	--	--	2.3%	2.7%	2.3%	2.4%	2.5%	2.3%	2.7%			Avg Ann'l Div'd Yield	*2.4%*
	--	--	--	1818.9	1547.7	1427.2	1539.6	1633.7	1652.7	1530.3	*1675*	*1810*	Revenues ($mill)	*2450*
	--	--	--	109.8	119.0	140.1	159.9	172.2	186.7	196.4	*205*	*215*	Net Profit ($mill)	*285*
	--	--	--	38.4%	38.0%	37.8%	36.4%	23.7%	18.7%	17.5%	*17.0%*	*17.5%*	Income Tax Rate	*22.0%*
	--	--	--	6.0%	7.7%	9.8%	10.4%	10.5%	11.3%	12.8%	*12.2%*	*11.9%*	Net Profit Margin	*11.6%*
	--	--	--	40.1%	39.5%	38.7%	37.8%	38.6%	37.7%	41.5%	*64.0%*	*62.0%*	Long-Term Debt Ratio	*47.0%*
	--	--	--	59.9%	60.5%	61.3%	62.2%	61.4%	62.3%	58.5%	*36.0%*	*38.0%*	Common Equity Ratio	*53.0%*
	--	--	--	2995.3	3042.9	3080.7	3153.5	3328.1	3415.5	3815.7	*6600*	*6820*	Total Capital ($mill)	*8000*
	--	--	--	3293.7	3511.9	3731.6	4007.6	4283.7	4565.2	4867.1	*5100*	*5330*	Net Plant ($mill)	*6000*
	--	--	--	4.4%	4.7%	5.2%	5.8%	5.9%	6.4%	6.0%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.0%*
	--	--	--	6.1%	6.5%	7.4%	8.2%	8.4%	8.8%	8.8%	*8.5%*	*8.5%*	Return on Shr. Equity	*6.5%*
	--	--	--	6.1%	6.5%	7.4%	8.2%	8.4%	8.8%	8.8%	*8.5%*	*8.5%*	Return on Com Equity	*6.5%*
	--	--	--	3.7%	3.1%	3.5%	3.7%	3.7%	3.8%	3.7%	*3.5%*	*3.0%*	Retained to Com Eq	*3.0%*
	--	--	--	40%	53%	52%	55%	56%	56%	58%	*61%*	*62%*	All Div'ds to Net Prof	*59%*

BUSINESS: ONE Gas, Inc. provides natural gas distribution services to more than two million customers. There are three divisions: Oklahoma Natural Gas, Kansas Gas Service, and Texas Gas Service. The company purchased 153 Bcf of natural gas supply in 2020, compared to 174 Bcf in 2019. Total volumes delivered by customer (fiscal 2020): transportation, 58.3%; residential, 31.7%; commercial & industrial, 9.4%; other, .6%. ONE Gas has around 3,600 employees. BlackRock owns 11.9% of common stock; The Vanguard Group, 9.7%; American Century Investment, 7.6%; officers and directors, 1.9% (4/21 Proxy). CEO: Pierce H. Norton II. Incorporated: Oklahoma. Address: 15 East Fifth Street, Tulsa, Oklahoma 74103. Tel.: 918-947-7000. Internet: www.onegas.com.

ONE Gas' bottom line exhibited some improvement in the opening quarter of 2021. Share net of $1.79 was 4% higher than the prior-year total of $1.72. That partially reflected benefits from new rates, primarily in Texas and Oklahoma. Another contributing factor was an expanded customer base in Oklahoma and Texas. The effective income tax rate decreased, as well. The company adds that there was only a small number of outages across the service area despite the severe storm that occurred there in February (see below for more details). Although the effects of the coronavirus have continued, we believe that full-year earnings will increase around 3%, to $3.80 a share. Assuming further growth of operating margins in 2022, share net might advance another 5%, to $4.00.

Winter Storm Uri prompted leadership to take certain actions. Given that event, ONE Gas experienced unprecedented market pricing for gas costs in its Kansas, Oklahoma, and Texas territories, which resulted in aggregated natural gas purchases for February of approximately $2.1 billion. To pay for these expenses, the company issued $1 billion of 0.85 percent senior notes due 2023, $700 million of 1.10 percent senior notes due 2024, and $800 million of floating-rate senior notes due 2023. It should also be stated that ONE Gas seeks to recover those costs through future rate filings. Still, since the balance sheet is now more leveraged, we lowered the Financial Strength rating one notch, to B++.

Business prospects over the 2024-2026 span seem promising. The company remains the leading natural gas distributor (as measured by customer count) in both Oklahoma and Kansas, and holds the number-three position in Texas. Moreover, these markets seem to have decent growth possibilities and are located in one of the most active drilling regions in the United States. Also, ONE Gas seems capable of satisfying its working capital requirements, capital expenditures, and other commitments for a while.

These shares, although just an Average (3) selection for Timeliness, possess solid long-term total return potential.

Frederick L. Harris, III *May 28, 2021*

(A) Diluted EPS. Excludes nonrecurring gain: 2017, $0.06. Next earnings report due early Aug. Quarterly EPS for 2018 don't add up due to rounding.
(B) Dividends historically paid in early March, June, Sept., and Dec. ■ Dividend reinvestment plan. Direct stock purchase plan.
(C) In millions.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	100

SOUTH JERSEY INDS. NYSE-SJI

RECENT PRICE **25.66** | P/E RATIO **14.3** (Trailing: 14.2 Median: 19.0) | RELATIVE P/E RATIO **0.66** | DIV'D YLD **5.0%** | **VALUE LINE**

TIMELINESS 5 Lowered 5/28/21
SAFETY 3 Lowered 8/28/20
TECHNICAL 5 Lowered 5/21/21
BETA 1.05 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$18-$51	$35 (35%)

2024-26 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	50	(+95%)	*21%*
Low	35	(+35%)	*12%*

Institutional Decisions

	2Q2020	3Q2020	4Q2020
to Buy	88	132	110
to Sell	110	64	91
Hld's(000)	83521	85672	110377

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
High:	27.1	29.0	29.0	31.1	30.6	30.4	34.8	38.4	36.7	34.5	33.4	29.2						
Low:	18.6	21.4	22.9	25.3	25.9	21.2	22.1	30.8	26.0	26.6	18.2	20.8						

LEGENDS
0.70 x Dividends p sh divided by Interest Rate
Relative Price Strength
2-for-1 split 5/15
Options: Yes
Shaded area indicates recession

Target Price Range 2024 | 2025 | 2026

% TOT. RETURN 4/21

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-10.4	75.2
3 yr.	-10.7	56.1
5 yr.	5.7	103.5

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15.89	15.88	16.15	16.18	14.19	15.48	13.71	11.16	11.18	12.98	13.52	13.04	15.63	19.20	17.63	15.32	***17.25***	***18.10***	Revenues per sh	***21.75***
1.25	1.75	1.60	1.74	1.86	2.10	2.23	2.34	2.48	2.67	2.42	2.67	2.79	2.91	2.56	3.32	***2.95***	***3.25***	"Cash Flow" per sh	***4.15***
.86	1.23	1.05	1.14	1.19	1.35	1.45	1.52	1.52	1.57	1.44	1.34	1.23	1.38	1.12	1.68	***1.80***	***1.95***	Earnings per sh [A]	***2.70***
.43	.46	.51	.56	.61	.68	.75	.83	.90	.96	1.02	1.06	1.10	1.13	1.16	1.19	***1.25***	***1.32***	Div'ds Decl'd per sh [B] ■	***1.50***
1.60	1.26	.94	1.04	1.83	2.79	3.20	4.01	4.84	5.01	4.87	3.50	3.43	3.99	5.46	4.84	***5.85***	***6.65***	Cap'l Spending per sh	***7.85***
6.75	7.55	8.12	8.67	9.12	9.54	10.33	11.63	12.64	13.65	14.62	16.22	14.99	14.82	15.41	16.51	***18.20***	***18.85***	Book Value per sh [C]	***22.60***
57.96	58.65	59.22	59.46	59.59	59.75	60.43	63.31	65.43	68.33	70.97	79.48	79.55	85.51	92.39	100.59	***103.00***	***105.00***	Common Shs Outst'g [D]	***115.00***
16.6	11.9	17.2	15.9	15.0	16.8	18.4	16.9	18.9	18.0	17.9	21.7	27.9	22.6	28.3	14.9	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	***16.0***
.88	.64	.91	.96	1.00	1.07	1.15	1.08	1.06	.95	.90	1.14	1.40	1.22	1.51	.77			Relative P/E Ratio	***.90***
3.0%	3.2%	2.8%	3.1%	3.4%	3.0%	2.8%	3.2%	3.1%	3.4%	3.9%	3.6%	3.2%	3.6%	3.7%	4.8%			Avg Ann'l Div'd Yield	***3.5%***
828.6	706.3	731.4	887.0	959.6	1036.5	1243.1	1641.3	1628.6	1541.4	***1775***	***1900***	Revenues ($mill)	***2500***
87.0	93.3	97.1	104.0	99.0	102.8	98.1	116.2	103.0	163.0	***185***	***205***	Net Profit ($mill)	***300***
22.4%	10.8%	--	--	5.9%	42.0%	--	--	--	9.9%	***21.0%***	***21.0%***	Income Tax Rate	***21.0%***
10.5%	13.2%	13.3%	11.7%	10.3%	9.9%	7.9%	7.1%	6.3%	10.6%	***10.4%***	***10.8%***	Net Profit Margin	***12.0%***
40.5%	45.0%	45.1%	48.0%	49.2%	38.5%	48.5%	62.4%	59.2%	62.6%	***63.0%***	***63.0%***	Long-Term Debt Ratio	***60.5%***
59.5%	55.0%	54.9%	52.0%	50.8%	61.5%	51.5%	37.6%	40.8%	37.4%	***37.0%***	***37.0%***	Common Equity Ratio	***39.5%***
1048.3	1337.6	1507.4	1791.9	2043.9	2097.2	2315.4	3373.9	3493.9	4437.3	***5075***	***5380***	Total Capital ($mill)	***6600***
1352.4	1578.0	1859.1	2134.1	2448.1	2623.8	2700.2	3653.5	4073.5	4464.2	***4800***	***5150***	Net Plant ($mill)	***5800***
8.9%	7.4%	6.8%	6.4%	5.4%	5.4%	5.1%	4.4%	4.0%	4.8%	***4.5%***	***5.0%***	Return on Total Cap'l	***5.5%***
13.9%	12.7%	11.7%	11.2%	9.5%	8.0%	8.2%	9.2%	7.2%	9.8%	***10.0%***	***10.5%***	Return on Shr. Equity	***11.5%***
13.9%	12.7%	11.7%	11.2%	9.5%	8.0%	8.2%	9.2%	7.2%	9.8%	***10.0%***	***10.5%***	Return on Com Equity	***11.5%***
6.7%	5.8%	4.8%	4.3%	2.8%	1.6%	.9%	1.7%	NMF	2.9%	***3.0%***	***3.5%***	Retained to Com Eq	***5.0%***
52%	55%	59%	61%	71%	80%	89%	82%	104%	70%	***70%***	***68%***	All Div'ds to Net Prof	***58%***

CAPITAL STRUCTURE as of 3/31/21
Total Debt $3377.5 mill. **Due in 5 Yrs** $380.1 mill.
LT Debt $3063.4 mill. **LT Interest** $100 mill.

Leases, Uncapitalized Annual rentals $1.2 mill.
Pension Assets-12/20 $331 mill.
Oblig. $481.8 mill.

Pfd Stock None

Common Stock 112,421,394 shs.
as of 5/1/21

MARKET CAP: $2.9 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2019	2020	3/31/21
Cash Assets	6.4	34.0	30.4
Other	646.1	472.8	458.5
Current Assets	652.5	506.8	488.9
Accts Payable	232.2	256.6	218.1
Debt Due	1316.6	739.2	314.1
Other	183.1	167.8	220.5
Current Liab.	1731.9	1163.6	752.7
Fix. Chg. Cov.	176%	238%	333%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '18-'20 to '24-'26
Revenues	1.5%	6.5%	*4.0%*
"Cash Flow"	4.5%	3.0%	*6.0%*
Earnings	1.5%	-1.5%	*11.5%*
Dividends	6.5%	4.0%	*4.5%*
Book Value	5.5%	2.5%	*6.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	521.9	227.3	302.5	589.6	1641.3
2019	637.3	266.9	261.2	463.2	1628.6
2020	534.1	260.0	261.5	485.8	1541.4
2021	674.3	***285***	***285***	***530.7***	***1775***
2022	***640***	***320***	***320***	***620***	***1900***

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	1.19	.07	d.27	.39	1.38
2019	1.09	d.13	d.30	.46	1.12
2020	1.15	d.01	d.06	.62	1.68
2021	1.26	***.01***	***d.05***	***.58***	***1.80***
2022	***1.32***	***.02***	***d.02***	***.63***	***1.95***

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	--	.273	.273	.553	1.10
2018	--	.280	.280	.567	1.13
2019	--	.287	.287	.582	1.16
2020	--	.295	.295	.598	1.19
2021	--	.303			

BUSINESS: South Jersey Industries, Inc. is a holding company. The company distributes natural gas in New Jersey and Maryland. South Jersey Gas rev. mix '20: residential, 48%; commercial, 23%; cogen. and electric gen., 9%; industrial, 20%. Acq. Elizabethtown Gas and Elkton Gas, 7/18. Nonutil. oper. incl. South Jersey Energy, South Jersey Resources Group, South Jersey Exploration, Marina Energy, South Jersey Energy Service Plus, and SJI Midstream. Has about 1,130 empl. Off./dir. own less than 1% of common; BlackRock, 14.4%; State Street Corporation, 13.9%; The Vanguard Group, 10.8% (3/21 proxy). Pres. & CEO: Michael J. Renna. Chairman: Joseph M. Rigby. Inc.: NJ. Addr.: 1 South Jersey Plaza, Folsom, NJ 08037. Tel.: 609-561-9000. Web: www.sjindustries.com.

South Jersey Industries has recently completed two concurrent registered public offerings. This included $228 million in shares of common stock and $300 million in equity units. The equity units were also listed on the New York Stock Exchange. Net proceeds from these offerings will be used to reduce leverage and for general purposes, as well as for capital expenditures mainly for its regulated businesses, such as infrastructure investments. Investors were not pleased by this development and the shares fell on the news. This issuance of additional shares drives down the price of a security and dilutes the ownership interest of existing stockholders.

But the equity has staged a partial rebound lately. The company posted good results for the March quarter. The top line increased roughly 26%, year over year, to $674.3 million. Adjusted earnings per share of $1.26 compared favorably with the prior-year tally. The company's utility and nonutility operations both fared well in the recent period.

Prospects for the coming years appear favorable here. The company's utility businesses should continue to benefit from solid customer growth, rate relief, and infrastructure modernization programs that allow South Jersey to enhance the reliability of its systems and earn an authorized return on these investments. Elsewhere, we expect favorable results on the nonutility side. The Energy Management segment's Wholesale Services line should continue to benefit from improved asset optimization opportunities and additional fuel management contracts. Earnings from fuel cell and solar investments ought to support performance at the Energy Production segment.

This stock is ranked to trail the broader market averages for the coming six to 12 months. Looking further out, we anticipate increasing revenue and healthy growth in earnings per share for the company over the pull to mid-decade. From the recent quotation, this equity offers attractive long-term total return potential. This is helped by a relatively generous dividend yield. All told, patient, income-oriented accounts may find something to like here.

Michael Napoli, CFA *May 28, 2021*

(A) Based on economic egs. from 2007. GAAP EPS: '10, $1.11; '11, $1.49; '12, $1.49; '13, $1.28; '14, $1.46; '15, $1.52; '16, $1.56; '17, ($0.04); '18, $0.21; '19, $0.84; '20, $1.62. Excl. nonrecur. gain (loss): '10, ($0.24); '11, $0.04; '12, ($0.03); '13, ($0.24); '14, ($0.11); '15, $0.08; '16, $0.22; '17, ($1.27); '18, ($1.17); '19, ($0.28); '20, ($0.06). Next egs. rpt. due early August. **(B)** Div'ds paid early April, July, Oct., and late Dec. ■ Div. reinvest. plan avail. **(C)** Incl. reg. assets. In 2020: $674.0 mill., $6.70 per shr. **(D)** In mill., adj. for split.

Company's Financial Strength	B++
Stock's Price Stability	60
Price Growth Persistence	15
Earnings Predictability	65

SOUTHWEST GAS NYSE-SWX

RECENT PRICE **68.88** | P/E RATIO **15.3** (Trailing: 14.2 Median: 19.0) | RELATIVE P/E RATIO **0.71** | DIV'D YLD **3.5%** | **VALUE LINE**

TIMELINESS 3 Lowered 1/8/21
SAFETY 3 Lowered 1/4/91
TECHNICAL 4 Raised 5/28/21
BETA .95 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$48-$119	$84 (20%)

2024-26 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	125	(+80%)	*18%*
Low	85	(+25%)	*9%*

Institutional Decisions

	2Q2020	3Q2020	4Q2020
to Buy	130	116	140
to Sell	123	137	123
Hld's(000)	48082	46991	48058

	37.3	43.2	46.1	56.0	64.2	63.7	79.6	86.9	86.0	92.9	81.6	73.5
High:	26.3	32.1	39.0	42.0	47.2	50.5	53.5	72.3	62.5	73.3	45.7	57.0
Low:												

LEGENDS
.80 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2024 | 2025 | 2026

Percent shares traded 15 10 5

% TOT. RETURN 4/21

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-4.9	75.2
3 yr.	3.5	56.1
5 yr.	22.3	103.5

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	© VALUE LINE PUB. LLC	24-26
43.59	48.47	50.28	48.53	42.00	40.18	41.07	41.77	42.08	45.61	52.00	51.82	53.00	54.31	56.72	57.68	*59.30*	*60.65*	Revenues per sh	*67.70*
5.20	5.97	6.21	5.76	6.16	6.46	6.81	7.73	8.24	8.47	8.62	9.29	8.83	8.14	9.40	9.87	*10.50*	*11.05*	"Cash Flow" per sh	*14.00*
1.25	1.98	1.95	1.39	1.94	2.27	2.43	2.86	3.11	3.01	2.92	3.18	3.62	3.68	3.94	4.14	*4.50*	*4.75*	Earnings per sh A	*6.50*
.82	.82	.86	.90	.95	1.00	1.06	1.18	1.32	1.46	1.62	1.80	1.98	2.08	2.18	2.28	*2.37*	*2.48*	Div'ds Decl'd per sh B■†	*2.80*
7.49	8.27	7.96	6.79	4.81	4.73	8.29	8.57	7.86	8.53	10.30	11.15	12.97	14.44	17.06	14.43	*13.55*	*16.40*	Cap'l Spending per sh	*24.60*
19.10	21.58	22.98	23.49	24.44	25.62	26.66	28.35	30.47	31.95	33.61	35.03	37.74	42.47	45.56	46.77	*50.00*	*52.85*	Book Value per sh	*63.10*
39.33	41.77	42.81	44.19	45.09	45.56	45.96	46.15	46.36	46.52	47.38	47.48	48.09	53.03	55.01	57.19	*59.00*	*61.00*	Common Shs Outst'g C	*65.00*
20.6	15.9	17.3	20.3	12.2	14.0	15.7	15.0	15.8	17.9	19.4	21.6	22.2	20.6	21.3	16.8	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.0*
1.10	.86	.92	1.22	.81	.89	.98	.95	.89	.94	.98	1.13	1.12	1.11	1.13	.87			Relative P/E Ratio	*.90*
3.2%	2.6%	2.6%	3.2%	4.0%	3.2%	2.8%	2.8%	2.7%	2.7%	2.9%	2.6%	2.5%	2.7%	2.6%	3.3%			Avg Ann'l Div'd Yield	*2.7%*
1887.2	1927.8	1950.8	2121.7	2463.6	2460.5	2548.8	2880.0	3119.9	3298.9	*3500*	*3700*	Revenues ($mill)	*4400*
112.3	133.3	145.3	141.1	138.3	152.0	173.8	182.3	213.9	232.3	*260*	*285*	Net Profit ($mill)	*410*
36.2%	36.2%	35.0%	35.7%	36.4%	33.9%	32.8%	25.3%	20.5%	21.6%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
6.0%	6.9%	7.4%	6.7%	5.6%	6.2%	6.8%	6.3%	6.9%	7.0%	*7.4%*	*7.7%*	Net Profit Margin	*9.3%*
43.2%	49.2%	49.4%	52.4%	49.3%	48.2%	49.8%	48.3%	47.9%	50.5%	*50.5%*	*50.0%*	Long-Term Debt Ratio	*48.0%*
56.8%	50.8%	50.6%	47.6%	50.7%	51.8%	50.2%	51.7%	52.1%	49.5%	*49.5%*	*50.0%*	Common Equity Ratio	*52.0%*
2155.9	2576.9	2793.7	3123.9	3143.5	3213.5	3613.3	4359.3	4806.4	5407.2	*5950*	*6425*	Total Capital ($mill)	*7850*
3218.9	3343.8	3486.1	3658.4	3891.1	4132.0	4523.7	5093.2	5685.2	6176.1	*6400*	*6750*	Net Plant ($mill)	*8000*
6.4%	6.4%	6.3%	5.7%	5.5%	5.8%	5.8%	5.2%	5.4%	5.3%	*5.0%*	*5.5%*	Return on Total Cap'l	*6.0%*
9.2%	10.2%	10.3%	9.5%	8.7%	9.1%	9.6%	8.1%	8.5%	8.7%	*9.0%*	*9.0%*	Return on Shr. Equity	*10.0%*
9.2%	10.2%	10.3%	9.5%	8.7%	9.1%	9.6%	8.1%	8.5%	8.7%	*9.0%*	*9.0%*	Return on Com Equity	*10.0%*
5.3%	6.1%	6.1%	5.0%	4.0%	4.1%	4.5%	3.6%	3.9%	4.0%	*4.0%*	*4.0%*	Retained to Com Eq	*5.5%*
43%	40%	41%	47%	54%	55%	53%	55%	54%	54%	*54%*	*53%*	All Div'ds to Net Prof	*44%*

CAPITAL STRUCTURE as of 3/31/21
Total Debt $3073.9 mill. **Due in 5 Yrs** $750.9 mill.
LT Debt $2696.6 mill. **LT Interest** $100.0 mill.
(Total interest coverage: 4.3x) (48% of Cap'l)
Leases, Uncapitalized Annual rentals $13.9 mill.
Pension Assets-12/20 $1238.7 mill.
Oblig. $1581.4 mill.

Pfd Stock None

Common Stock 58,001,396 shs.
as of 4/30/21

MARKET CAP: $4.0 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2019	2020	3/31/21
Cash Assets	49.5	83.4	92.3
Other	810.4	787.6	908.6
Current Assets	859.9	871.0	1000.9
Accts Payable	238.9	231.3	182.8
Debt Due	374.5	147.4	377.3
Other	466.5	533.3	475.9
Current Liab.	1079.9	912.0	1036.0
Fix. Chg. Cov.	340%	379%	419%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '18-'20 to '24-'26
Revenues	2.5%	4.0%	*3.0%*
"Cash Flow"	4.0%	1.5%	*7.5%*
Earnings	7.5%	5.5%	*9.0%*
Dividends	8.5%	8.0%	*4.5%*
Book Value	6.0%	7.0%	*6.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	754.3	670.9	668.1	786.7	2880.0
2019	833.6	713.0	725.2	848.1	3119.9
2020	836.3	757.2	791.2	914.2	3298.9
2021	885.9	*825*	*840*	*949.1*	*3500*
2022	*925*	*875*	*900*	*1000*	*3700*

Calendar	EARNINGS PER SHARE A D Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	1.63	.44	.25	1.36	3.68
2019	1.77	.41	.10	1.67	3.94
2020	1.31	.68	.32	1.82	4.14
2021	2.03	*.50*	*.25*	*1.72*	*4.50*
2022	*1.95*	*.60*	*.35*	*1.85*	*4.75*

Calendar	QUARTERLY DIVIDENDS PAID B■† Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.450	.495	.495	.495	1.94
2018	.495	.520	.520	.520	2.06
2019	.520	.545	.545	.545	2.16
2020	.545	.570	.570	.570	2.26
2021	.570	.595			

BUSINESS: Southwest Gas Holdings, Inc. is the parent holding company of Southwest Gas and Centuri Group. Southwest Gas is a regulated gas distributor serving 2.1 million customers in Arizona, Nevada, and California. Centuri provides construction services. 2020 margin mix: residential and small commercial, 85%; large commercial and industrial, 3%; transportation, 12%. Total throughput: 2.2 billion therms. Has 11,149 employees. Off. & dir. own .8% of common; BlackRock, Inc., 12.3%; The Vanguard Group, Inc., 9.8%; Lazard Asset Management LLC, 9.4% (3/21 Proxy). Chairman: Michael J. Melarkey. Pres. & CEO: John P. Hester. Inc.: DE. Addr.: 8360 S. Durango Drive, P.O. Box 98510 Las Vegas, Nevada 89193. Tel.: 702-876-7237. Web: www.swgas.com.

Shares of Southwest Gas have moved higher in price in the current year. The company reported favorable results for the March period. The top line increased roughly 6%, year to year, to $885.9 million. Earnings per share of $2.03 marked a considerable improvement over the prior-year tally. The utility business benefited from favorable rulings in several rate cases. Its territories in Arizona, California, and Nevada have all experienced significant growth, driving increased demand for new homes, and natural gas services in general. Many of the communities that the company serves have benefited in recent times from the easing of pandemic-related restrictions. The infrastructure services operation, Centuri, also fared well. This business continues to gain as its regulated utility customers modernize their energy infrastructure.

We anticipate solid operating results going forward. Southwest's utility operation ought to further benefit from healthy growth in the customer base. Infrastructure investments by the utility should also pay off in the years ahead. Rate relief will likely continue to benefit performance, too. The company depends on such approved revenue increases to offset increasing expenses and allow it to earn an acceptable return on investment. Elsewhere, Centuri, the company's infrastructure services business, should also perform fairly well. This line derives its revenue from the installation, replacement, repair, and maintenance of energy distribution systems. Centuri has a robust client base, and ought to benefit from the ongoing need of utilities to replace aging infrastructure. Measures by the company to control costs should also pay off.

This stock is ranked to track the broader market averages for the coming six to 12 months. Looking further out, we anticipate solid growth in revenues and earnings for the company over the pull to mid-decade. From the recent quotation, this stock offers attractive long-term total return potential. The dividend should continue to increase at a steady rate in the coming years. In addition, Southwest Gas earns good marks for Financial Strength, Price Stability, and Earnings Predictability. Volatility is subdued, too.

Michael Napoli, CFA *May 28, 2021*

(A) Diluted earnings. Excl. nonrec. gains (losses): '05, (11¢); '06, 7¢. Next egs. report due early August. **(B)** Dividends historically paid early March, June, September, and December. ■† Div'd reinvestment and stock purchase plan avail. **(C)** In millions. **(D)** Totals may not sum due to rounding.

Company's Financial Strength	A
Stock's Price Stability	80
Price Growth Persistence	60
Earnings Predictability	100

SPIRE INC. NYSE-SR

RECENT PRICE **74.48** | P/E RATIO **14.6** (Trailing: 25.9 Median: 19.0) | RELATIVE P/E RATIO **0.67** | DIV'D YLD **3.6%** | **VALUE LINE**

TIMELINESS 3 Raised 5/21/21
SAFETY 2 Raised 6/20/03
TECHNICAL 2 Raised 5/28/21
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$37-$92	$65 (-15%)

2024-26 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	130	(+75%)	*18%*
Low	95	(+30%)	*10%*

Institutional Decisions

	2Q2020	3Q2020	4Q2020
to Buy	127	145	131
to Sell	130	121	148
Hld's(000)	40679	40642	41028

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
High:	37.8	42.8	44.0	48.5	55.2	61.0	71.2	82.9	81.1	88.0	88.0	77.9						
Low:	30.8	32.9	36.5	37.4	44.0	49.1	57.1	62.3	60.1	71.7	50.6	59.3						

LEGENDS
0.35 x Dividends p sh divided by Interest Rate
Relative Price Strength
Options: Yes
Shaded area indicates recession

Target Price Range 2024 | 2025 | 2026

% TOT. RETURN 4/21

	THIS STOCK	VL ARITH.* INDEX
1 yr.	7.4	75.2
3 yr.	15.3	56.1
5 yr.	38.2	103.5

Percent shares traded

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	© VALUE LINE PUB. LLC	24-26
	75.43	93.51	93.40	100.44	85.49	77.83	71.48	49.90	31.10	37.68	45.59	33.68	36.07	38.78	38.30	35.96	*42.85*	*36.90*	Revenues per sh [A]	*58.20*
	2.98	3.81	3.87	4.22	4.56	4.11	4.62	4.58	3.12	3.87	6.15	6.16	6.54	7.55	7.12	5.25	*9.10*	*8.55*	"Cash Flow" per sh	*10.50*
	1.90	2.37	2.31	2.64	2.92	2.43	2.86	2.79	2.02	2.35	3.16	3.24	3.43	4.33	3.52	1.44	*5.00*	*4.30*	Earnings per sh [A B]	*5.50*
	1.37	1.40	1.45	1.49	1.53	1.57	1.61	1.66	1.70	1.76	1.84	1.96	2.10	2.25	2.37	2.49	*2.60*	*2.72*	Div'ds Decl'd per sh [C ■]	*3.10*
	2.84	2.97	2.72	2.57	2.36	2.56	3.02	4.83	4.00	3.96	6.68	6.42	9.08	9.86	16.15	12.37	*11.25*	*10.85*	Cap'l Spending per sh	*11.45*
	17.31	18.85	19.79	22.12	23.32	24.02	25.56	26.67	32.00	34.93	36.30	38.73	41.26	44.51	45.14	44.19	*54.40*	*56.25*	Book Value per sh [D]	*75.00*
	21.17	21.36	21.65	21.99	22.17	22.29	22.43	22.55	32.70	43.18	43.36	45.65	48.26	50.67	50.97	51.60	*52.50*	*53.50*	Common Shs Outst'g [E]	*55.00*
	16.2	13.6	14.2	14.3	13.4	13.7	13.0	14.5	21.3	19.8	16.5	19.6	19.8	16.7	22.8	NMF	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*20.5*
	.86	.73	.75	.86	.89	.87	.82	.92	1.20	1.04	.83	1.03	1.00	.90	1.21	NMF			Relative P/E Ratio	*1.15*
	4.4%	4.3%	4.4%	3.9%	3.9%	4.7%	4.3%	4.1%	4.0%	3.8%	3.5%	3.1%	3.1%	3.1%	3.0%	3.4%			Avg Ann'l Div'd Yield	*2.8%*
							1603.3	1125.5	1017.0	1627.2	1976.4	1537.3	1740.7	1965.0	1952.4	1855.4	*2250*	*1975*	Revenues ($mill) [A]	*3200*
							63.8	62.6	52.8	84.6	136.9	144.2	161.6	214.2	184.6	88.6	*265*	*230*	Net Profit ($mill)	*300*
							31.4%	29.6%	25.0%	27.6%	31.2%	32.5%	32.4%	32.4%	15.7%	12.3%	*20.0%*	*21.0%*	Income Tax Rate	*23.5%*
							4.0%	5.6%	5.2%	5.2%	6.9%	9.4%	9.3%	10.9%	9.5%	4.8%	*11.8%*	*11.6%*	Net Profit Margin	*9.4%*
							38.9%	36.1%	46.6%	55.1%	53.0%	50.9%	50.0%	45.7%	45.0%	49.0%	*49.0%*	*49.0%*	Long-Term Debt Ratio	*45.0%*
							61.1%	63.9%	53.4%	44.9%	47.0%	49.1%	50.0%	54.3%	55.0%	51.0%	*51.0%*	*51.0%*	Common Equity Ratio	*55.0%*
							937.7	941.0	1959.0	3359.4	3345.1	3601.9	3986.3	4155.5	4625.6	4946.0	*5600*	*5900*	Total Capital ($mill)	*7500*
							928.7	1019.3	1776.6	2759.7	2941.2	3300.9	3665.2	3970.5	4352.0	4680.1	*5100*	*5400*	Net Plant ($mill)	*6800*
							8.1%	7.9%	3.3%	3.1%	5.1%	4.9%	5.0%	6.3%	5.1%	2.9%	*6.0%*	*5.5%*	Return on Total Cap'l	*5.5%*
							11.1%	10.4%	5.0%	5.6%	8.7%	8.2%	8.1%	9.5%	7.3%	3.5%	*9.5%*	*7.5%*	Return on Shr. Equity	*7.5%*
							11.1%	10.4%	5.0%	5.6%	8.7%	8.2%	8.1%	9.5%	7.9%	3.2%	*9.5%*	*7.5%*	Return on Com Equity	*7.5%*
							4.9%	4.3%	1.0%	1.5%	3.7%	3.3%	3.3%	4.7%	2.7%	NMF	*4.0%*	*2.5%*	Retained to Com Eq	*3.0%*
							56%	59%	81%	73%	58%	59%	60%	51%	66%	NMF	*57%*	*70%*	All Div'ds to Net Prof	*62%*

CAPITAL STRUCTURE as of 3/31/21
Total Debt $3456.8 mill. **Due in 5 Yrs**$1690.0 mill.
LT Debt $2692.5 mill. **LT Interest** $130.0 mill.
(Total interest coverage: 2.0x)

Leases, Uncapitalized Annual rentals $8.8 mill.
Pension Assets-9/20 $897.9 mill.
Oblig. $1401.3 mill.
Pfd Stock $242.0 mill. **Pfd Div'd** $14.8 mill.
Common Stock 51,679,561 shs.
as of 4/30/21

MARKET CAP: $3.8 billion (Mid Cap)

CURRENT POSITION ($MILL.)	2019	2020	3/31/21
Cash Assets	5.8	4.1	104.0
Other	608.7	586.5	936.0
Current Assets	614.5	590.6	1040.0
Accts Payable	301.5	243.3	352.1
Debt Due	783.2	708.4	764.3
Other	384.1	497.5	391.1
Current Liab.	1468.8	1449.2	1507.5
Fix. Chg. Cov.	272%	373%	385%

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '18-'20 to '24-'26
Revenues	-8.0%	- -	*7.5%*
"Cash Flow"	4.5%	8.5%	*8.0%*
Earnings	1.5%	4.5%	*10.0%*
Dividends	4.5%	6.0%	*4.5%*
Book Value	7.0%	5.5%	*9.0%*

Fiscal Year Ends	QUARTERLY REVENUES ($ mill.)[A] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2018	561.8	813.4	350.6	239.2	1965.0
2019	602.0	803.5	321.3	225.6	1952.4
2020	566.9	715.5	321.1	251.9	1855.4
2021	512.6	1104.9	*377.5*	*255*	*2250*
2022	*530*	*803*	*376*	*266*	*1975*

Fiscal Year Ends	EARNINGS PER SHARE [A B F] Dec.31	Mar.31	Jun.30	Sep.30	Full Fiscal Year
2018	2.39	2.03	.52	d.51	4.33
2019	1.32	3.04	d.09	d.74	3.52
2020	1.24	2.54	d1.87	d.45	1.44
2021	1.65	3.55	*.48*	*d.68*	*5.00*
2022	*1.75*	*2.74*	*.45*	*d.64*	*4.30*

Calendar	QUARTERLY DIVIDENDS PAID [C ■] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.525	.525	.525	.525	2.10
2018	.5625	.5625	.5625	.5625	2.25
2019	.5925	.5925	.5925	.5925	2.37
2020	.6225	.6225	.6225	.6225	2.49
2021	.65	.65			

BUSINESS: Spire Inc., formerly known as the Laclede Group, Inc., is a holding company for natural gas utilities, which distributes natural gas across Missouri, including the cities of St. Louis and Kansas City, Alabama, and Mississippi. Has roughly 1.7 million customers. Acquired Missouri Gas 9/13, Alabama Gas Co 9/14. Utility therms sold and transported in fiscal 2020: 3.3 bill. Revenue mix for regulated operations: residential, 68%; commercial and industrial, 22%; transportation, 6%; other, 4%. Has about 3,583 employees. Officers and directors own 3.0% of common shares; BlackRock, 12.0% (1/21 proxy). Chairman: Edward Glotzbach; CEO: Suzanne Sitherwood. Inc.: Missouri. Address: 700 Market Street, St. Louis, Missouri 63101. Tel.: 314-342-0500. Internet: www.spireenergy.com.

Spire registered impressive numbers during the first half of fiscal 2021 (concludes September 30th). Share net of $5.20 surged around 38%, compared to the prior-year total of $3.78. This was made possible partially by the Gas Utility division, helped by increased Infrastructure System Replacement Surcharge (ISRS) revenues, the effects of colder temperatures, plus diminished operating costs. Moreover, favorable market conditions, especially in February when Winter Storm Uri struck parts of the U.S., drove the performance of the Gas Marketing unit. Given that the company faces an easy bottom-line comparison in the third quarter, it appears that full-year share net will jump nearly 3.5 times, to $5.00, versus the uninspiring fiscal 2020 tally of $1.44 (which was crushed by the impact of COVID-19). Turning to next year, we expect lower, though still respectable, earnings of $4.30 a share, since the second-quarter matchup will be challenging.

***Value Line* is optimistic about the company's prospects over the 2024-2026 period.** The gas utilities boast 1.7 million customers in Mississippi, Alabama, and Missouri, providing a measure of regional diversity. Furthermore, the other operations, particularly pipelines, hold promise. Additional expansionary projects and technological enhancements in customer service and elsewhere ought to assist Spire, too. Finally, the balance sheet (see below) is healthy.

The Financial Strength rating resides at B++. When March ended, there was around $675 million of available liquidity partly via a revolving credit facility. Too, long-term debt was a manageable 49.6% of total capital, and short-term commitments did not seem to be a major hurdle. So, the company ought to be able to meet its various obligations (including interest payments, capital expenditures, and dividends) with relative ease. Acquisitions are also plausible.

These good-quality shares have risen greatly in value in recent months. It appears that Spire's strong results of late are a driving force behind that movement. Also, long-term total return potential is solid. Meanwhile, the stock is neutrally ranked for Timeliness.

Frederick L. Harris, III *May 28, 2021*

(A) Fiscal year ends Sept. 30th. **(B)** Based on diluted shares outstanding. Excludes nonrecurring loss: '06, 7¢. Excludes gain from discontinued operations: '08, 94¢. Next earnings report due late July. **(C)** Dividends paid in early January, April, July, and October. ■ Dividend reinvestment plan available. **(D)** Incl. deferred charges. In '20: $1,171.6 mill., $22.71/sh. **(E)** In millions. **(F)** Qtly. egs. may not sum due to rounding or change in shares outstanding.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	55
Earnings Predictability	50

Northern States Power Company
Summary of Risk Premium Models for the
Proxy Group of Seven Natural Gas Distribution Companies

	Proxy Group of Seven Natural Gas Distribution Companies	
Predictive Risk Premium Model (PRPM) (1)	11.43	%
Risk Premium Using an Adjusted Total Market Approach (2)	10.49	%
Average	10.96	%

Notes:
(1) From page 2 of this Schedule.
(2) From page 3 of this Schedule.

Northern States Power Company
Indicated ROE
Derived by the Predictive Risk Premium Model (1)

Proxy Group of Seven Natural Gas Distribution Companies	[1] LT Average Predicted Variance	[2] Spot Predicted Variance	[3] Recommended Variance (2)	[4] GARCH Coefficient	[5] Predicted Risk Premium (3)	[6] Risk-Free Rate (4)	[7] Indicated ROE (5)
Atmos Energy Corporation	0.33%	0.48%	0.41%	2.2565	11.58%	2.88%	14.46%
New Jersey Resources Corporation	0.38%	0.34%	0.36%	2.0814	9.43%	2.88%	12.31%
Northwest Natural Holding Company	0.32%	0.38%	0.35%	1.5413	6.68%	2.88%	9.56%
ONE Gas, Inc.	0.30%	0.43%	0.37%	4.0633	19.39%	2.88%	NMF
South Jersey Industries, Inc.	0.39%	0.69%	0.54%	1.6346	11.03%	2.88%	13.91%
Southwest Gas Holdings, Inc.	0.43%	0.38%	0.41%	1.3628	6.84%	2.88%	9.72%
Spire Inc.	0.71%	0.52%	0.61%	0.9445	7.18%	2.88%	10.06%
						Average	11.67%
						Median	11.19%
						Average of Mean and Median	11.43%

Notes:
(1) The Predictive Risk Premium Model uses historical data to generate a predicted variance and a GARCH coefficient. The historical data used are the equity risk premiums for the first available trading month as reported by Bloomberg Professional Service.
(2) Average of Columns [1] and [2].
(3) (1+(Column [3] * Column [4])^12) - 1.
(4) From note 2 on page 2 of Schedule DWD-7.
(5) Column [5] + Column [6].

Northern States Power Company
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Seven Natural Gas Distribution Companies	
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	3.56	%
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A2 Rated Public Utility Bonds	0.39	(2)
3.	Adjusted Prospective Yield on A2 Rated Public Utility Bonds	3.95	%
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	0.04	(3)
5.	Adjusted Prospective Bond Yield	3.99	%
6.	Equity Risk Premium (4)	6.50	
7.	Risk Premium Derived Common Equity Cost Rate	10.49	%

Notes:
(1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 10 and 11 of this Schedule).

(2) The average yield spread of A2 rated public utility bonds over Aaa rated corporate bonds of 0.39% from page 4 of this Schedule.

(3) Adjustment to reflect the A2/A3 Moody's LT issuer rating of the Utility Proxy Group as shown on page 5 of this Schedule. The 0.04% upward adjustment is derived by taking 1/6 of the spread between A2 and Baa2 Public Utility Bonds (1/6 * 0.26% = 0.04%) as derived from page 4 of this Schedule.

(4) From page 7 of this Schedule.

Northern States Power Company
Interest Rates and Bond Spreads for
Moody's Corporate and Public Utility Bonds

Selected Bond Yields - Moody's

	[1] Aaa Rated Corporate Bond	[2] Aa2 Rated Public Utility Bond	[3] A2 Rated Public Utility Bond	[4] Baa2 Rated Public Utility Bond
May-2021	2.96 %	3.17 %	3.33 %	3.58 %
Apr-2021	2.90	3.13	3.30	3.57
Mar-2021	3.04	3.27	3.44	3.72
Average	2.97 %	3.19 %	3.36 %	3.62 %

Selected Bond Spreads

A2 Rated Public Utility Bonds Over Aaa Rated Corporate Bonds: 0.39 % (1)

Baa2 Rated Public Utility Bonds Over A2 Rated Public Utility Bonds: 0.26 % (2)

A2 Rated Public Utility Bonds Over Aa2 Rated Public Utility Bonds: 0.17 % (3)

Notes:
(1) Column [3] - Column [1].
(2) Column [4] - Column [3].
(3) Column [3] - Column [2].

Source of Information:
Bloomberg Professional Service

Northern States Power Company
Comparison of Long-Term Issuer Ratings for
Proxy Group of Seven Natural Gas Distribution Companies

	Moody's		Standard & Poor's	
	Long-Term Issuer Rating		Long-Term Issuer Rating	
	May 2021		May 2021	
Proxy Group of Seven Natural Gas Distribution Companies	Long-Term Issuer Rating (1)	Numerical Weighting (2)	Long-Term Issuer Rating (1)	Numerical Weighting (2)
Atmos Energy Corporation	A1	5.0	A-	7.0
New Jersey Resources Corporation	A1	5.0	NR	- -
Northwest Natural Holding Company	Baa1	8.0	A+	5.0
ONE Gas, Inc.	A3	7.0	BBB+	8.0
South Jersey Industries, Inc.	A3	7.0	BBB	9.0
Southwest Gas Holdings, Inc.	Baa1	8.0	A-	7.0
Spire Inc.	A1/A2	5.5	A-	7.0
Average	A2/A3	6.5	A-	7.2

Notes:

(1) Ratings are that of the average of each company's utility operating subsidiaries.
(2) From page 6 of this Schedule.

Source Information: Moody's Investors Service
Standard & Poor's Global Utilities Rating Service

Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings

Moody's Bond Rating	Numerical Bond Weighting	Standard & Poor's Bond Rating
Aaa	1	AAA
Aa1	2	AA+
Aa2	3	AA
Aa3	4	AA-
A1	5	A+
A2	6	A
A3	7	A-
Baa1	8	BBB+
Baa2	9	BBB
Baa3	10	BBB-
Ba1	11	BB+
Ba2	12	BB
Ba3	13	BB-
B1	14	B+
B2	15	B
B3	16	B-

Northern States Power Company
Judgment of Equity Risk Premium for
Proxy Group of Seven Natural Gas Distribution Companies

Line No.		Proxy Group of Seven Natural Gas Distribution Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1)	8.03 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	5.84
3.	Predicted Equity Risk Premium Based on Regression Analysis of 800 Fully-Litigated Natural Gas Utility Rate Cases	5.64
4.	Average equity risk premium	6.50 %

Notes: (1) From page 8 of this Schedule.
(2) From page 12 of this Schedule.
(3) From page 13 of this Schedule.

Northern States Power Company
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Seven Natural Gas Distribution Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Seven Natural Gas Distribution Companies
	Ibbotson-Based Equity Risk Premiums:	
1.	Ibbotson Equity Risk Premium (1)	5.92 %
2.	Regression on Ibbotson Risk Premium Data (2)	8.69
3.	Ibbotson Equity Risk Premium based on PRPM (3)	9.02
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	4.60
5.	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	10.76
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	12.78
7.	Conclusion of Equity Risk Premium	8.63 %
8.	Adjusted Beta (7)	0.93
9.	Forecasted Equity Risk Premium	8.03 %

Notes provided on page 9 of this Schedule.

Northern States Power Company
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Seven Natural Gas Distribution Companies

Notes:

(1) Based on the arithmetic mean historical monthly returns on large company common stocks from Duff & Phelps 2021 SBBI® Yearbook minus the arithmetic mean monthly yield of Moody's average Aaa and Aa corporate bonds from 1928-2020.

(2) This equity risk premium is based on a regression of the monthly equity risk premiums of large company common stocks relative to Moody's average Aaa and Aa rated corporate bond yields from 1928-2020 referenced in Note 1 above.

(3) The Predictive Risk Premium Model (PRPM) is discussed in the accompanying direct testimony. The Ibbotson equity risk premium based on the PRPM is derived by applying the PRPM to the monthly risk premiums between Ibbotson large company common stock monthly returns and average Aaa and Aa corporate monthly bond yields, from January 1928 through March 2021.

(4) The equity risk premium based on the Value Line Summary and Index is derived by subtracting the average consensus forecast of Aaa corporate bonds of 3.56% (from page 3 of this Schedule) from the projected 3-5 year total annual market return of 8.16% (described fully in note 1 on page 2 of Schedule DWD-7).

(5) Using data from Value Line for the S&P 500, an expected total return of 14.32% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 3.56% results in an expected equity risk premium of 10.76%.

(6) Using data from the Bloomberg Professional Service for the S&P 500, an expected total return of 16.34% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 3.56% results in an expected equity risk premium of 12.78%.

(7) Average of mean and median beta from Schedule DWD-7.

Sources of Information:

Stocks, Bonds, Bills, and Inflation - 2021 SBBI Yearbook, John Wiley & Sons, Inc.
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2021
Bloomberg Professional Service

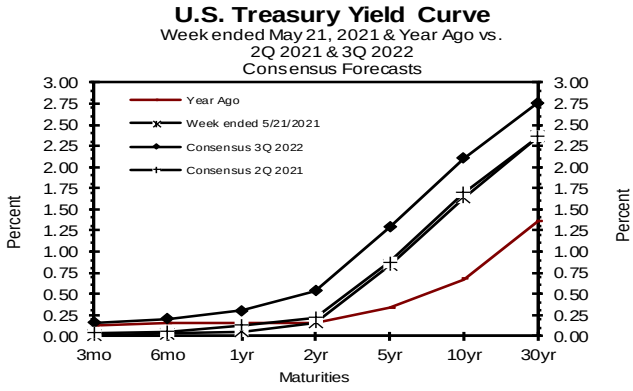
Northern States Power Company

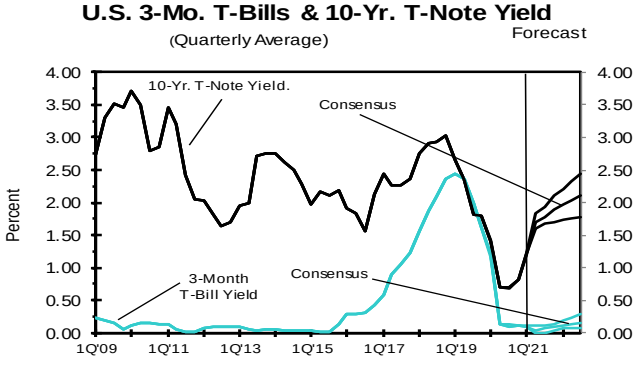
2 ■ BLUE CHIP FINANCIAL FORECASTS ■ JUNE 1, 2021

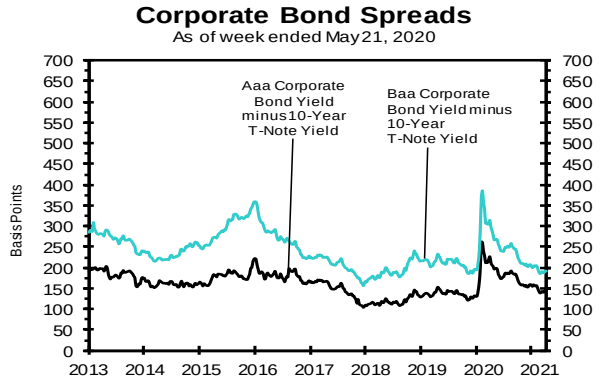
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

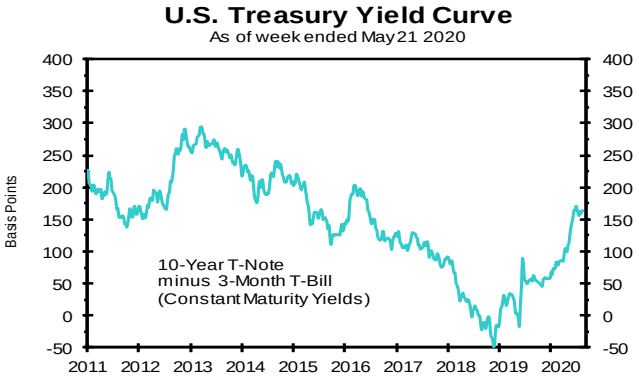
	History				History				Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*	2Q	3Q	4Q	1Q	2Q	3Q
Interest Rates	May 21	May 14	May 7	Apr 30	Apr	Mar	Feb	1Q 2021	2021	2021	2021	2022	2022	2022
Federal Funds Rate	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**
LIBOR, 3-mo.	0.15	0.16	0.17	0.18	0.18	0.19	0.19	0.20	**0.2**	**0.2**	**0.2**	**0.3**	**0.3**	**0.3**
Commercial Paper, 1-mo.	0.04	0.04	0.29	0.04	0.04	0.07	0.06	0.07	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**
Treasury bill, 3-mo.	0.01	0.02	0.02	0.01	0.02	0.03	0.04	0.05	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**
Treasury bill, 6-mo.	0.03	0.04	0.04	0.04	0.04	0.05	0.06	0.07	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**
Treasury bill, 1 yr.	0.05	0.05	0.06	0.05	0.06	0.08	0.07	0.08	**0.1**	**0.1**	**0.2**	**0.2**	**0.3**	**0.3**
Treasury note, 2 yr.	0.16	0.16	0.16	0.17	0.16	0.15	0.12	0.13	**0.2**	**0.3**	**0.3**	**0.4**	**0.5**	**0.5**
Treasury note, 5 yr.	0.84	0.83	0.81	0.86	0.86	0.82	0.54	0.60	**0.9**	**1.0**	**1.1**	**1.2**	**1.2**	**1.3**
Treasury note, 10 yr.	1.64	1.65	1.60	1.63	1.64	1.61	1.26	1.32	**1.7**	**1.8**	**1.9**	**2.0**	**2.0**	**2.1**
Treasury note, 30 yr.	2.36	2.36	2.27	2.29	2.30	2.34	2.04	2.07	**2.4**	**2.5**	**2.6**	**2.6**	**2.7**	**2.8**
Corporate Aaa bond	3.09	3.11	3.01	3.04	3.04	3.15	2.84	2.88	**3.0**	**3.1**	**3.3**	**3.3**	**3.3**	**3.4**
Corporate Baa bond	3.56	3.57	3.48	3.51	3.51	3.62	3.30	3.35	**3.8**	**4.0**	**4.1**	**4.2**	**4.2**	**4.3**
State & Local bonds	2.64	2.65	2.65	2.63	2.66	2.74	2.63	2.68	**2.6**	**2.7**	**2.8**	**2.9**	**2.9**	**2.9**
Home mortgage rate	3.00	2.94	2.96	2.98	3.06	3.08	2.81	2.88	**3.1**	**3.3**	**3.4**	**3.5**	**3.5**	**3.6**
	History								Consensus Forecasts-Quarterly					
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
Key Assumptions	2019	2019	2019	2020	2020	2020	2020	2021	2021	2021	2021	2022	2022	2022
Fed's AFE $ Index	110.4	110.6	110.5	111.4	112.4	107.3	105.2	103.4	**102.7**	**102.7**	**102.9**	**102.9**	**103.1**	**103.2**
Real GDP	1.5	2.6	2.4	-5.0	-31.4	33.4	4.3	6.4	**9.3**	**6.9**	**5.0**	**3.9**	**3.1**	**2.6**
GDP Price Index	2.5	1.5	1.4	1.4	-1.8	3.5	2.0	4.3	**3.3**	**2.5**	**2.1**	**2.2**	**2.2**	**2.3**
Consumer Price Index	3.5	1.3	2.6	1.0	-3.1	4.7	2.4	3.7	**4.8**	**2.6**	**2.1**	**2.2**	**2.3**	**2.2**
PCE Price Index	2.5	1.4	1.5	1.3	-1.6	3.7	1.5	3.7	**4.0**	**2.4**	**2.0**	**2.1**	**2.2**	**2.2**

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index, PCE Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; LIBOR quotes from Intercontinental Exchange. All interest rate data are sourced from Haver Analytics. Historical data for Fed's Major Currency Index are from FRSR H.10. Historical data for Real GDP, GDP Price Index and PCE Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index history is from the Department of Labor's Bureau of Labor Statistics (BLS).









Northern States Power Company

Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2022 through 2027 and averages for the five-year periods 2023-2027 and 2028-2032. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

		Average For The Year						Five-Year Averages	
		2022	2023	2024	2025	2026	2027	2023-2027	2028-2032
1. Federal Funds Rate	**CONSENSUS**	**0.1**	**0.4**	**1.0**	**1.6**	**1.9**	**2.1**	**1.4**	**2.2**
	Top 10 Average	0.2	0.7	1.6	2.4	2.6	2.7	2.0	2.7
	Bottom 10 Average	0.1	0.1	0.5	0.9	1.3	1.5	0.9	1.6
2. Prime Rate	**CONSENSUS**	**3.3**	**3.5**	**4.2**	**4.7**	**5.0**	**5.2**	**4.5**	**5.2**
	Top 10 Average	3.4	3.8	4.7	5.4	5.7	5.8	5.1	5.8
	Bottom 10 Average	3.2	3.3	3.7	4.0	4.4	4.6	4.0	4.7
3. LIBOR, 3-Mo.	**CONSENSUS**	**0.4**	**0.6**	**1.3**	**1.8**	**2.1**	**2.3**	**1.6**	**2.4**
	Top 10 Average	0.5	1.0	1.8	2.4	2.7	2.9	2.2	3.0
	Bottom 10 Average	0.2	0.4	0.8	1.2	1.6	1.7	1.1	1.8
4. Commercial Paper, 1-Mo	**CONSENSUS**	**0.2**	**0.6**	**1.3**	**1.8**	**2.1**	**2.3**	**1.6**	**2.4**
	Top 10 Average	0.4	0.9	1.6	2.3	2.6	2.8	2.0	2.8
	Bottom 10 Average	0.1	0.3	0.9	1.3	1.8	1.9	1.2	2.0
5. Treasury Bill Yield, 3-Mo	**CONSENSUS**	**0.2**	**0.5**	**1.0**	**1.6**	**1.9**	**2.1**	**1.4**	**2.2**
	Top 10 Average	0.3	0.8	1.6	2.2	2.5	2.7	1.9	2.7
	Bottom 10 Average	0.1	0.2	0.6	0.9	1.3	1.5	0.9	1.6
6. Treasury Bill Yield, 6-Mo	**CONSENSUS**	**0.2**	**0.5**	**1.1**	**1.6**	**2.0**	**2.2**	**1.5**	**2.3**
	Top 10 Average	0.3	0.8	1.7	2.3	2.6	2.7	2.0	2.8
	Bottom 10 Average	0.1	0.3	0.6	1.0	1.4	1.6	1.0	1.7
7. Treasury Bill Yield, 1-Yr	**CONSENSUS**	**0.3**	**0.7**	**1.2**	**1.8**	**2.1**	**2.3**	**1.6**	**2.4**
	Top 10 Average	0.5	1.0	1.8	2.4	2.8	2.9	2.2	3.0
	Bottom 10 Average	0.2	0.3	0.7	1.1	1.5	1.7	1.1	1.8
8. Treasury Note Yield, 2-Yr	**CONSENSUS**	**0.5**	**0.9**	**1.5**	**2.0**	**2.3**	**2.5**	**1.8**	**2.6**
	Top 10 Average	0.7	1.3	2.1	2.7	3.0	3.1	2.5	3.3
	Bottom 10 Average	0.3	0.5	0.9	1.3	1.6	1.8	1.2	1.9
9. Treasury Note Yield, 5-Yr	**CONSENSUS**	**1.2**	**1.6**	**2.1**	**2.5**	**2.8**	**2.8**	**2.4**	**3.0**
	Top 10 Average	1.5	2.0	2.8	3.3	3.5	3.5	3.0	3.6
	Bottom 10 Average	0.9	1.2	1.5	1.8	2.0	2.2	1.7	2.3
10. Treasury Note Yield, 10-Yr	**CONSENSUS**	**2.0**	**2.4**	**2.7**	**3.0**	**3.2**	**3.3**	**2.9**	**3.3**
	Top 10 Average	2.3	2.8	3.4	3.8	4.0	3.9	3.6	4.0
	Bottom 10 Average	1.7	1.9	2.1	2.3	2.5	2.6	2.3	2.7
11. Treasury Bond Yield, 30-Yr	**CONSENSUS**	**2.6**	**2.9**	**3.3**	**3.6**	**3.8**	**3.8**	**3.5**	**3.9**
	Top 10 Average	3.0	3.5	4.0	4.5	4.6	4.5	4.2	4.6
	Bottom 10 Average	2.3	2.4	2.5	2.7	2.9	3.1	2.7	3.2
12. Corporate Aaa Bond Yield	**CONSENSUS**	**3.3**	**3.7**	**4.1**	**4.5**	**4.7**	**4.7**	**4.3**	**4.8**
	Top 10 Average	3.6	4.2	4.7	5.2	5.4	5.4	5.0	5.4
	Bottom 10 Average	3.1	3.2	3.4	3.7	3.9	4.1	3.7	4.2
13. Corporate Baa Bond Yield	**CONSENSUS**	**4.3**	**4.7**	**5.1**	**5.4**	**5.6**	**5.7**	**5.3**	**5.8**
	Top 10 Average	4.6	5.1	5.6	6.1	6.3	6.2	5.9	6.4
	Bottom 10 Average	4.0	4.3	4.5	4.7	4.9	5.2	4.7	5.2
14. State & Local Bonds Yield	**CONSENSUS**	**2.9**	**3.2**	**3.6**	**3.9**	**4.1**	**4.2**	**3.8**	**4.2**
	Top 10 Average	3.2	3.5	4.1	4.5	4.7	4.7	4.3	4.8
	Bottom 10 Average	2.6	2.9	3.1	3.4	3.7	3.7	3.3	3.8
15. Home Mortgage Rate	**CONSENSUS**	**3.6**	**4.0**	**4.4**	**4.7**	**4.9**	**5.0**	**4.6**	**5.0**
	Top 10 Average	4.0	4.5	5.0	5.5	5.6	5.6	5.2	5.7
	Bottom 10 Average	3.2	3.6	3.8	4.0	4.2	4.3	4.0	4.4
A. Fed's AFE Nominal $ Index	**CONSENSUS**	**103.7**	**103.7**	**104.0**	**103.7**	**103.6**	**103.3**	**103.7**	**103.1**
	Top 10 Average	105.3	106.0	106.8	107.0	107.3	107.5	106.9	107.9
	Bottom 10 Average	102.0	101.5	101.4	100.8	100.4	100.0	100.8	99.4
		Year-Over-Year, % Change						Five-Year Averages	
		2022	2023	2024	2025	2026	2027	2023-2027	2028-2032
B. Real GDP	**CONSENSUS**	**4.2**	**2.6**	**2.3**	**2.2**	**2.1**	**2.1**	**2.2**	**2.1**
	Top 10 Average	5.3	3.3	2.7	2.5	2.4	2.4	2.7	2.5
	Bottom 10 Average	2.9	2.0	1.9	1.8	1.8	1.7	1.8	1.7
C. GDP Chained Price Index	**CONSENSUS**	**2.3**	**2.3**	**2.2**	**2.1**	**2.2**	**2.1**	**2.2**	**2.1**
	Top 10 Average	2.6	2.6	2.4	2.4	2.4	2.4	2.4	2.3
	Bottom 10 Average	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9
D. Consumer Price Index	**CONSENSUS**	**2.4**	**2.4**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**	**2.2**
	Top 10 Average	2.8	2.7	2.5	2.5	2.5	2.4	2.5	2.4
	Bottom 10 Average	2.1	2.1	1.9	1.9	2.0	1.9	2.0	1.9
E. PCE Price Index	**CONSENSUS**	**2.3**	**2.2**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**
	Top 10 Average	2.7	2.5	2.4	2.4	2.4	2.4	2.4	2.3
	Bottom 10 Average	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9

Northern States Power Company
Derivation of Mean Equity Risk Premium Based Studies
Using Holding Period Returns and
Projected Market Appreciation of the S&P Utility Index

Line No.		Implied Equity Risk Premium
	Equity Risk Premium based on S&P Utility Index Holding Period Returns (1):	
1.	Historical Equity Risk Premium	4.16 %
2.	Regression of Historical Equity Risk Premium (2)	6.37
3.	Forecasted Equity Risk Premium Based on PRPM (3)	5.41
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Value Line Data) (4)	7.45
5.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg Data) (5)	5.82
6.	Average Equity Risk Premium (6)	5.84 %

Notes:
(1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2020. Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.

(2) This equity risk premium is based on a regression of the monthly equity risk premiums of the S&P Utility Index relative to Moody's A2 rated public utility bond yields from 1928 - 2020 referenced in note 1 above.

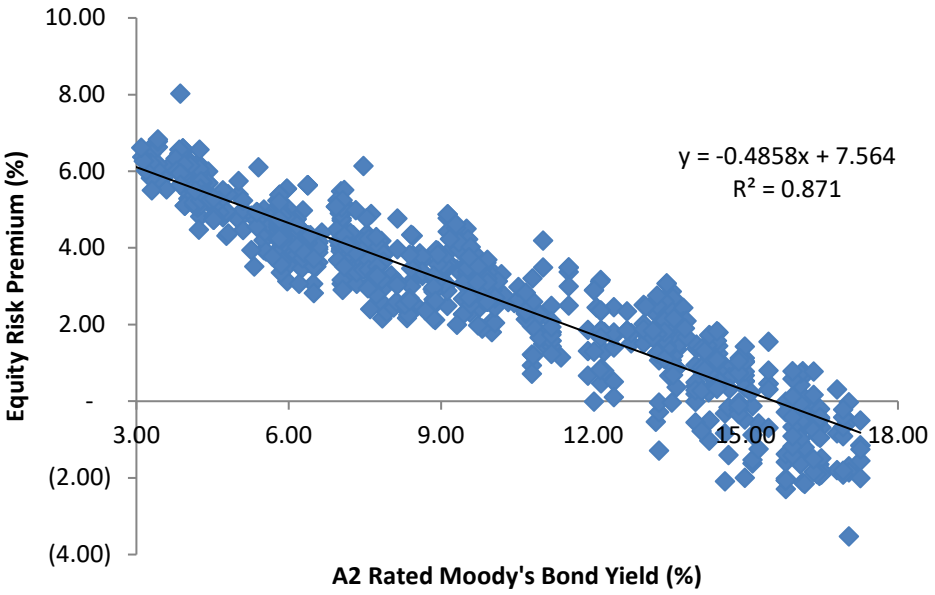
(3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A2 rated public utility bonds from January 1928 - May 2021.

(4) Using data from Value Line for the S&P Utilities Index, an expected return of 11.40% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A2 rated public utility bond yield of 3.95%, calculated on line 3 of page 3 of this Schedule results in an equity risk premium of 7.45%. (11.40% - 3.95% = 7.45%)

(5) Using data from Bloomberg Professional Service for the S&P Utilities Index, an expected return of 9.77% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A2 rated public utility bond yield of 3.95%, calculated on line 3 of page 3 of this Schedule results in an equity risk premium of 5.82%. (9.77% - 3.95% = 5.82%)

(6) Average of lines 1 through 5.

Northern States Power Company
Prediction of Equity Risk Premiums Relative to
Moody's A2 Rated Utility Bond Yields



Constant	Slope	Prospective A2 Rated Utility Bond (1)	Prospective Equity Risk Premium
7.564001 %	-0.48585	3.95 %	5.64 %

Notes:
(1) From line 3 of page 3 of this Schedule.

Source of Information:
Regulatory Research Associates
Bloomberg Professional Services

Northern States Power Company
Indicated Common Equity Cost Rate Through Use
of the Traditional Capital Asset Pricing Model (CAPM) and Empirical Capital Asset Pricing Model (ECAPM)

Proxy Group of Seven Natural Gas Distribution Companies	[1] Value Line Adjusted Beta	[2] Bloomberg Adjusted Beta	[3] Average Beta	[4] Market Risk Premium (1)	[5] Risk-Free Rate (2)	[6] Traditional CAPM Cost Rate	[7] ECAPM Cost Rate	[8] Indicated Common Equity Cost Rate (3)
Atmos Energy Corporation	0.80	0.91	0.86	9.46 %	2.88 %	11.02 %	11.35 %	11.18 %
New Jersey Resources Corporation	1.00	0.97	0.98	9.46	2.88	12.15	12.20	12.17
Northwest Natural Holding Company	0.85	0.85	0.85	9.46	2.88	10.92	11.28	11.10
ONE Gas, Inc.	0.80	1.00	0.90	9.46	2.88	11.39	11.63	11.51
South Jersey Industries, Inc.	1.05	0.98	1.02	9.46	2.88	12.53	12.48	12.51
Southwest Gas Holdings, Inc.	0.95	1.09	1.02	9.46	2.88	12.53	12.48	12.51
Spire Inc.	0.85	1.00	0.92	9.46	2.88	11.58	11.77	11.68
Mean			0.94			11.73 %	11.88 %	11.81 %
Median			0.92			11.58 %	11.77 %	11.68 %
Average of Mean and Median			0.93			11.66 %	11.83 %	11.75 %

Notes on page 2 of this Schedule.

Northern States Power Company
Notes to Accompany the Application of the CAPM and ECAPM

Notes:

(1) The market risk premium (MRP) is derived by using six different measures from three sources: Ibbotson, Value Line, and Bloomberg as illustrated below:

Historical Data MRP Estimates:

Measure 1: Ibbotson Arithmetic Mean MRP (1926-2020)

Arithmetic Mean Monthly Returns for Large Stocks 1926-2020:	12.20 %
Arithmetic Mean Income Returns on Long-Term Government Bonds:	5.05
MRP based on Ibbotson Historical Data:	7.15 %

Measure 2: Application of a Regression Analysis to Ibbotson Historical Data (1926-2020) 9.39 %

Measure 3: Application of the PRPM to Ibbotson Historical Data: (January 1926 - May 2021) 10.04 %

Value Line MRP Estimates:

Measure 4: Value Line Projected MRP (Thirteen weeks ending May 28, 2021)

Total projected return on the market 3-5 years hence*:	8.16 %
Projected Risk-Free Rate (see note 2):	2.88
MRP based on Value Line Summary & Index:	5.28 %

*Forcasted 3-5 year capital appreciation plus expected dividend yield

Measure 5: Value Line Projected Return on the Market based on the S&P 500

Total return on the Market based on the S&P 500:	14.32 %
Projected Risk-Free Rate (see note 2):	2.88
MRP based on Value Line data	11.44 %

Measure 6: Bloomberg Projected MRP

Total return on the Market based on the S&P 500:	16.34 %
Projected Risk-Free Rate (see note 2):	2.88
MRP based on Bloomberg data	13.46 %

Average of Value Line, Ibbotson, and Bloomberg MRP: 9.46 %

(2) For reasons explained in the direct testimony, the appropriate risk-free rate for cost of capital purposes is the average forecast of 30 year Treasury Bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts. (See pages 10 and 11 of Schedule DWD-3.) The projection of the risk-free rate is illustrated below:

Second Quarter 2021	2.40 %
Third Quarter 2021	2.50
Fourth Quarter 2021	2.60
First Quarter 2022	2.60
Second Quarter 2022	2.70
Third Quarter 2022	2.80
2023-2027	3.50
2028-2032	3.90
	2.88 %

(3) Average of Column 6 and Column 7.

Sources of Information:
Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2021
Stocks, Bonds, Bills, and Inflation - 2021 SBBI Yearbook, John Wiley & Sons, Inc.
Bloomberg Professional Services

Northern States Power Company
Basis of Selection of the Group of Non-Price Regulated Companies
Comparable in Total Risk to the Utility Proxy Group

The criteria for selection of the Non-Price Regulated Proxy Group was that the non-price regulated companies be domestic and reported in Value Line Investment Survey (Standard Edition).

The Non-Price Regulated Proxy Group companies were then selected based on the unadjusted beta range of 0.64 – 0.94 and residual standard error of the regression range of 2.7297 – 3.2557 of the Utility Proxy Group.

These ranges are based upon plus or minus two standard deviations of the unadjusted beta and standard error of the regression. Plus or minus two standard deviations captures 95.50% of the distribution of unadjusted betas and residual standard errors of the regression.

The standard deviation of the Gas Utility Proxy Group's residual standard error of the regression is 0.1315. The standard deviation of the standard error of the regression is calculated as follows:

$$\text{Standard Deviation of the Std. Err. of the Regr.} = \frac{\text{Standard Error of the Regression}}{\sqrt{2N}}$$

where: N = number of observations. Since Value Line betas are derived from weekly price change observations over a period of five years, N = 259

$$\text{Thus, } 0.1315 = \frac{2.9927}{\sqrt{518}} = \frac{2.9927}{22.7596}$$

Source of Information: Value Line, Inc., May 2021
Value Line Investment Survey (Standard Edition)

Northern States Power Company
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

Proxy Group of Seven Natural Gas Distribution Companies	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
Atmos Energy Corporation	0.80	0.66	2.7453	0.0685
New Jersey Resources Corporation	0.95	0.92	3.0205	0.0754
Northwest Natural Holding Company	0.80	0.69	3.1454	0.0785
ONE Gas, Inc.	0.80	0.67	2.7077	0.0676
South Jersey Industries, Inc.	1.05	1.00	3.4767	0.0868
Southwest Gas Holdings, Inc.	0.95	0.88	3.0244	0.0755
Spire Inc.	0.85	0.71	2.8287	0.0706
Average	0.89	0.79	2.9927	0.0747
Beta Range (+/- 2 std. Devs. of Beta)	0.64	0.94		
2 std. Devs. of Beta	0.15			
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.7297	3.2557		
Std. dev. of the Res. Std. Err.	0.1315			
2 std. devs. of the Res. Std. Err.	0.2630			

Source of Information: Valueline Proprietary Database, March 2021

Northern States Power Company
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Seven Natural Gas Distribution Companies

Proxy Group of Forty-Eight Non-Price Regulated Companies	[1] VL Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
Apple Inc.	0.90	0.81	3.1746	0.0792
Abbott Labs.	0.95	0.88	2.7401	0.0684
Assurant Inc.	0.90	0.84	2.9537	0.0737
ANSYS, Inc.	0.85	0.74	2.8841	0.0720
Booz Allen Hamilton	0.90	0.82	3.0468	0.0760
Becton, Dickinson	0.80	0.66	2.8952	0.0722
Brown-Forman 'B'	0.90	0.77	2.7453	0.0685
Broadridge Fin'l	0.85	0.70	2.7332	0.0682
Brady Corp.	1.00	0.93	3.0007	0.0749
CACI Int'l	0.95	0.86	3.1684	0.0791
Casey's Gen'l Stores	0.90	0.78	3.2522	0.0812
Cadence Design Sys.	0.90	0.79	3.0338	0.0757
Cerner Corp.	0.90	0.84	2.7309	0.0681
CSW Industrials	0.90	0.81	2.8884	0.0721
Quest Diagnostics	0.85	0.75	2.7411	0.0684
Lauder (Estee)	0.95	0.85	2.8216	0.0704
Exponent, Inc.	0.90	0.79	2.9131	0.0727
Fastenal Co.	0.90	0.85	3.2203	0.0804
Gentex Corp.	0.95	0.91	2.7546	0.0687
Int'l Flavors & Frag	0.95	0.87	3.2238	0.0804
Ingredion Inc.	0.90	0.78	2.8793	0.0718
Iron Mountain	0.90	0.82	3.0897	0.0771
Hunt (J.B.)	0.95	0.86	2.8344	0.0707
J&J Snack Foods	0.90	0.84	2.9208	0.0729
Henry (Jack) & Assoc	0.85	0.71	2.7734	0.0692
ManTech Int'l 'A'	0.85	0.77	3.0653	0.0765
McCormick & Co.	0.80	0.66	2.7887	0.0696
Altria Group	0.90	0.83	2.9215	0.0729
MSA Safety	1.00	0.94	3.0076	0.0750
MSCI Inc.	0.95	0.87	2.9662	0.0740
Motorola Solutions	0.90	0.80	2.7926	0.0697
Vail Resorts	0.95	0.88	3.1939	0.0797
Maxim Integrated	0.95	0.87	2.9404	0.0734
Northrop Grumman	0.85	0.71	2.9032	0.0724
Old Dominion Freight	0.90	0.83	3.0708	0.0766
PerkinElmer Inc.	0.95	0.86	2.8896	0.0721
Philip Morris Int'l	0.95	0.88	3.2481	0.0811
Pool Corp.	0.85	0.75	3.2001	0.0799
Post Holdings	0.95	0.86	3.0105	0.0751
RLI Corp.	0.80	0.64	2.9883	0.0746
Rollins, Inc.	0.85	0.73	2.9697	0.0741
Selective Ins. Group	0.85	0.77	3.0004	0.0749
Sirius XM Holdings	0.95	0.91	2.7995	0.0699
Bio-Techne Corp.	0.80	0.67	3.2475	0.0810
Tetra Tech	0.90	0.84	3.0245	0.0755
Waters Corp.	0.95	0.86	2.7531	0.0687
West Pharmac. Svcs.	0.85	0.70	3.1887	0.0796
Western Union	0.80	0.67	2.7346	0.0682
Average	0.90	0.80	2.9609	0.0739
Proxy Group of Seven Natural Gas Distribution Companies	0.89	0.79	2.9927	0.0747

Source of Information: Valueline Proprietary Database, March 2021

Northern States Power Company
Summary of Cost of Equity Models Applied to
Proxy Group of Forty-Eight Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Seven Natural Gas Distribution Companies

Principal Methods	Proxy Group of Forty-Eight Non-Price Regulated Companies
Discounted Cash Flow Model (DCF) (1)	12.83 %
Risk Premium Model (RPM) (2)	12.49
Capital Asset Pricing Model (CAPM) (3)	11.69
	12.34 %
	12.49 %
	12.42 %

Notes:
(1) From page 2 of this Schedule.
(2) From page 3 of this Schedule.
(3) From page 6 of this Schedule.

Northern States Power Company
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Seven Natural Gas Distribution Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Forty-Eight Non-Price Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Zack's Five Year Projected Growth Rate in EPS	Bloomberg's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS	Adjusted Dividend Yield	Indicated Common Equity Cost Rate (1)
Apple Inc.	0.69 %	14.50 %	12.50 %	12.10 %	17.93 %	14.26 %	0.74 %	15.00 %
Abbott Labs.	1.51	11.50	13.80	13.63	16.49	13.86	1.61	15.47
Assurant Inc.	1.76	11.50	17.50	17.50	17.50	16.00	1.90	17.90
ANSYS, Inc.	-	8.00	12.30	12.58	10.74	10.90	-	NA
Booz Allen Hamilton	1.80	10.50	10.60	13.00	9.67	10.94	1.90	12.84
Becton, Dickinson	1.35	7.50	8.90	8.30	11.85	9.14	1.41	10.55
Brown-Forman 'B'	0.97	11.00	NA	5.39	7.40	7.93	1.01	8.94
Broadridge Fin'l	1.48	8.50	NA	12.30	11.60	10.80	1.56	12.36
Brady Corp.	1.59	7.50	7.00	9.00	7.00	7.63	1.65	9.28
CACI Int'l	-	13.50	13.10	12.06	13.68	13.08	-	NA
Casey's Gen'l Stores	0.63	8.00	NA	15.81	7.85	10.55	0.66	11.21
Cadence Design Sys.	-	9.50	14.40	11.60	14.40	12.48	-	NA
Cerner Corp.	1.18	8.00	12.30	10.46	11.63	10.60	1.24	11.84
CSW Industrials	0.45	8.50	NA	12.00	12.00	10.83	0.47	11.30
Quest Diagnostics	1.91	10.00	26.50	(5.40)	3.26	13.25	2.04	15.29
Lauder (Estee)	0.71	11.00	10.70	18.20	27.18	16.77	0.77	17.54
Exponent, Inc.	0.83	12.50	NA	13.30	15.00	13.60	0.89	14.49
Fastenal Co.	2.21	8.00	9.00	8.70	7.95	8.41	2.30	10.71
Gentex Corp.	1.35	10.50	10.10	13.15	15.80	12.39	1.43	13.82
Int'l Flavors & Frag	2.20	7.50	9.80	21.48	7.72	11.63	2.33	13.96
Ingredion Inc.	2.76	7.50	NA	11.00	1.90	6.80	2.85	9.65
Iron Mountain	6.32	11.50	1.70	0.66	1.70	3.89	6.44	10.33
Hunt (J.B.)	0.71	8.00	15.00	15.00	21.53	14.88	0.76	15.64
J&J Snack Foods	1.55	10.00	NA	NA	6.00	8.00	1.61	9.61
Henry (Jack) & Assoc	1.18	9.00	10.90	12.47	10.64	10.75	1.24	11.99
ManTech Int'l 'A'	1.79	9.00	5.10	5.53	3.87	5.88	1.84	7.72
McCormick & Co.	1.53	5.50	6.70	5.87	6.00	6.02	1.58	7.60
Altria Group	6.94	6.00	4.00	4.35	4.35	4.68	7.10	11.78
MSA Safety	1.10	6.50	NA	9.00	18.00	11.17	1.16	12.33
MSCI Inc.	0.69	16.00	NA	15.00	15.31	15.44	0.74	16.18
Motorola Solutions	1.49	7.00	9.00	12.20	7.37	8.89	1.56	10.45
Vail Resorts	-	9.50	NA	87.08	72.95	56.51	-	NA
Maxim Integrated	-	8.00	10.00	11.95	21.91	12.97	-	NA
Northrop Grumman	1.84	7.00	NA	5.67	5.77	6.15	1.90	8.05
Old Dominion Freight	0.32	9.00	17.20	18.98	18.93	16.03	0.35	16.38
PerkinElmer Inc.	0.21	11.00	37.90	5.66	37.90	23.11	0.23	23.34
Philip Morris Int'l	5.19	6.50	8.70	10.75	12.75	9.67	5.44	15.11
Pool Corp.	0.83	15.00	NA	NA	17.00	16.00	0.90	16.90
Post Holdings	-	11.00	NA	20.30	31.20	20.83	-	NA
RLI Corp.	0.89	12.50	NA	NA	9.80	11.15	0.94	12.09
Rollins, Inc.	0.91	11.50	NA	NA	8.20	9.85	0.95	10.80
Selective Ins. Group	1.33	8.50	9.50	9.51	5.10	8.15	1.38	9.53
Sirius XM Holdings	0.96	35.50	12.70	40.32	10.10	24.66	1.08	25.74
Bio-Techne Corp.	0.32	12.50	14.00	19.03	15.00	15.13	0.34	15.47
Tetra Tech	0.62	13.50	15.00	13.85	15.00	14.34	0.66	15.00
Waters Corp.	-	6.00	7.10	8.19	7.77	7.26	-	NA
West Pharmac. Svcs.	0.22	17.00	25.80	18.55	25.80	21.79	0.24	22.03
Western Union	3.74	6.00	NA	4.57	9.19	6.59	3.86	10.45
							Mean	13.33 %
							Median	12.33 %
							Average of Mean and Median	12.83 %

NA= Not Available

(1) The application of the DCF model to the domestic, non-price regluated comparable risk companies is identical to the application of the DCF to the Utility Proxy Group. The dividend yield is derived by using the 60 day average price and the spot indicated dividend as of May 28, 2021. The dividend yield is then adjusted by 1/2 the average projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.zacks.com, Bloomberg Professional Services, and www.yahoo.com (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.

Source of Information:
Value Line Investment Survey
www.zacks.com Downloaded on 05/28/2021
www.yahoo.com Downloaded on 05/28/2021
Bloomberg Professional Services

Northern States Power Company
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Forty-Eight Non-Price Regulated Companies
1.	Prospective Yield on Baa2 Rated Corporate Bonds (1)	4.46 %
2.	Equity Risk Premium (2)	8.03
3.	Risk Premium Derived Common Equity Cost Rate	12.49 %

Notes: (1) Average forecast of Baa2 corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated June 1, 2021 (see pages 10 and 11 of Schedule DWD-3). The estimates are detailed below.

Second Quarter 2021	3.80 %
Third Quarter 2021	4.00
Fourth Quarter 2021	4.10
First Quarter 2022	4.20
Second Quarter 2022	4.20
Third Quarter 2022	4.30
2023-2027	5.30
2028-2032	5.80
Average	4.46 %

(2) From page 5 of this Schedule.

Northern States Power Company
Comparison of Long-Term Issuer Ratings for the
Proxy Group of Forty-Eight Non-Price Regulated Companies of Comparable risk to the
Proxy Group of Seven Natural Gas Distribution Companies

	Moody's Long-Term Issuer Rating May 2021		Standard & Poor's Long-Term Issuer Rating May 2021	
Proxy Group of Forty-Eight Non-Price Regulated Companies	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
Apple Inc.	Aa1	2.0	AA+	2.0
Abbott Labs.	A2	6.0	A+	5.0
Assurant Inc.	Baa3	10.0	BBB	9.0
ANSYS, Inc.	NA	--	NA	--
Booz Allen Hamilton	NA	--	NA	--
Becton, Dickinson	Baa3	10.0	BBB	9.0
Brown-Forman 'B'	A1	5.0	A-	7.0
Broadridge Fin'l	Baa1	8.0	BBB+	8.0
Brady Corp.	NA	--	NA	--
CACI Int'l	NA	--	BB+	11.0
Casey's Gen'l Stores	NA	--	NA	--
Cadence Design Sys.	Baa2	9.0	BBB+	8.0
Cerner Corp.	NA	--	NA	--
CSW Industrials	NA	--	NA	--
Quest Diagnostics	Baa2	9.0	BBB+	8.0
Lauder (Estee)	A1	5.0	A+	5.0
Exponent, Inc.	NA	--	NA	--
Fastenal Co.	NA	--	NA	--
Gentex Corp.	NA	--	NA	--
Int'l Flavors & Frag	Baa3	10.0	BBB	9.0
Ingredion Inc.	Baa1	8.0	BBB	9.0
Iron Mountain	Ba3	13.0	BB-	13.0
Hunt (J.B.)	Baa1	8.0	BBB+	8.0
J&J Snack Foods	NA	--	NA	--
Henry (Jack) & Assoc	NA	--	NA	--
ManTech Int'l 'A'	WR	--	BB+	11.0
McCormick & Co.	Baa2	9.0	BBB	9.0
Altria Group	A3	7.0	BBB	9.0
MSA Safety	NA	--	NA	--
MSCI Inc.	Ba1	11.0	BB+	11.0
Motorola Solutions	Baa3	10.0	BBB-	10.0
Vail Resorts	B2	15.0	BB	12.0
Maxim Integrated	Baa1	8.0	BBB+	8.0
Northrop Grumman	Baa2	9.0	BBB+	8.0
Old Dominion Freight	NA	--	NA	--
PerkinElmer Inc.	Baa3	10.0	BBB	9.0
Philip Morris Int'l	A2	6.0	A	6.0
Pool Corp.	NA	--	NA	--
Post Holdings	B2	15.0	B+	14.0
RLI Corp.	Baa2	9.0	BBB	9.0
Rollins, Inc.	NA	--	NA	--
Selective Ins. Group	Baa2	9.0	BBB	9.0
Sirius XM Holdings	NA	--	BB	12.0
Bio-Techne Corp.	NA	--	NA	--
Tetra Tech	NA	--	NA	--
Waters Corp.	NA	--	NA	--
West Pharmac. Svcs.	NA	--	NA	--
Western Union	Baa2	9.0	BBB	9.0
Average	Baa2	8.8	BBB	8.9

Notes:
(1) From page 6 of Schedule DWD-6.

Source of Information:
Bloomberg Professional Services

Northern States Power Company
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
Proxy Group of Forty-Eight Non-Price Regulated Companies of Comparable risk to the
Proxy Group of Seven Natural Gas Distribution Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Forty-Eight Non-Price Regulated Companies
	Ibbotson-Based Equity Risk Premiums:	
1.	Ibbotson Equity Risk Premium (1)	5.92 %
2.	Regression on Ibbotson Risk Premium Data (2)	8.69
3.	Ibbotson Equity Risk Premium based on PRPM (3)	9.02
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	4.60
5	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	10.76
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	12.78
7.	Conclusion of Equity Risk Premium	8.63 %
8.	Adjusted Beta (7)	0.93
9.	Forecasted Equity Risk Premium	8.03 %

Notes:
(1) From note 1 of page 9 of Schedule DWD-6.
(2) From note 2 of page 9 of Schedule DWD-6.
(3) From note 3 of page 9 of Schedule DWD-6.
(4) From note 4 of page 9 of Schedule DWD-6.
(5) From note 5 of page 9 of Schedule DWD-6.
(6) From note 6 of page 9 of Schedule DWD-6.
(7) Average of mean and median beta from page 6 of this Schedule.

Sources of Information:
Stocks, Bonds, Bills, and Inflation - 2021 SBBI Yearbook, John Wiley & Sons, Inc.
Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2021
Bloomberg Professional Services

Northern States Power Company
Traditional CAPM and ECAPM Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Seven Natural Gas Distribution Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Forty-Eight Non-Price Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Apple Inc.	0.90	1.01	0.96	9.46 %	2.88 %	11.96 %	12.06 %	12.01 %
Abbott Labs.	0.90	0.85	0.88	9.46	2.88	11.20	11.49	11.35
Assurant Inc.	0.90	1.00	0.95	9.46	2.88	11.87	11.99	11.93
ANSYS, Inc.	0.85	0.97	0.91	9.46	2.88	11.49	11.70	11.59
Booz Allen Hamilton	0.90	0.92	0.91	9.46	2.88	11.49	11.70	11.59
Becton, Dickinson	0.80	0.58	0.69	9.46	2.88	9.41	10.14	9.77
Brown-Forman 'B'	0.90	0.97	0.94	9.46	2.88	11.77	11.91	11.84
Broadridge Fin'l	0.80	0.84	0.82	9.46	2.88	10.64	11.06	10.85
Brady Corp.	1.00	1.05	1.02	9.46	2.88	12.53	12.48	12.51
CACI Int'l	0.95	1.01	0.98	9.46	2.88	12.15	12.20	12.17
Casey's Gen'l Stores	0.90	0.91	0.91	9.46	2.88	11.49	11.70	11.59
Cadence Design Sys.	0.90	0.98	0.94	9.46	2.88	11.77	11.91	11.84
Cerner Corp.	0.90	0.89	0.90	9.46	2.88	11.39	11.63	11.51
CSW Industrials	0.90	1.05	0.97	9.46	2.88	12.06	12.13	12.09
Quest Diagnostics	0.85	0.96	0.91	9.46	2.88	11.49	11.70	11.59
Lauder (Estee)	0.95	1.00	0.98	9.46	2.88	12.15	12.20	12.17
Exponent, Inc.	0.90	0.94	0.92	9.46	2.88	11.58	11.77	11.68
Fastenal Co.	0.90	0.95	0.92	9.46	2.88	11.58	11.77	11.68
Gentex Corp.	0.95	1.06	1.01	9.46	2.88	12.43	12.41	12.42
Int'l Flavors & Frag	0.95	1.08	1.02	9.46	2.88	12.53	12.48	12.51
Ingredion Inc.	0.90	0.92	0.91	9.46	2.88	11.49	11.70	11.59
Iron Mountain	0.90	1.02	0.96	9.46	2.88	11.96	12.06	12.01
Hunt (J.B.)	0.95	0.91	0.93	9.46	2.88	11.68	11.84	11.76
J&J Snack Foods	0.90	0.77	0.84	9.46	2.88	10.83	11.20	11.02
Henry (Jack) & Assoc	0.85	0.89	0.87	9.46	2.88	11.11	11.42	11.26
ManTech Int'l 'A'	0.85	1.11	0.98	9.46	2.88	12.15	12.20	12.17
McCormick & Co.	0.80	0.70	0.75	9.46	2.88	9.97	10.57	10.27
Altria Group	0.90	0.88	0.89	9.46	2.88	11.30	11.56	11.43
MSA Safety	1.00	0.99	1.00	9.46	2.88	12.34	12.34	12.34
MSCI Inc.	0.95	0.94	0.94	9.46	2.88	11.77	11.91	11.84
Motorola Solutions	0.90	0.96	0.93	9.46	2.88	11.68	11.84	11.76
Vail Resorts	0.95	1.14	1.05	9.46	2.88	12.81	12.69	12.75
Maxim Integrated	0.95	0.99	0.97	9.46	2.88	12.06	12.13	12.09
Northrop Grumman	0.85	0.80	0.83	9.46	2.88	10.73	11.13	10.93
Old Dominion Freight	0.95	0.97	0.96	9.46	2.88	11.96	12.06	12.01
PerkinElmer Inc.	0.90	0.84	0.87	9.46	2.88	11.11	11.42	11.26
Philip Morris Int'l	0.95	0.91	0.93	9.46	2.88	11.68	11.84	11.76
Pool Corp.	0.85	0.95	0.90	9.46	2.88	11.39	11.63	11.51
Post Holdings	0.95	0.90	0.93	9.46	2.88	11.68	11.84	11.76
RLI Corp.	0.80	0.90	0.85	9.46	2.88	10.92	11.28	11.10
Rollins, Inc.	0.85	0.69	0.77	9.46	2.88	10.16	10.71	10.44
Selective Ins. Group	0.85	0.97	0.91	9.46	2.88	11.49	11.70	11.59
Sirius XM Holdings	0.95	1.10	1.02	9.46	2.88	12.53	12.48	12.51
Bio-Techne Corp.	0.80	0.93	0.86	9.46	2.88	11.02	11.35	11.18
Tetra Tech	0.95	1.06	1.00	9.46	2.88	12.34	12.34	12.34
Waters Corp.	0.95	0.86	0.91	9.46	2.88	11.49	11.70	11.59
West Pharmac. Svcs.	0.80	0.75	0.78	9.46	2.88	10.26	10.78	10.52
Western Union	0.80	1.05	0.93	9.46	2.88	11.68	11.84	11.76
		Mean	0.92			11.55 %	11.75 %	11.65 %
		Median	0.93			11.63 %	11.81 %	11.72 %
		Average of Mean and Median	0.93			11.59 %	11.78 %	11.69 %

Notes:
(1) From note 1 of page 2 of Schedule DWD-7.
(2) From note 2 of page 2 of Schedule DWD-7.
(3) Average of CAPM and ECAPM cost rates.

Northern States Power Company
Derivation of Investment Risk Adjustment Based upon
Ibbotson Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.		[1] Market Capitalization on May 28, 2021 (1) (millions)			[2] Applicable Decile of the NYSE/AMEX/ NASDAQ (2)	[3] Applicable Size Premium (3)	[4] Spread from Applicable Size Premium (4)
1.	Northern States Power Company, a Minnesota Corporation	$ 114.612			10	5.01%	
2.	Proxy Group of Seven Natural Gas Distribution Companies	$ 4,615.314	40.3	x	4	0.75%	4.26%
			[A]		[B]	[C]	[D]

	Decile	Market Capitalization of Smallest Company (millions)	Market Capitalization of Largest Company (millions)	Size Premium (Return in Excess of CAPM)*
Largest	1	$ 29,025.803	$ 1,966,078.882	-0.22%
	2	13,178.743	28,808.073	0.49%
	3	6,743.361	13,177.828	0.71%
	4	3,861.858	6,710.676	0.75%
	5	2,445.693	3,836.536	1.09%
	6	1,591.865	2,444.745	1.37%
	7	911.586	1,591.765	1.54%
	8	451.955	911.103	1.46%
	9	190.019	451.800	2.29%
Smallest	10	2.194	189.831	5.01%

*From 2021 Duff & Phelps Cost of Capital Navigator

Notes:

(1) From page 2 of this Schedule.

(2) Gleaned from Columns [B] and [C] on the bottom of this page. The appropriate decile (Column [A]) corresponds to the market capitalization of the proxy group, which is found in Column [1].

(3) Corresponding risk premium to the decile is provided in Column [D] on the bottom of this page.

(4) Line No. 1 Column [3] – Line No. 2 Column [3]. For example, the 4.26% in Column [4], Line No. 2 is derived as follows 4.26% = 5.01% - 0.75%.

Northern States Power Company
Market Capitalization of Northern States Power Company, a Minnesota Corporation and the
Proxy Group of Seven Natural Gas Distribution Companies

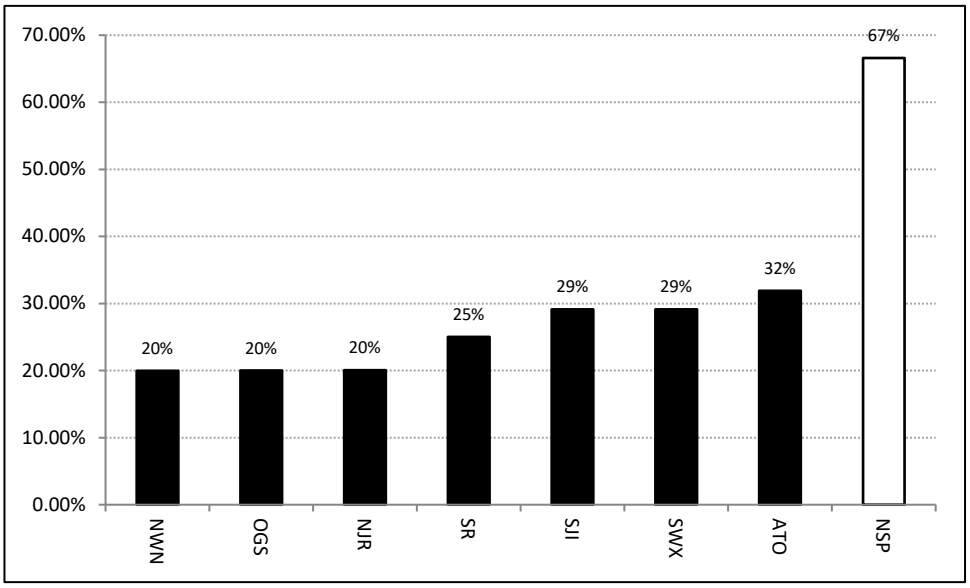
Company	Exchange	[1] Common Stock Shares Outstanding at Fiscal Year End 2020 (millions)	[2] Book Value per Share at Fiscal Year End 2020 (1)	[3] Total Common Equity at Fiscal Year End 2020 (millions)	[4] Closing Stock Market Price on May 28, 2021	[5] Market-to-Book Ratio on May 28, 2021 (2)	[6] Market Capitalization on May 28, 2021 (3) (millions)
Northern States Power Company, a Minnesota Corporation		NA	NA	65.269 (4)	NA		
Based upon Proxy Group of Seven Natural Gas Distribution Companies						175.6 (5)	$ 114.612 (6)
Proxy Group of Seven Natural Gas Distribution Companies							
Atmos Energy Corporation	NYSE	$ 125.882	$ 53.949	$ 6,791.203	$ 99.170	183.8 %	$ 12,483.765
New Jersey Resources Corporation	NYSE	95.949	19.226	1,844.692	42.720	222.2	4,098.949
Northwest Natural Holding Company	NYSE	30.589	29.054	888.733	52.880	182.0	1,617.546
ONE Gas, Inc.	NYSE	53.167	42.006	2,233.311	74.320	176.9	3,951.352
South Jersey Industries, Inc.	NYSE	100.592	16.571	1,666.876	26.660	160.9	2,681.781
Southwest Gas Holdings, Inc.	NYSE	57.193	46.771	2,674.953	66.010	141.1	3,775.305
Spire Inc.	NYSE	51.612	44.182	2,280.300	71.660	162.2	3,698.501
Average		$ 73.569	$ 35.966	$ 2,625.724	$ 61.917	175.6 %	$ 4,615.314

NA= Not Available

Notes: (1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 1 * Column 4.
(4) Requested rate base multiplied by the initial requested common equity ratio.
(5) The market-to-book ratio of Northern States Power Company, a Minnesota Corporation on May 28, 2021 is assumed to be equal to the market-to-book ratio of Proxy Group of Seven Natural Gas Distribution Companies on May 28, 2021 as appropriate.
(6) Column [3] multiplied by Column [5].

Source of Information: 2020 Annual Forms 10K
yahoo.finance.com
Bloomberg Professional

Northern States Power Company
Comparison of Projected Capital Expenditures Relative to Net Plant



Sources of Information: Value Line
NSP 2020 Natural Gas ND Annual Report
Company provided data

Northern States Power Company
Derivation of the Flotation Cost Adjustment to the Cost of Common Equity

Equity Issuances

Date	Issuing Company	[Column 1] Shares Issued (1)	[Column 2] Market Price per Share (1)	[Column 3] Average Offering Price per Share (1)	[Column 4] Underwriting Discount (1)	[Column 5] Total Offering Expense per Share (1)	[Column 6] Net Proceeds per Share (2)	[Column 7] Total Flotation Costs (3)	[Column 8] Gross Equity Issue before Costs (4)	[Column 9] Net Proceeds (5)	[Column 10] Flotation Cost Percentage (6)
11/16/1949	Northern States Power	1,584,238	$ 10.75	$ 10.25	$ 0.12	$ 0.137	$ 9.989	$ 1,205,605	$ 17,030,559	$ 15,824,953	7.079%
6/4/1952	Northern States Power	1,108,966	$ 10.50	$ 10.50	$ 0.10	$ 0.162	$ 10.240	$ 288,331	$ 11,644,143	$ 11,355,812	2.476%
4/14/1954	Northern States Power	1,219,856	$ 15.25	$ 14.00	$ 0.06	$ 0.124	$ 13.816	$ 1,749,274	$ 18,602,804	$ 16,853,530	9.403%
2/29/1956	Northern States Power	670,920	$ 17.83	$ 16.75	$ 0.05	$ 0.221	$ 16.479	$ 903,058	$ 11,959,149	$ 11,056,091	7.551%
7/22/1959	Northern States Power	952,033	$ 23.38	$ 22.00	$ 0.07	$ 0.191	$ 21.740	$ 1,556,574	$ 22,253,771	$ 20,697,197	6.995%
7/28/1965	Northern States Power	772,008	$ 35.25	$ 33.00	$ 0.09	$ 0.225	$ 32.683	$ 1,981,745	$ 27,213,282	$ 25,231,537	7.282%
1/22/1969	Northern States Power	1,080,811	$ 29.00	$ 27.00	$ 0.12	$ 0.187	$ 26.694	$ 2,492,350	$ 31,343,519	$ 28,851,169	7.952%
10/21/1970	Northern States Power	1,729,298	$ 23.13	$ 21.50	$ 0.18	$ 0.149	$ 21.176	$ 3,370,402	$ 39,990,016	$ 36,619,614	8.428%
7/26/1972	Northern States Power	1,902,228	$ 25.00	$ 23.50	$ 0.13	$ 0.166	$ 23.205	$ 3,414,499	$ 47,555,700	$ 44,141,201	7.180%
10/10/1973	Northern States Power	2,092,451	$ 25.83	$ 24.50	$ 0.13	$ 0.153	$ 24.219	$ 3,360,476	$ 54,037,547	$ 50,677,071	6.219%
11/20/1974	Northern States Power	2,300,000	$ 17.63	$ 17.50	$ 0.91	$ 0.069	$ 16.521	$ 2,539,200	$ 40,537,500	$ 37,998,300	6.264%
8/14/1975	Northern States Power	1,750,000	$ 23.00	$ 23.00	$ 0.74	$ 0.077	$ 22.183	$ 1,429,750	$ 40,250,000	$ 38,820,250	3.552%
6/3/1976	Northern States Power	2,000,000	$ 24.00	$ 24.00	$ 0.72	$ 0.064	$ 23.216	$ 1,568,000	$ 48,000,000	$ 46,432,000	3.267%
5/31/1993	Northern States Power	3,041,955	$ 44.13	$ 43.63	$ 1.20	$ 0.048	$ 42.377	$ 5,317,337	$ 134,226,264	$ 128,908,927	3.961%
9/23/1997	Northern States Power	4,500,000	$ 49.94	$ 49.56	$ 1.23	$ 0.133	$ 48.200	$ 7,821,000	$ 224,721,000	$ 216,900,000	3.480%
9/29/1997	Northern States Power	400,000	$ 50.50	$ 49.56	$ 1.23	$ 0.133	$ 48.200	$ 920,000	$ 20,200,000	$ 19,280,000	4.554%
2/25/2002	Xcel Energy, Inc.	20,000,000	$ 22.95	$ 22.50	$ 0.73	$ 0.015	$ 21.755	$ 23,900,000	$ 459,000,000	$ 435,100,000	5.207%
9/9/2008	Xcel Energy, Inc.	17,250,000	$ 20.86	$ 20.20	$ 0.10	$ 0.006	$ 20.094	$ 13,218,352	$ 359,835,000	$ 346,616,648	3.673%
8/3/2010	Xcel Energy, Inc.	21,850,000	$ 22.10	$ 21.50	$ 0.65	$ 0.013	$ 20.571	$ 33,407,927	$ 482,885,000	$ 449,477,073	6.918%
March 2013	Xcel Energy, Inc.	7,757,449	$ 29.06	$ 29.06	$ 0.29	$ 0.052	$ 28.714	$ 2,657,558	$ 225,407,642	$ 222,750,085	1.179%
June 2014	Xcel Energy, Inc.	5,693,946	$ 30.66	$ 30.66	$ 0.31	$ 0.030	$ 30.326	$ 1,915,210	$ 174,592,340	$ 172,677,130	1.097%
September 2018	Xcel Energy, Inc.	4,733,435	$ 47.89	$ 47.89	$ 0.41	$ 0.073	$ 47.405	$ 2,271,040	$ 226,661,287	$ 224,390,247	1.002%
8/29/2019	Xcel Energy, Inc.	9,359,103	$ 48.42	$ 48.42	$ 0.17	$ 0.030	$ 48.213	$ 1,901,526	$ 453,132,797	$ 451,231,271	0.420%
	Total Public Issuances							$ 119,189,213	$ 3,171,079,321	$ 3,051,890,108	3.759%

Flotation Cost Adjustment

	[Column 11] Average Dividend Yield (7)	[Column 12] Average Projected EPS Growth Rate (7)	[Column 13] Adjusted Dividend Yield (8)	[Column 14] Average DCF Cost Rate Unadjusted for Flotation (9)	[Column 15] DCF Cost Rate Adjusted for Flotation (10)	[Column 16] Flotation Cost Adjustment (11)
Proxy Group of Seven Natural Gas Distribution Companies	3.44 %	6.02 %	3.54 %	9.56 %	9.70 %	0.14 %

Notes:
(1) Company provided
(2) Col. 3 - Col. 4 - Col. 5
(3) (Col. 2 - Col. 6) x Col. 1
(4) Col. 1 x Col. 2
(5) Col. 1 x Col. 6
(6) Col. 7 / Col. 8
(7) Exhibit__(DWD-1). Schedule 5
(8) Col. 11 x (1 + 0.5 x Col. 12)
(9) Col. 12 + Col. 13
(10) (Col. 13 / (1 - Col. 10)) + Col. 12
(11) Col. 15 - Col. 14

STATE OF NORTH DAKOTA
BEFORE THE
PUBLIC SERVICE COMMISSION

In the Matter of the Application of	)	
Northern States Power Company for Authority	)	
To Increase Rates for Natural Gas Service	)	Case No. PU-21-___
In North Dakota	)	

AFFIDAVIT OF
Dylan W. D'Ascendis

I, the undersigned, being duly sworn, depose and say that the foregoing is the Direct Testimony of the undersigned, and that such Direct Testimony and the exhibits or schedules sponsored by me to the best of my knowledge, information and belief, are true, correct, accurate and complete, and I hereby adopt said testimony as if given by me in formal hearing, under oath.

Dylan W. D'Ascendis

Subscribed and sworn to before me, this 23rd day of August, 2021.

Heather N. Fulmer
Notary Public
My Commission Expires:

HEATHER N. FULMER
NOTARY PUBLIC OF NEW JERSEY
Commission # 50115526
My Commission Expires 10/25/2024

HEATHER N. FULMER NOTARY PUBLIC NEW JERSEY