Exhibit 4

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 Electric Service in North Dakota

Case No. PU-20-____
Exhibit___(DWD-1)

Rate of Return

November 6, 2020

Table of Contents

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 Director. My business address is 3000 Atrium Way, Suite 241, Mount Laurel, New Jersey 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 (NSPM 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 over 20 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 included in my Statement of Qualifications provided as Exhibit___(DWD-1), 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.

My testimony concludes with a discussion of the current capital market environment and how it influences cost of capital issues in this proceeding.

Q. HAVE YOU PREPARED SCHEDULES IN SUPPORT OF YOUR RECOMMENDATION?

A. Yes. I include Exhibit___(DWD-1), Schedules 1 through 11, which were 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 7.35% on its North Dakota-jurisdictional rate base. My recommendation is based on the Company's actual test year capital structure that consists of 46.72% long-term debt at an embedded cost rate of 4.24%, 0.78% short-term debt at an embedded cost rate of 0.81%, and 52.50% common equity at my recommended ROE of 10.20%. Those capital structure ratios and cost rates result in a return on investor-supplied capital of 7.35%, 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	46.72%	4.24%	1.98%
Short-Term Debt	0.78%	0.81%	0.01%
Common Equity	52.50%	10.20%	5.36%
Total	100.00%		7.35%

Q. PLEASE SUMMARIZE YOUR RECOMMENDED ROE.

A. My recommended ROE of 10.20% is summarized on page 2 of 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 model (DCF), the Risk Premium Model (RPM), and the Capital 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:

[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*).

Table 2

Summary of Common Equity Cost Rates[3]

Discounted Cash Flow Model	8.62%
Risk Premium Model	10.43%
Capital Asset Pricing Model	12.14%
Cost of Equity Models Applied to Comparable Risk, Non-Price Regulated Companies	12.05%
Indicated Range of Common Equity Cost Rates Before Adjustments	9.72% - 10.81%
Size Adjustment	0.20%
Credit Risk Adjustment	-0.12%
Flotation Cost Adjustment	0.15%
Indicated Range of Common Equity Cost Rates after Adjustment	9.95% - 11.04%
Recommended Cost of Common Equity	10.20%

The indicated range of common equity cost rates applicable to the Utility Proxy Group is between 9.72% and 10.81% before any Company-specific adjustments.[4] I then adjusted the indicated common equity cost rate upward by 0.20% to reflect the Company's smaller relative size and downward by 0.12% 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 0.15% to account for flotation costs.[5] These adjustments resulted in a Company-specific indicated range of common equity cost

[3] *See* Section VII for a detailed discussion regarding the application of my cost of common equity models.
[4] The 9.72% low end of the range is calculated by taking the average model result (10.81%), and averaging that with the lowest model result (8.62%). The 10.81% high end of the range is the approximate average of all model results.
[5] *See* Section IX for a detailed discussion of my cost of common equity adjustments.

rates between 9.95% and 11.04%. Given the Utility Proxy Group and Company-specific ranges of common equity cost rates, my recommended ROE for the Company is 10.20%.

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

A. As mentioned briefly above, I recommend a capital structure including 52.50% common equity, 46.72% long-term debt, and 0.78% 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 4.24% and a cost of short-term debt of 0.81%. The Company's proposed cost of long-term debt is reasonable in view of average utility debt costs at the time of the Company's issuances. The Company's proposed cost of short-term debt is reasonable in view of the average cost of one-year debt issued during 2020.

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 Cost of Common Equity analytical results;

- *Section V* – Explains the proposed capital structure;
- *Section VI* – Explains my selection of the Utility Proxy Group used to develop my Cost of Common Equity analytical results;
- *Section VII* – Describes the analyses on which my Cost of Common Equity recommendation is based;
- *Section VIII* – Summarizes my common equity cost rate before adjustments to reflect the Company-specific factors;
- *Section IX* – Explains my adjustments to my common equity cost rate to reflect the Company-specific factors;
- *Section X* – Provides an overview of the current capital market environment; and
- *Section XI* – 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.[6]

In summary, the U.S. Supreme Court has found a return that is adequate to attract capital at reasonable terms and 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 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 their 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

[6] *Hope*, 320 U.S. 591 (1944), at 603.

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 the source of the funding, public funding or corporate funding.

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, similarly situated utility companies. 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 reflects the risks and prospects of the utility's operations and supports the utility's financial integrity from a stand-alone perspective as measured by their combined business and financial risks. Consequently, the ROE authorized in this proceeding should be sufficient to support the operational (*i.e.,* business risk) and financing (*i.e.,* financial risk) of the Company's North Dakota utility operations on a stand-alone basis.

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." 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, comparable risk investment opportunities. 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.

Whereas the cost of debt is contractually defined and can be directly observed as the interest rate or yield on debt securities, 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, risks and uncertainties of supply, 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., INVESTMENT RISK)?

A. Yes, similar bond ratings/issuer credit ratings reflect, and are representative of, similar combined business and financial risks (*i.e.*, total risk) faced by bond investors.[7] 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. NSPM 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

[7] Risk distinctions within S&P's 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.

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 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.[8]

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. electric utilities. As discussed earlier, utilities must compete for capital with other companies with commensurate risk (including non-utilities) and, to do so, must be provided the

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

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. NSPM 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 525,000 natural gas customers in North Dakota, Minnesota, and South Dakota.[9] The operations that are subject to the Commission's jurisdiction provide electric service to approximately 95,000 retail customers in North Dakota.[10] The Company has long-term issuer ratings of A2 from Moody's Investor Services (Moody's) and A- from Standard & Poor (S&P).[11] 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 2015 to 2019.[12] During the five-year period ending 2019, the historically achieved average earnings rate on book common equity for the Company averaged 8.29%. The average common equity ratio based on total permanent capital (excluding short-term debt) was 52.59%, and the average dividend payout ratio was 94.56%.

[9] Northern States Power Company, SEC Form 10-K at 4, 7 (Dec. 31, 2019).
[10] *2019 Reports of Regulated Earnings for Xcel Energy's North Dakota Electric and Natural Gas Operations*, Case No. PU-20-185, May 1, 2020, at S-1.
[11] Source: S&P Global Market Intelligence.
[12] Source: NSPM FERC Form 1. Reflects entire operations of the Company.

Total debt to earnings before interest, taxes, depreciation, and amortization for the years 2015 to 2019 ranges between 3.16 and 3.97 times, with an average of 3.53 times. Funds from operations to total debt range from 20.69% to 28.13%, with an average of 25.72%.

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 vertically integrated electric utility, I applied the following criteria to select my Utility Proxy Group:

(i) They were included in the Eastern, Central, or Western Electric Utility Group of *Value Line Investment Survey* (Standard Edition)(*Value Line*);

(ii) They have 70% or greater of fiscal year 2019 total operating income derived from, and 70% or greater of fiscal year 2019 total assets attributable to, regulated electric operations;

(iii) They are vertically integrated (*i.e.,* utilities that own and operate regulated generation, transmission, and distribution assets);

(iv) 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;

(v) They have not cut or omitted their common dividends during the five years ended 2019 or through the time of preparation of this testimony;

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

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

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

The following 15 companies set forth in Table 3 below met these criteria:

Table 3

Utility Proxy Group Companies

Company Name	Ticker Symbol
ALLETE, Inc.	ALE
Alliant Energy Corporation	LNT
Ameren Corporation	AEE
Duke Energy Corporation	DUK
Edison International	EIX
Entergy Corporation	ETR
Evergy, Inc.	EVRG
IDACORP, Inc.	IDA
NorthWestern Corporation	NWE
OGE Energy Corporation	OGE
Otter Tail Corporation	OTTR
Pinnacle West Capital Corporation	PNW
PNM Resources, Inc.	PNM
Portland General Electric Co.	POR
Xcel Energy, Inc.	XEL

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 2015 to 2019.

During the five-year period ending 2019, the historically achieved average earnings rate on book common equity for the group averaged 8.54%, the average common

equity ratio based on total permanent capital (excluding short-term debt) was 48.49%, and the average dividend payout ratio was 61.41%.

Total debt to earnings before interest, taxes, depreciation, and amortization for the years 2015 to 2019 ranges between 4.02 and 5.28 times, with an average of 4.63 times. Funds from operations to total debt range from 15.23% to 23.09%, with an average of 19.49%. Given those capitalization and financial statistics, I conclude the Utility Proxy Group is generally comparable 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.

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

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 U.S. 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]

Perhaps ultimate authority for balancing the issues of cost and financial integrity is found in the U.S. 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]

---

[14] *New England Telephone & Telegraph Co. v. State*, 98 N.H. 211, 97 A.2d 213, (1953), citing *New England Tel. & Tel. Co. v. Department of Pub. Util.*, (Mass.) 327 Mass. 81, 97 N.E. 2d 509, 514; *Petitions of New England Tel. & Tel. Co.* 116 Vt. 480, 80 A2d 671, at 6.

[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.

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 7.35%, as shown on Schedule 1, page 1 and Table 1, above.

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 ACTUAL CAPITAL STRUCTURE BE AUTHORIZED FOR THE COMPANY IN THIS PROCEEDING?

A. As a preliminary matter, the Company's actual capital structure is known and measurable, and is within a reasonable range from the perspective of the Utility Proxy Group companies.[17] The use of an operating subsidiary's actual capital structure is consistent with the FERC's precedent, under which they use the applicant's capital

[17] *See* Exhibit__(DWD-1), Schedule 2.

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 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 existing capital structure should be used to set rates in this proceeding.

---

[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.

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 month-end balances for the 12 months ending December 2021, and include forecasted long-term debt issuances and retirements during that period;
- Short-term debt balances are based on the average of month-end balances for the 12 months ending December 2021; and
- Common equity balances represent the average of 13 month-end equity balances from December 2020 through December 2021. The common equity balance averages the accounting month-end balances consistent with Generally Accepted Accounting Principles 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 in 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 NSPM's historical capital structures. As shown on Schedule 2, page 1, the common equity ratios for years 2015 through 2019 range from 51.85% to 52.07%, averaging 51.98%.

Q. HOW DOES NSPM'S ACTUAL COMMON EQUITY RATIO OF 52.50% COMPARE WITH THE COMMON EQUITY RATIOS MAINTAINED BY THE UTILITY PROXY GROUP?

A. 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 comparable companies within the Utility Proxy Group.[20] The Company's requested ratemaking common equity ratio of 52.50% is reasonable and consistent with the range of common equity ratios maintained by the Utility Proxy Group. As shown on pages 2 and 3 of Schedule 3, common equity ratios of the utilities range from 35.73% to 58.04% for fiscal year 2019. The Company's actual capital structure 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 its 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 39.00% and 59.00%.

In addition to comparing the Company's ratemaking common equity ratio with common equity ratios currently and expected to be maintained by 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 4 of Schedule 3, common

[20] The development of the Utility Proxy Group is described more fully in Section VI.

equity ratios of the operating utility subsidiaries of the Utility Proxy Group range from 45.23% to 65.22% for fiscal year 2019.

Q. IS THE COMPANY'S PROPOSED EQUITY RATIO OF 52.50% APPROPRIATE FOR RATEMAKING PURPOSES GIVEN THE RANGE OF THE UTILITY PROXY GROUP?

A. Yes, it is. The Company's proposed equity ratio of 52.50% is appropriate for ratemaking purposes in the current proceeding because it is the actual equity ratio of NSPM, 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 4.24% cost of long-term debt for the test year includes the actual coupon rate on all bonds expected to be outstanding for each month of the test year. 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 0.81% cost of short-term debt in the test year included: (1) 0.33% actual interest expense for commercial paper, and (2) 0.48% 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 backup 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 on 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 Fair Value Curves for A-rated and BBB-rated utility debt ranges from 4.35% to 4.75%, indicating that its 4.24% 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.[21] The cost of one-year A-rated utility debt ranged from 0.36% to 2.39%, with an average of 1.09% and the cost of one-year BBB-rated utility debt ranged from 0.42% to 3.46%, with an average of 1.32%. As such, the proposed cost of short-term debt of 0.81% is reasonable.

[21] Source: Bloomberg Professional. January 1, 2020 through August 31, 2020.

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 these 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 models on which I rely focus on different aspects of return requirements, and provide different insights to 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 August 31, 2020, divided by the average closing market price for the 60 trading days ended August 31, 2020.[22]

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.

[22] *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 Schedule 5, the application of the Constant Growth DCF model to the Utility Proxy Group results in a wide range of indicated ROEs from 5.96% to 10.75%. The mean of those results is 8.58%, the median result is 8.66%, and the average of the two is 8.62%. 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.*, 8.62%) 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 RPM.

A. The PRPM, published in the *Journal of Regulatory Economics*,[23] was developed from the work of Robert F. Engle, who shared the Nobel Prize in Economics in 2003 "for methods of analyzing economic time series with time-varying volatility" or ARCH.[24] 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).

---

[23] 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.
[24] Autoregressive conditional heteroscedasticity; *See also,* www.nobelprize.org.

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 August 2020. 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[25] and a GARCH coefficient.[26] Multiplying the predicted monthly variance by the GARCH coefficient and then annualizing it[27] produces the predicted annual equity risk premium. I then added the forecasted 30-year U.S. Treasury bond yield of 2.05%[28] 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).*[29] The mean PRPM indicated common equity cost rate for the Utility Proxy Group is 10.15%, the median is 10.02%, and the average of the two is 10.09%. 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 10.09%.

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 2.05%. This risk-free rate is based on the average of the *Blue Chip* consensus forecast of the expected yields on 30-year U.S.

---

[25] Illustrated on Columns 1 and 2, page 2 of Exhibit___(DWD-1), Schedule 6.
[26] Illustrated on Column 4, page 2 of Exhibit___(DWD-1), Schedule 6.
[27] Annualized Return = (1 + Monthly Return) ^12 - 1
[28] *See,* Column 6, page 2 of Exhibit___(DWD-1), Schedule 6.
[29] *Blue Chip Financial Forecasts (Blue Chip),* June 1, 2020 at page 14 and September 1, 2020 at page 2.

Treasury bonds for the six quarters ending with the fourth calendar quarter of 2021, and long-term projections for the years 2022 to 2026 and 2027 to 2031.

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.[30]

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 bonds, namely, the yield on 30-

[30] Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 44.

> 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.[31]

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."[32] 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."[33]

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. The average life of NSPM's utility plant is 27 years based on the composite depreciation rate of the components of its utility plant.[34] 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 Beta-adjusted total market

---

[31] Morin, at 151.

[32] 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.

[33] Paper cited with permission of author.

[34] ND Jurisdictional depreciation rate: 3.70%. 1/3.70% = 27 years.

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 electric utilities.

Q. PLEASE EXPLAIN HOW YOU DETERMINED THE EXPECTED BOND YIELD WAS 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 fourth calendar quarter of 2021, and *Blue Chip's* long-term projections for 2022 to 2026, and 2027 to 2031. As shown on line 1, page 3 of Schedule 6, the average expected yield on Moody's Aaa-rated corporate bonds is 2.98%.

Because that 2.98% 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 0.58%, which represents a recent spread between Aaa-rated corporate bonds and A2-rated public utility bonds.[35] Adding that recent 0.58% spread to the expected Aaa-rated corporate bond yield of 2.98% results in an expected A2-rated public utility bond yield of 3.56%.

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

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 A3, another adjustment to the expected A2-rated public utility bond is needed to reflect the difference in bond ratings. An upward adjustment of 0.12%, which represents one-third 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 A3-rated public utility bond.[36] Adding the 0.12% to the 3.56% prospective A2-rated public utility bond yield results in a 3.68% expected bond yield applicable to the Utility Proxy Group.

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)*	2.98%
Adjustment to Reflect Yield Spread Between Moody's Aaa-Rated Corporate Bonds and Moody's A2-Rated Utility Bonds	0.58%
Adjustment to Reflect the Utility Proxy Group's Average Moody's Bond Rating of A3	0.12%
Prospective Bond Yield Applicable to the Utility Proxy Group	3.68%

[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 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-third of the difference between the A2-rated and Baa2-rated public utility bond yield was appropriate.

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

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 Schedule 6. The total Beta-derived equity 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 an 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 2020 (SBBI - 2020)[38] less the average historical yield on Moody's Aaa/Aa-rated corporate bonds for the period 1928 to 2019. 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.

[38] *See,* SBBI-2020 Appendix A Tables: Morningstar Stocks, Bonds, Bills, & Inflation 1926-2019.

SBBI's long-term arithmetic mean monthly total return rate on large company common stocks was 11.83%, and the long-term arithmetic mean monthly yield on Moody's Aaa/Aa-rated corporate bonds was 6.05%.[39] As shown on line 1, page 8 of 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 5.78%.

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-2020.[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 9.39% shown on line 2, page 8 of 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

[39] As explained in note 1, page 9 of Exhibit___(DWD-1), Schedule 6.
[40] *See,* SBBI-2020, at page 10-22.

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 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 bonds 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 August 2020.[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 9.62%.[42]

Q. PLEASE EXPLAIN THE DERIVATION OF A PROJECTED EQUITY RISK PREMIUM BASED ON *VALUE LINE* DATA FOR 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 Schedule 6. Consistent with my calculation of the dividend yield component in my DCF analysis, this prospective market equity risk premium is derived from an average of

[41] Data from January 1926 to December 2019 is from SBBI - 2020. Data from January 2020 to August 2020 is from Bloomberg.

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

the three- to five-year median market price appreciation potential by *Value Line* for the 13 weeks ended September 4, 2020, 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 58%, which translates to a 12.12% annual appreciation, and, when added to the average of *Value Line's* median expected dividend yields of 2.33%, equates to a forecasted annual total return rate on the market of 14.45%. The forecasted Moody's Aaa-rated corporate bond yield of 2.98% is deducted from the total market return of 14.45%, resulting in an equity risk premium of 11.47%, as shown on line 4, page 8 of 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 13.83%. Subtracting the prospective yield on Moody's Aaa-rated corporate bonds of 2.98% results in a 10.85% projected equity risk premium.

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

[43] As explained in detail in note 1, page 2 of Exhibit___(DWD-1), Schedule 6.

the S&P 500 is 13.78%. Subtracting the prospective yield on Moody's Aaa-rated corporate bonds of 2.98% results in a 10.80% projected equity risk premium.

Q. WHAT IS YOUR CONCLUSION OF 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 a 9.65% 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 – 2019)	5.78%
Regression Analysis on Historical Data	9.39%
PRPM Analysis on Historical Data	9.62%
Prospective Equity Risk Premium using Total Market Returns from *Value Line* Summary & Index less Projected Aaa Corporate Bond Yields	11.47%
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	10.85%
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	10.80%
Average	9.65%

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

After calculating the average market equity risk premium of 9.65%, 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 Schedule 7, the average of the mean and median Beta coefficient for the Utility Proxy Group is 0.94. Multiplying the 0.94 average Beta coefficient by the market equity risk premium of 9.65% results in a Beta-adjusted equity risk premium for the Utility Proxy Group of 9.07%.

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 10.74% and monthly Moody's A-rated public utility bond yields of 6.53% from 1928 to 2019 to arrive at an equity risk premium of 4.21%.[45] I then used the same historical data to derive an equity risk premium of 6.83% 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 August 2020 to arrive at a PRPM-derived equity risk premium of 5.53% for the S&P Utility Index.

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

I then derived expected total returns on the S&P Utilities Index of 10.36% and 11.45% using data from *Value Line* and Bloomberg, respectively, and subtracted the prospective Moody's A2-rated public utility bond yield of 3.56%,[46] which resulted in equity risk premiums of 6.80% and 7.89%, 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 6.25%.

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 – 2019)	4.21%
Regression Analysis on Historical Data	6.83%
PRPM Analysis on Historical Data	5.53%
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	6.80%
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	7.89%

c. Authorized Return Derived Equity Risk Premium

Q. HOW DO YOU DERIVE AN EQUITY RISK PREMIUM OF 5.92% BASED ON AUTHORIZED ROE FOR ELECTRIC UTILITIES?

A. The equity risk premium of 5.92% shown on line 3, page 7 of Schedule 6 is the result

[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.

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 Schedule 6. Page 13 of Schedule 6 contains the graphical results of a regression analysis of 1,168 rate cases for electric utilities which were fully litigated during the period from January 1, 1980 through August 31, 2020. 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 3.56%, it can be calculated that the indicated equity risk premium applicable to that bond yield is 5.92%, which is shown on line 3, page 7 of Schedule 6.

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

A. The equity risk premium I apply to the Utility Proxy Group is 7.08%, which is the average of the Beta-adjusted equity risk premium for the Utility Proxy

[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.

Group, the S&P Utilities Index, and the authorized return utility equity risk premiums of 9.07%, 6.25%, and 5.92%, respectively.[49]

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

A. As shown on line 7, page 3 of Schedule 6 and Table 7 below, I calculated a common equity cost rate of 10.76% 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	3.68%
Prospective Equity Risk Premium	7.08%
Indicated Cost of Common Equity	10.76%

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

A. As shown on page 1 of Schedule 6, the indicated RPM-derived common equity cost rate is 10.43%, which gives equal weight to the PRPM (10.09%) and the adjusted-market approach results (10.76%).

[49] As shown on page 7 of Exhibit___(DWD-1), Schedule 6.
[50] As shown on page 3 of Exhibit___(DWD-1), Schedule 6.

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)

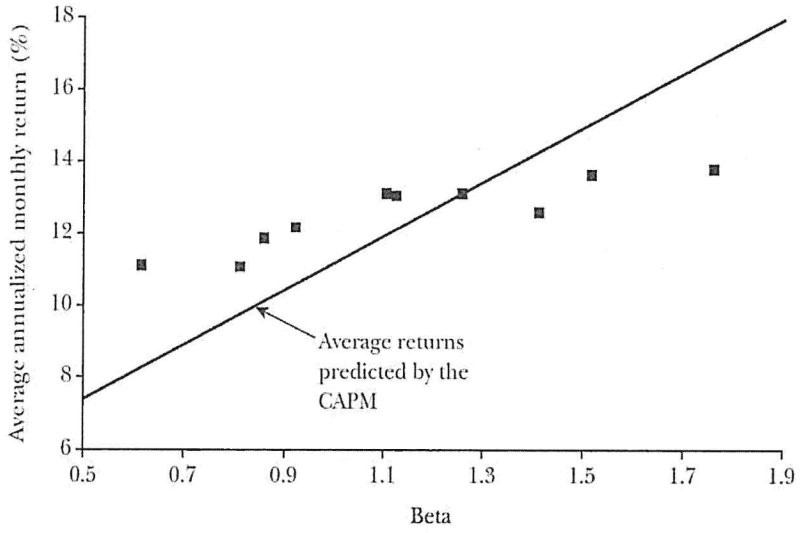
Numerous tests of the traditional CAPM have measured the extent to which security returns and Beta coefficients are related as predicted by the CAPM, confirming its validity. The empirical CAPM (ECAPM) reflects the reality that while the results of these tests support the notion that the Beta coefficient 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, reproduced 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]

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:

[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).

> 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 = 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]

---

[53] Morin, at 175.
[54] *Ibid.*, at 190.
[55] Fama & French, at 32.
[56] *Ibid.*, at 33.

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

Q. WHAT BETA COEFFICIENTS DID YOU SUE 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 2.05%. 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 fourth calendar quarter of 2021, and long-term projections for the years 2022 to 2026 and 2027 to 2031.

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 in 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 5.09% was deducted from the SBBI - 2020 monthly historical total market return of 12.10%, which results in an historical market equity risk premium of 7.01%.[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 - 2020. That regression analysis yielded a market equity risk premium of 10.24%. The PRPM market equity risk premium is 10.73%, and is derived using the PRPM relative to the yields on long-term U.S. Treasury securities from January 1926 through August 2020.

The *Value Line*-derived forecasted total market equity risk premium is derived by deducting the forecasted risk-free rate of 2.05%, discussed above, from the *Value Line* projected total annual market return of 14.45%, resulting in a forecasted total market equity risk premium of 12.40%. The S&P 500 projected market equity risk premium using *Value Line* data is derived by subtracting the projected risk-free rate of 2.05% from the projected total return of the S&P 500 of 13.83%. The resulting market equity risk premium is 11.78%.

The S&P 500 projected market equity risk premium using Bloomberg data is derived by subtracting the projected risk-free rate of 2.05% from the projected total return of the S&P 500 of 13.78%. The resulting market equity risk premium is 11.73%. These six measures, when averaged, result in an average total market equity risk premium of 10.65%.

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

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)	7.01%
Regression Analysis on Historical Data	10.24%
PRPM Analysis on Historical Data	10.73%
Prospective Equity Risk Premium using Total Market Returns from *Value Line* Summary & Index less Projected 30-Year Treasury Bond Yields	12.40%
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	11.78%
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	11.73%
Average	10.65%

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 Schedule 7, the mean result of my CAPM/ECAPM analyses is 12.32%, the median is 11.95%, and the average of the two is 12.14%. Consistent with my reliance on the average of mean and median DCF results discussed above, the indicated common equity cost rate using the CAPM/ECAPM is 12.14%.

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

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 47 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 47 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 11.95%.

Pages 3 through 5 of Schedule 9 contain the data and calculations that support the 12.68% RPM common equity cost rate. As shown on line 1, page 3 of Schedule 9, the consensus prospective yield on Moody's Baa-rated corporate bonds for the six quarters ending in the fourth quarter of 2021, and for the years 2022 to 2026 and 2027 to 2031, is 4.10%.[59] Since the Non-Price Regulated Proxy Group has an average Moody's long-term issuer rating of Baa1, a downward adjustment of 0.20% to the projected Baa2 rated corporate bond yield is necessary to reflect the difference in ratings, which results in a projected Baa1-rated corporate bond yield of 3.90%.

When the Beta-adjusted risk premium of 8.78%[60] relative to the Non-Price Regulated Proxy Group is added to the prospective Baa1-rated corporate bond yield of 3.90%, the indicated RPM common equity cost rate is 12.68%.

Page 6 of Schedule 9 contains the inputs and calculations that support my indicated CAPM/ECAPM common equity cost rate of 11.83%.

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 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

[59] *Blue Chip Financial Forecasts*, June 1, 2020, at page 14 and September 1, 2020, at page 2.
[60] Derived on page 5 of Exhibit___(DWD-1), Schedule 9.

Utility Proxy Group -- are as follows: 11.95% (DCF), 12.68% (RPM), and 11.83% (CAPM). The average of the mean and median of these models is 12.05%, which I used as the indicated common equity cost rates for the Non-Price Regulated Proxy Group.

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 9.72% and 10.81%. 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 9.72% and 10.81% is reasonable and appropriate before any adjustments for relative risk differences between the Company and the Utility Proxy Group are made. The bottom of the indicated range (*i.e.,* 9.72%) was calculated by averaging the average of all model results (10.81%) with the lowest model result (8.62%), and the top of the indicated range is the approximate average

of all model results. I have chosen this indicated range of common equity cost rates applicable to the Utility Proxy Group as a conservative estimate of the required return on equity.

Q. WHY DID YOU USE THE MIDPOINT BETWEEN YOUR AVERAGE MODEL RESULT AND YOUR LOWEST MODEL RESULT AS THE BOTTOM OF YOUR INDICATED REASONABLE RANGE BEFORE ADJUSTMENT?

A. As explained in detail in Section X below, the COVID-19 pandemic has created turmoil in the markets. Key takeaways include:

- The full impact and duration of the COVID-19 pandemic are unknown, and outcomes are still highly uncertain;
- This uncertainty increases volatility. Volatility increases the chances of investment losses. As a result, investors flee to bonds to limit their investment losses, which is known as "the flight to safety." Increased levels of bond purchases increase their price, and drive down their yields, *i.e.,* interest rates. Because of this, the current low-interest rate environment is due to increased volatility in the market, and not a steady lowering of the cost of debt over time; and
- The same increased market volatility that caused investors' "flight to safety" also created a situation where utilities are traded similar to the S&P 500. These correlated returns of utility stocks and market indices increase Beta coefficients (a measure of risk), and by extension, investor-required returns.

While the current volatility and uncertainty could justify a higher return on equity, my recommendation to use the lower end of the range of my results for my Utility Proxy Group reasonable range is designed to provide a conservative estimate of the Company's required return.

IX. ADJUSTMENTS TO THE COMMON EQUITY COST RATE

A. Size Adjustment

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 14, 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.

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:

---

[61] Duff & Phelps Valuation Handbook – U.S. Guide to Cost of Capital, Wiley 2020, at 4-1.
[62] Fama & French, at 25-43.
[63] Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance (McGraw-Hill Book Company, 1996), at 204-205, 229.

> 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 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. IS THERE A WAY TO QUANTIFY A RELATIVE RISK ADJUSTMENT DUE TO THE COMPANY'S SMALL SIZE WHEN COMPARED TO THE UTILITY PROXY GROUP?

A. Yes. The Company has greater relative risk than the average utility in the Utility

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

Proxy Group because of its smaller size, as measured by an estimated market capitalization of common equity for the Company's North Dakota operations.

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
NSPM ND Jurisdictional	$671	
Utility Proxy Group	$14,144	21.1x
*From page 1 of Exhibit___(DWD-1), Schedule 10.		

The Company's estimated market capitalization for its North Dakota operations was $671 million as of August 31, 2020, compared with the market capitalization of the average company in the Utility Proxy Group of $14,144 million as of August 31, 2020. The average company in the Utility Proxy Group has a market capitalization 21.1 times the size of the Company's estimated North Dakota-based market capitalization.

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 their smaller relative size. The determination 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 2019 period.[65] The average size premium for the Utility Proxy Group with a market

[65] Source: Duff & Phelps Cost of Capital Navigator.

capitalization of $14,144 million falls in the 2nd decile, while the Company's estimated market capitalization of $671 million places it in the 8th decile. The size premium spread between the 2nd decile and the 8th decile is 1.09%.[66] Even though a 1.09% upward size adjustment is indicated, I applied a size premium of 0.20% to the Company's indicated common equity cost rate in order to be conservative.

Q. SINCE THE COMPANY 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.

Q. SHOULD THE COMPANY BE COMPARED WITH OTHER OPERATING ELECTRIC 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.

[66] *Ibid.,* See also, Exhibit__(DWD-1), Schedule 10.

B. Credit Risk Adjustment

Q. PLEASE DISCUSS YOUR PROPOSED CREDIT RISK ADJUSTMENT.

A. NSPM'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 A3 and BBB+, respectively.[67] Hence, a downward credit risk adjustment is necessary to reflect the higher credit rating, *i.e.,* A2, of the Company relative to the A3 average Moody's bond rating of the Utility Proxy Group.[68]

An indication of the magnitude of the necessary downward adjustment to reflect the lower credit risk inherent in an A2 bond rating is one-third of a recent three-month average spread between Moody's Baa and A-rated public utility bond yields of 0.35%, shown on page 4 of Schedule 6, or 0.12%.[69]

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.

---

[67] Source of Information: S&P Global Market Intelligence.

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

[69] 0.12% = 0.35% * (1/3). 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-third of the difference between the A2-rated and Baa2-rated public utility bond yield was appropriate.

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.[70]

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.[71] In addition, Morin confirms the need for such an adjustment even when no new equity issuance is imminent.[72] 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

---

[70] Morin, at p. 321.
[71] Eugene F. Brigham and Phillip R. Daves, Intermediate Financial Management, 9th Edition, Thomson/Southwestern, at p. 342.
[72] Morin, at pp. 327-30.

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 11, an adjustment of 0.15% is required to reflect the flotation costs applicable to the Utility Proxy Group.

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

A. Applying the 0.20% size adjustment, the -0.12% credit risk adjustment, and the 0.15% flotation cost adjustment to the indicated range of common equity cost rates between 9.71% and 10.81% results in a Company-specific range of common equity rates between 9.95% and 11.04%. In consideration of both of these indicated ranges, I recommend a ROE of 10.20% for NSPM in this proceeding.

X. CAPITAL MARKET CONDITIONS

Q. DO ECONOMIC CONDITIONS INFLUENCE THE REQUIRED COST OF CAPITAL AND REQUIRED RETURN ON COMMON EQUITY?

A. Yes. The models used to estimate the Cost of Equity are meant to reflect, and therefore are influenced by, current and expected capital market conditions. Therefore, it is important to assess the reasonableness of any financial model's results in the context of observable market data.

Q. PLEASE SUMMARIZE THE RECENT CAPITAL MARKET ENVIRONMENT.

A. It is well recognized that there have been dramatic shifts in the capital markets brought about by COVID-19. The Federal Reserve and the U.S. government have

implemented multiple policies to address the financial market and economic instability.

Although government and central bank actions have stabilized the capital markets somewhat, as explained in more detail below, volatility (and, therefore, risk) remains elevated for the utility sector, which has important implications on the ROE.

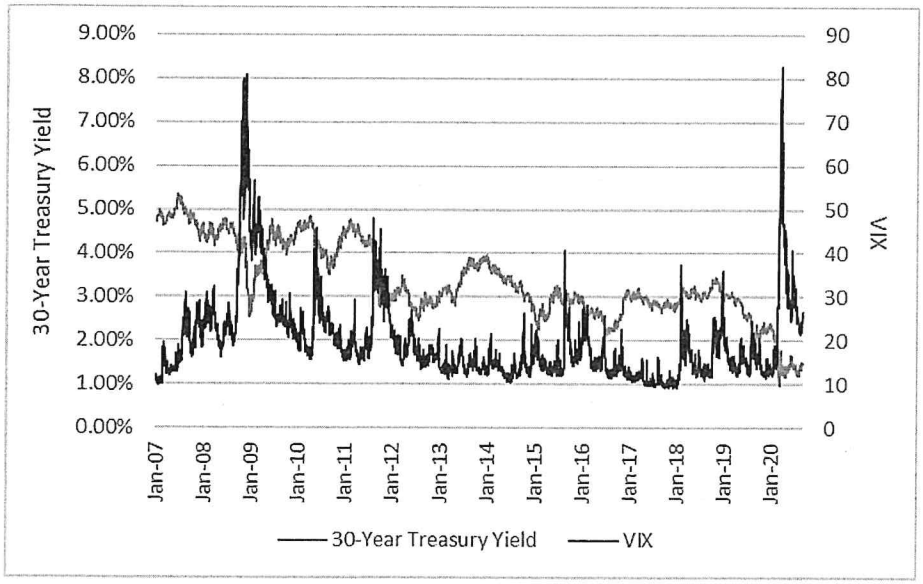
Q. HOW DO SIGNIFICANT AND ABRUPT INCREASES IN VOLATILITY AFFECT INTEREST RATES?

A. Significant and abrupt increases in volatility tend to be associated with declines in Treasury yields. That relationship makes intuitive sense; as volatility (*i.e.,* risk) increases, investors will seek to avoid a capital loss by investing in Treasury securities in a "flight to safety." Because Treasury yields are inversely related to Treasury bond prices, as investors bid up the prices of bonds, they bid down the yields. As Chart 1 below demonstrates, decreases in the 30-year Treasury yield are coincident with significant increases in the VIX.[73] In those instances, the fall in yields does not reflect a reduction in required returns, but rather it reflects an increase in risk aversion and, therefore, an increase in required equity returns.

[73] The VIX is a calculation designed to produce a measure of constant, 30-day expected volatility of the U.S. stock market, derived from real-time, mid-quote prices of S&P 500 Index call and put options. Source: www.cboe.com/vix.

Chart 1

30-Year Treasury Yields vs. VIX[74]



Q. HAS MARKET VOLATILITY INCREASED IN RECENT MONTHS?

A. Yes, it has. A visible and widely reported measure of expected volatility is the VIX. Because volatility is a measure of risk, increases in the VIX, or in its volatility, are a broad indicator of expected increases in market risk. That is, if the level of the VIX was 15.00, it would be interpreted as an expected standard deviation in annual market returns of 15.00% over the coming 30 days. Since 1990, the VIX has averaged about 19.39, which is consistent with the long-term standard deviation on annual market returns as reported by Duff & Phelps.[75] From February 1, 2020 to August 31, 2020, the VIX averaged 33.24, or more than 71.00% above its long-term average.[76] In other words, since the COVID-19 pandemic began, market volatility has been, on average, 71.00% higher than the market's long-term average volatility.

---

[74] Source: Bloomberg Professional Service.
[75] SBBI-2020, at 6-17.
[76] Source: Bloomberg Professional Service.

Q. IS MARKET VOLATILITY EXPECTED TO REMAIN ELEVATED IN THE NEAR TERM?

A. Yes. One means of assessing market expectations regarding the future level of volatility is to review CBOE's "Term Structure of Volatility", which is described by CBOE as:

> The implied volatility term structure observed in SPX options markets is analogous to the term structure of interest rates observed in fixed income markets. Similar to the calculation of forward rates of interest, it is possible to observe the option market's expectation of future market volatility through use of the SPX implied volatility term structure.[77]

As shown in Table 10 below, the implied volatility is expected to remain approximately 50% above historical volatility[78] until at least December 2021.

Table 10

CBOE Term Structure of Volatility[79]

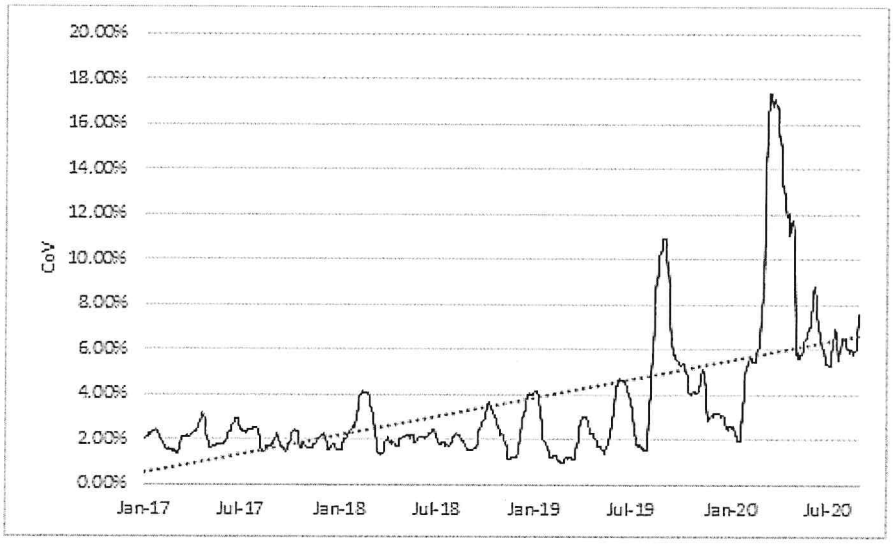
Date	Projected VIX
September 2020	24.43
October 2020	27.66
November 2020	31.38
December 2020	32.29
January 2021	32.40
February 2021	31.41
March 2021	33.04
June 2021	32.88
September 2021	34.58
December 2021	30.93

[77] Source: www.cboe.com/trading-tools/strategy-planning-tools/term-structure-data.
[78] The long-term average price of VIX is approximately 19.00, which is similar to the long-term standard deviation of market returns.
[79] Source: http://www.cboe.com/trading-tools/strategy-planning-tools/term-structure-data, as of August 31, 2020.

As discussed above, investors reacted to the increase in market uncertainty associated with COVID-19 by moving away from equity securities (including utilities) to Treasury securities, pushing down long-term Treasury yields. Both long-term Treasury and utility bond yields have been extremely volatile, as shown on Charts 2 and 3, below, as seen in its Coefficient of Variation (CoV).[80]

Chart 2

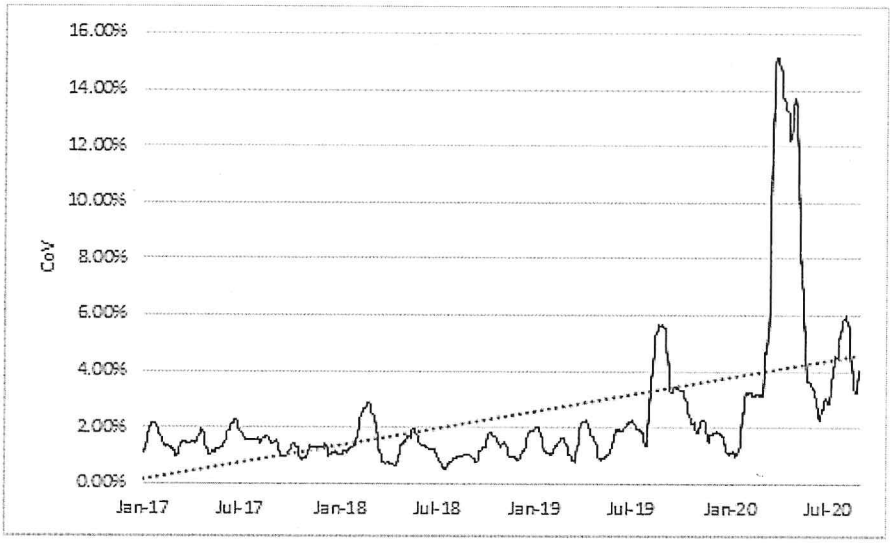
Coefficient of Variation in 30-Year Treasury Yields[81]



[80] The coefficient of variation is used by investors and economists to determine volatility.
[81] Source: Bloomberg Professional. Data through August 31, 2020.

Chart 3

Coefficient of Variation in A-Rated Public Utility Bonds[82]



`In view of all of the above, current levels of interest rates are the result of a volatility-driven "flight to safety" on the part of investors, which indicates increased risk aversion, and thus, an increased investor-required return.

Q. IN ADDITION TO AFFECTING TREASURY BONDS, HOW ELSE DOES INCREASED MARKET VOLATILITY AFFECT A UTILITY INVESTOR'S REQUIRED RETURN?

A. Increased market volatility increases both utility stock volatility and those stocks' correlation to the overall market. Increases in both measures would likewise increase the required return for utility investors.

Q. HAVE THE RELATIONSHIPS BETWEEN UTILITIES AND MARKET INDICES CHANGED DUE TO THE CURRENT VOLATILE MARKET CONDITIONS?

A. Yes, they have. To determine the relationships between utilities and market indices,

[82] Source: Bloomberg Professional. Data through August 31, 2020.

I have calculated the correlation coefficients of the price changes of several groups of utilities relative to the S&P 500 and the Dow Jones Industrial Average (DJIA) from February 1, 2020 to August 31, 2020. Specifically, I calculated correlation coefficients for the following relationships:

- The price changes of the S&P 500 relative to the price changes of the Utility Proxy Group;
- The price changes of the S&P 500 relative to the price changes of the Dow Jones Utility Average (DJU);
- The price changes of the S&P 500 relative to the price changes of the Utilities Select SPDR (XLU);
- The price changes of the DJIA relative to the price changes of the Utility Proxy Group;
- The price changes of the DJIA relative to the price changes of the DJU; and
- The price changes of the DJIA relative to the price changes of the XLU.

Table 11 below provides the results of the calculations:

Table 11

Calculation of Correlation Coefficients for Utility Groups Relative to Market Indices from February 2020 through August 2020[83]

Group	S&P 500	DJIA
Utility Proxy Group	84.90%	84.08%
DJU	84.42%	83.45%
XLU	84.74%	83.39%

[83] Source: S&P Global Market Intelligence; S&P Capital IQ.

As shown on Table 11 above, utility stocks have been trading in tandem with market indices during the current market dislocation. The behavior of utility stocks to move in tandem with the market during periods of extreme volatility is not limited to the current period. During the Great Recession (December 2007 to June 2009), correlations between these same groups were similar, as shown on Table 12, below:

Table 12

Calculation of Correlation Coefficients for Utility Groups Relative to Market Indices from December 2007 to June 2009[84]

Group	S&P 500	DJIA
Utility Proxy Group	80.31%	81.56%
DJU	81.57%	82.13%
XLU	78.36%	78.59%

That increasing correlation is not surprising. As Morningstar recently explained, during volatile markets there often is little distinction in returns across assets or portfolios. That is, "correlations go to 1."[85] When that happens, utility stocks lose their "defensive" quality.

Q. WHAT DO STRONGER CORRELATIONS BETWEEN UTILITY STOCKS AND THE MARKET IMPLY FOR THE INVESTOR-REQUIRED RETURN?

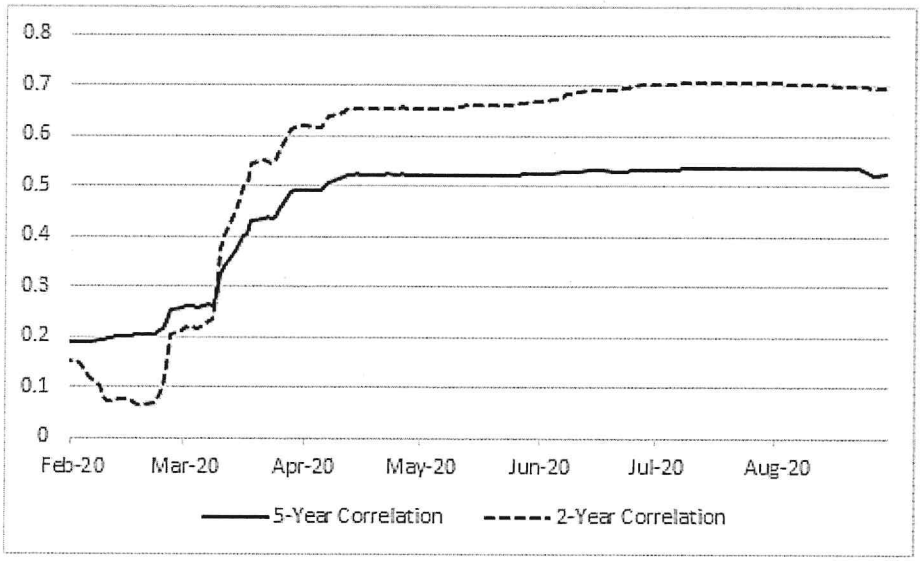
A. A direct consequence of stronger correlations is higher Beta coefficients. As shown in Chart 4 below, as the Coronavirus threat became apparent, the two-year[86] and five-year[87] correlation coefficients between the price changes in the S&P 500 and price

[84] Source: S&P Global Market Intelligence; S&P Capital IQ.
[85] Morningstar, *Correlations Going to 1: Amid Market Collapse, U.S. Stock Fund Factors Show Little Differentiation*, March 6, 2020.
[86] Consistent with the calculation horizon of Bloomberg's Beta coefficients.
[87] Consistent with the calculation horizon of *Value Line's* Beta coefficients.

changes in the Utility Proxy Group from February 2020 through August 2020 increased dramatically. As shown on Chart 4, the correlation coefficients increased from approximately 0.15 to approximately 0.70 (two-year horizon) and from approximately 0.19 to approximately 0.52 (five-year horizon).

Chart 4

Two-Year and Five-Year Correlation Coefficients for the Utility Proxy Group Relative to the S&P 500[88]



The increase in volatility (*i.e.*, risk), as explained above, in combination with the increased correlation between the Proxy Group and market indices ultimately leads to higher Beta coefficients. In short, during a period of heightened and possibly prolonged market uncertainty, observable market information makes clear that utility investors now face greater risks and require higher returns.

[88] Source: S&P Global Market Intelligence.

XI. CONCLUSION

Q. WHAT IS YOUR RECOMMENDED ROE FOR THE COMPANY?

A. Given the discussion above and the results from the analyses, I recommend that a ROE of 10.20% is appropriate for the Company at this time.

Q. IN YOUR OPINION, IS YOUR PROPOSED ROE OF 10.20% FAIR AND REASONABLE TO NSPM AND ITS CUSTOMERS?

A. Yes, it is.

Q. IN YOUR OPINION, IS NSPM'S PROPOSED CAPITAL STRUCTURE CONSISTING OF 52.50% COMMON EQUITY, 0.78% SHORT-TERM DEBT, AND 46.72% LONG-TERM DEBT FAIR AND REASONABLE?

A. Yes, they are.

Q. IN YOUR OPINION, ARE NSPM'S PROPOSED COST OF SHORT-TERM DEBT OF 0.81% AND COST OF LONG-TERM DEBT OF 4.24% FAIR AND REASONABLE?

A. Yes, they are.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

STATE OF NORTH DAKOTA
BEFORE THE
PUBLIC SERVICE COMMISSION

In the Matter of the Application of Northern States Power Company, a Minnesota Corporation For Authority to Increase Rates for Electric Service in North Dakota	))))	Case No. PU-20-___

AFFIDAVIT OF
Dylan 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 D'Ascendis

Subscribed and sworn to before me, this 16 day of October, 2020.

Notary Public
My Commission Expires:

ALEXA D RAMIREZ
Notary Public - State of New Jersey
My Commission Expires Aug 27, 2025

scottmadden
MANAGEMENT CONSULTANTS

Appendix A – Resume & Testimony Listing of:

Dylan W. D'Ascendis, CRRA, CVA
Director

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 23 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.

scottmadden
MANAGEMENT CONSULTANTS

Appendix A – Resume & Testimony Listing of:
Dylan W. D'Ascendis, CRRA, CVA
Director

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
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				
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
Florida Public Service Commission				
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				
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				
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
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				

scottmadden
MANAGEMENT CONSULTANTS

Appendix A – Resume & Testimony Listing of:
Dylan W. D'Ascendis, CRRA, CVA
Director

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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
Louisiana Public Service Commission				
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
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				
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 Jersey Board of Public Utilities				
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
North Carolina Utilities Commission				
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

scottmadden
MANAGEMENT CONSULTANTS

Appendix A – Resume & Testimony Listing of:
Dylan W. D'Ascendis, CRRA, CVA
Director

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
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				
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
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
Virginia State Corporation Commission				
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

Recommended Capital Structure and Cost Rates
for Ratemaking Purposes

Type Of Capital	Ratios (1)	Cost Rate	Weighted Cost Rate
Long-Term Debt	46.72%	0.00% (2)	0.00%
Short-Term Debt	0.78%	0.81% (2)	0.01%
Common Equity	52.50%	10.20% (3)	5.36%
Total	100.00%		5.37%

Notes:

(1) From Exhibit_(DWD-1), Schedule 2, page 2.
(2) From Exhibit _(DWD-1), Schedule 4, pages 1 and 2.
(3) From page 2 of this Schedule.

Brief Summary of Common Equity Cost Rate

Line No.	Principal Methods	Proxy Group of Fifteen Electric Companies
1.	Discounted Cash Flow Model (DCF) (1)	8.62%
2.	Risk Premium Model (RPM) (2)	10.43%
3.	Capital Asset Pricing Model (CAPM) (3)	12.14%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	12.05%
5.	Indicated Range of Common Equity Cost Rates before Adjustment for Company-Specific Risk	9.72% - 10.81%
6.	Size Risk Adjustment (5)	0.20%
7.	Credit Risk Adjustment (6)	-0.12%
8.	Flotation Cost Adjustment (7)	0.15%
9.	Indicated Range of Common Equity Cost Rates after Adjustment	9.95% - 11.04%
10.	Recommended Common Equity Cost Rate	10.20%

Notes:
(1) From Exhibit_(DWD-1), Schedule 5.
(2) From page 1 of Exhibit_(DWD-1), Schedule 6.
(3) From page 1 of Exhibit_(DWD-1), Schedule 7.
(4) From page 1 of Exhibit_(DWD-1), Schedule 9.
(5) Adjustment to reflect the Company's greater business risk due to its smaller size realtive to the Utility Proxy Group as detailed in Mr. D'Ascendis' direct testimony.
(6) Company-specific risk adjustment to reflect NSP's lower risk due to a higher long-term issuer rating relative to the average Utility Proxy Group company as detailed in Mr. D'Ascendis' direct testimony.
(7) From Exhibit_(DWD-1), Schedule 11.

CAPITALIZATION AND FINANCIAL STATISTICS (1)
2015 - 2019, Inclusive

	2019	2018	2017	2016	2015	5 YEAR AVERAGE
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$ 11,650.861	$ 10,552.523	$ 10,453.835	$ 10,238.640	$ 9,701.187	
SHORT-TERM DEBT	31.450	151.450	106.450	86.450	224.450	
TOTAL-CAPITAL EMPLOYED	$ 11,682.311	$ 10,703.973	$ 10,560.285	$ 10,325.090	$ 9,925.637	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	4.24 %	4.34 %	4.50 %	4.55 %	4.51 %	
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	47.80 %	47.19 %	47.62 %	47.69 %	46.74 %	47.41 %
PREFERRED STOCK	-	-	-	-	-	-
COMMON EQUITY	52.20	52.81	52.38	52.31	53.26	52.59
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	47.94 %	47.93 %	48.15 %	48.13 %	47.94 %	48.02 %
PREFERRED STOCK	-	-	-	-	-	-
COMMON EQUITY	52.06	52.07	51.85	51.87	52.06	51.98
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
DIVIDEND PAYOUT RATIO	88.13 %	89.41 %	105.25 %	84.26 %	105.77 %	94.56 %
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	9.31 %	8.91 %	9.05 %	9.29 %	4.88 %	8.29 %
TOTAL DEBT / EBITDA (3)	3.65 x	3.67 x	3.21 x	3.16 x	3.97 x	3.53 x
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	20.69 %	28.12 %	26.00 %	25.68 %	28.13 %	25.72 %
TOTAL DEBT / TOTAL CAPITAL	47.94 %	47.93 %	48.15 %	48.13 %	47.94 %	48.02 %

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

Calculation of 2021 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	2021 Average Balance	Month	Balance	Month	Balance	
Series due July 1, 2025 (FMB)	$ 249,442	2021 Jan	$ 184,375	2020 Dec	$ 6,665,689	
Series due March 1, 2028 (FMB)	149,285	2021 Feb	168,402	2021 Jan	6,840,503	
Series Due July 15, 2035 (FMB)	248,358	2021 Mar	193,458	2021 Feb	6,872,772	
Series Due June 1, 2036 (FMB)	404,993	2021 Apr	247,822	2021 Mar	6,815,200	
Series Due July 1, 2037 (FMB)	346,637	2021 May	-	2021 Apr	6,838,119	
Series Due November 1, 2039 (FMB)	295,156	2021 June	9,909	2021 May	6,862,261	
Series Due August 15, 2040 (FMB)	247,630	2021 Jul	135,844	2021 Jun	6,828,191	
Series Due August 15, 2022 (FMB)	299,617	2021 Aug	74,120	2021 Jul	6,915,649	
Series Due August 15, 2042 (FMB)	461,341	2021 Sep	19,353	2021 Aug	6,998,137	
Series Due May 15, 2023 (FMB)	399,037	2021 Oct	97,366	2021 Sep	6,950,084	
Series Due May 15, 2044 (FMB)	296,427	2021 Nov	57,929	2021 Oct	6,985,090	
Series Due Aug 15, 2045 (FMB)	292,940	2021 Dec	33,188	2021 Nov	7,017,784	
Series Due May 15, 2046 (FMB)	343,783			2021 Dec	6,962,970	
Series Due Sep 15, 2047 (FMB)	579,808					
Series Due Mar 1, 2050 (FMB)	580,926					
Series Due Jun 1, 2051 (FMB)	677,854					
Series Due May 1, 2051 (FMB) (1)	262,717					
Right of Way Notes	286					
Unamortized Loss on Reacquired Debt	(5,700)					
Total	$ 6,130,539	Avg. Balance	$ 101,814	Avg. Balance	$ 6,888,650	$ 13,121,003
Percent of Total Capital	46.72%		0.78%		52.50%	100.00%

Notes:
(1) Company-provided data.

Proxy Group of Fifteen Electric Companies
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2015 - 2019, Inclusive

	2019	2018	2017	2016	2015	5 YEAR AVERAGE
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$19,170.073	$17,563.380	$16,026.006	$15,844.640	$14,799.184	
SHORT-TERM DEBT	$554.853	$638.869	$601.956	$462.079	$479.850	
TOTAL CAPITAL EMPLOYED	$19,724.926	$18,202.249	$16,627.962	$16,306.719	$15,279.034	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	4.40 %	4.62 %	4.60 %	4.85 %	4.65 %	
PREFERRED STOCK	5.44	5.22	5.28	5.42	5.39	
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	52.09 %	50.93 %	50.34 %	50.28 %	49.69 %	50.67 %
PREFERRED STOCK	0.67	0.80	0.84	0.94	0.96	0.84
COMMON EQUITY	47.24	48.27	48.82	48.78	49.35	48.49
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	52.95 %	52.07 %	52.19 %	51.75 %	50.98 %	51.99 %
PREFERRED STOCK	0.65	0.77	0.79	0.90	0.94	0.81
COMMON EQUITY	46.40	47.16	47.02	47.36	48.08	47.20
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	4.84 %	4.91 %	4.57 %	4.58 %	4.70 %	4.72 %
MARKET / AVERAGE BOOK RATIO	203.29	194.96	204.20	167.90	161.63	186.40
DIVIDEND YIELD	3.14	3.44	3.21	3.49	3.61	3.38
DIVIDEND PAYOUT RATIO	66.31	51.18	76.23	53.36	59.95	61.41
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	9.68 %	8.52 %	8.78 %	7.97 %	7.77 %	8.54 %
TOTAL DEBT / EBITDA (3)	4.52 x	5.01 x	4.02 x	5.28 x	4.33 x	4.63 x
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	15.23 %	20.10 %	20.06 %	18.97 %	23.09 %	19.49 %
TOTAL DEBT / TOTAL CAPITAL	52.95 %	52.07 %	52.19 %	51.75 %	50.98 %	51.99 %

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 Fifteen Electric Companies
2015 - 2019, Inclusive

	2019	2018	2017	2016	2015	5 YEAR AVERAGE
ALLETE, Inc.						
Long-Term Debt	41.96 %	40.80 %	42.09 %	45.15 %	46.86 %	43.37 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	58.04	59.20	57.91	54.85	53.14	56.63
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Alliant Energy Corporation						
Long-Term Debt	53.39 %	53.49 %	52.62 %	50.34 %	49.43 %	51.85 %
Preferred Stock	1.72	1.94	2.16	2.33	2.58	2.15
Common Equity	44.89	44.57	45.22	47.33	47.99	46.00
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Ameren Corporation						
Long-Term Debt	53.29 %	52.05 %	51.52 %	50.11 %	50.65 %	51.52 %
Preferred Stock	0.81	0.88	0.92	0.98	0.99	0.92
Common Equity	45.90	47.07	47.56	48.91	48.36	47.56
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Duke Energy Corporation						
Long-Term Debt	55.39 %	55.45 %	55.61 %	53.85 %	49.87 %	54.03 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	44.61	44.55	44.39	46.15	50.13	45.97
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Edison International						
Long-Term Debt	54.21 %	53.76 %	46.65 %	44.02 %	45.68 %	48.86 %
Preferred Stock	6.48	8.02	8.44	8.65	8.20	7.96
Common Equity	39.31	38.22	44.91	47.33	46.12	43.18
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Entergy Corporation						
Long-Term Debt	63.12 %	64.08 %	64.80 %	64.16 %	58.19 %	62.87 %
Preferred Stock	0.78	0.87	0.85	0.88	1.39	0.95
Common Equity	36.10	35.05	34.35	34.96	40.42	36.18
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Evergy, Inc.						
Long-Term Debt	51.77 %	42.70 %	49.60 %	NA %	NA %	48.02 %
Preferred Stock	-	-	-	NA	NA	0.00
Common Equity	48.23	57.30	50.40	NA	NA	51.98
Total Capital	100.00 %	100.00 %	100.00 %	NA %	NA %	100.00 %
IDACORP, Inc.						
Long-Term Debt	42.70 %	43.63 %	43.68 %	44.77 %	45.62 %	44.08 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	57.30	56.37	56.32	55.23	54.38	55.92
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Fifteen Electric Companies
2015 - 2019, Inclusive

	2019	2018	2017	2016	2015	5 YEAR AVERAGE
NorthWestern Corporation						
Long-Term Debt	52.27 %	51.98 %	50.26 %	52.05 %	53.08 %	51.93 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	47.73	48.02	49.74	47.95	46.92	48.07
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
OGE Energy Corporation						
Long-Term Debt	43.56 %	44.00 %	43.78 %	43.31 %	45.31 %	43.99 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	56.44	56.00	56.22	56.69	54.69	56.01
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Otter Tail Corporation						
Long-Term Debt	46.88 %	44.74 %	41.31 %	44.56 %	45.17 %	44.53 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	53.12	55.26	58.69	55.44	54.83	55.47
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Pinnacle West Capital Corp.						
Long-Term Debt	50.91 %	49.59 %	48.68 %	46.33 %	45.45 %	48.19 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	49.09	50.41	51.32	53.67	54.55	51.81
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
PNM Resources, Inc.						
Long-Term Debt	64.02 %	61.10 %	57.89 %	58.64 %	55.66 %	59.46 %
Preferred Stock	0.25	0.26	0.28	0.28	0.31	0.28
Common Equity	35.73	38.64	41.83	41.08	44.03	40.26
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Portland General Electric Co.						
Long-Term Debt	50.06 %	49.72 %	50.10 %	50.06 %	49.39 %	49.87 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	49.94	50.28	49.90	49.94	50.61	50.13
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Xcel Energy, Inc.						
Long-Term Debt	57.77 %	57.01 %	56.66 %	56.73 %	55.36 %	56.71 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	42.23	42.99	43.34	43.27	44.64	43.29
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Fifteen Electric Companies						
Long-Term Debt	52.09 %	50.94 %	50.35 %	50.29 %	49.70 %	50.62 %
Preferred Stock	0.67	0.80	0.84	0.94	0.96	0.82
Common Equity	47.24	48.26	48.81	48.77	49.34	48.56
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information
Annual Forms 10-K

Operating Subsidiary Company Capital Structures of the
Proxy Group of Fifteen Electric Companies

Company Name	Parent Company Ticker	2019 Common Equity	2019 Long-Term Debt	2019 Total Perm. Capital
ALLETE (Minnesota Power)	ALE	59.59%	40.41%	100.00%
Superior Water, Light and Power Company	ALE	58.08%	41.92%	100.00%
Interstate Power and Light Company	LNT	50.23%	49.77%	100.00%
Wisconsin Power and Light Company	LNT	53.78%	46.22%	100.00%
Ameren Illinois Company	AEE	53.00%	47.00%	100.00%
Union Electric Company	AEE	51.90%	48.10%	100.00%
Duke Energy Carolinas, LLC	DUK	52.11%	47.89%	100.00%
Duke Energy Florida, LLC	DUK	49.91%	50.09%	100.00%
Duke Energy Indiana, LLC	DUK	52.84%	47.16%	100.00%
Duke Energy Kentucky, Inc.	DUK	49.37%	50.63%	100.00%
Duke Energy Ohio, Inc.	DUK	65.22%	34.78%	100.00%
Duke Energy Progress, LLC	DUK	51.29%	48.71%	100.00%
Southern California Edison Company	EIX	50.43%	49.57%	100.00%
Entergy Arkansas, LLC	ETR	47.90%	52.10%	100.00%
Entergy Louisiana, LLC	ETR	47.47%	52.53%	100.00%
Entergy Mississippi, LLC	ETR	48.60%	51.40%	100.00%
Entergy New Orleans, LLC	ETR	49.26%	50.74%	100.00%
Entergy Texas, Inc.	ETR	50.43%	49.57%	100.00%
Evergy Kansas Central, Inc.	EVRG	57.97%	42.03%	100.00%
Evergy Missouri West, Inc.	EVRG	50.34%	49.66%	100.00%
Evergy Metro, Inc.	EVRG	50.31%	49.69%	100.00%
Idaho Power Company	IDA	55.14%	44.86%	100.00%
NorthWestern Corporation	NWE	47.59%	52.41%	100.00%
Oklahoma Gas and Electric Company	OGE	55.15%	44.85%	100.00%
Otter Tail Power Company	OTTR	51.12%	48.88%	100.00%
Public Service Company of New Mexico	PNM	45.23%	54.77%	100.00%
Texas-New Mexico Power Company	PNM	52.74%	47.26%	100.00%
Arizona Public Service Company	PNW	52.80%	47.20%	100.00%
Portland General Electric Company	POR	49.85%	50.15%	100.00%
Northern States Power Company - MN	XEL	52.20%	47.80%	100.00%
Northern States Power Company - WI	XEL	54.23%	45.77%	100.00%
Public Service Company of Colorado	XEL	56.32%	43.68%	100.00%
Southwestern Public Service Company	XEL	54.14%	45.86%	100.00%
	Mean	52.32%	47.68%	100.00%
	Median	51.90%	48.10%	100.00%

Source: S&P Global Market Intelligence

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	(3) Capital Employed	Total Bond Cost: (4) 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	-	307	250		249,442	17,813	-	78	63		17,953	7.20%
Series due March 1, 2028 (FMB)	6.5000	Mar-98	Mar-28	150,000	-	389	326		149,285	9,750	-	59	49		9,858	6.60%
Series Due July 15, 2035 (FMB)	5.2500	Jul-05	Jul-35	250,000	-	226	1,416		248,358	13,125	-	16	101		13,242	5.33%
Series Due June 1, 2036 (FMB)	6.2500	May-06	Jun-36	400,000	8,106	696	2,417		404,993	25,000	545	47	162		24,665	6.09%
Series Due July 1, 2037 (FMB)	6.2000	Jun-07	Jul-37	350,000	-	1,057	2,306		346,637	21,700	-	66	144		21,911	6.32%
Series Due November 1, 2039 (FMB)	5.3500	Nov-09	Nov-39	300,000	(1,958)	348	2,537		295,156	16,050	(107)	19	139		16,315	5.53%
Series Due August 15, 2040 (FMB)	4.8500	Aug-10	Aug-40	250,000	-	450	1,920		247,630	12,125	-	24	101		12,249	4.95%
Series Due August 15, 2022 (FMB)	2.1500	Aug-12	Aug-22	300,000	-	49	334		299,617	6,450	-	46	309		6,805	2.27%
Series Due August 15, 2042 (FMB)	3.4000	Aug-12	Aug-42	500,000	(31,566)	2,684	4,409		461,341	17,000	(1,496)	127	209		18,833	4.08%
Series Due May 15, 2023 (FMB)	2.6000	May-13	May-23	400,000	-	134	829		399,037	10,400	-	73	453		10,927	2.74%
Series Due May 15, 2044 (FMB)	4.1250	May-14	May-44	300,000	-	664	2,909		296,427	12,375	-	29	127		12,531	4.23%
Series Due Aug 15, 2045 (FMB)	4.0000	Aug-15	Aug-45	300,000	-	3,931	3,129		292,940	12,000	-	163	130		12,293	4.20%
Series Due May 15, 2046 (FMB)	3.6000	May-16	May-46	350,000	-	1,735	4,482		343,783	12,600	-	70	180		12,850	3.74%
Series Due Sep 15, 2047 (FMB)	3.7000	Sep-17	Sep-47	600,000	-	5,216	7,674	7,302	579,808	22,200	-	199	293	279	22,971	3.96%
Series Due Mar 1, 2050 (FMB)	2.9000	Sep-19	Mar-50	600,000	-	10,871	8,202		580,926	17,400	-	380	286		18,066	3.11%
Series Due Jun 1, 2051 (FMB)	2.6000	Jun-20	Jun-51	700,000	-	12,712	9,434		677,854	18,200	-	425	316		18,941	2.79%
Series Due May 1, 2051 (FMB) (1)	2.9000	May-21	May-51	266,667	-	-	3,950		262,717	7,733	-	-	134		7,867	2.99%
Other Debt																
Right of Way Notes	var	var	var	286	-	-	-		286	-	-	-	-		-	0.00%
TOTAL DEBT				6,266,953	(25,419)	41,468	56,524	7,302	6,136,239	251,921	(1,059)	1,820	3,198	279	258,277	4.21%
Unamortized Loss on Reacquired Debt									(5,700)						1,217	
Fees on 5-year Credit Facility (2)									-						379	
GRAND TOTAL and COST OF DEBT									6,130,539						259,872	

Notes:

(1) NSP 2021 issuance of $400M 30 year bond, balance is 8 of 12 months.

(2) 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.

(3) 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.

(4) Interest Expense is a Straight Interest Expense calculation.

Calculation of Short-Term Debt Cost Rate

			Cost of Short Term Debt		
	Month End Balances	Average Of Month End Balances (1)	Monthly Interest Expense (2)	Monthly Fees Expense (3)	Average Short Term Debt Cost
2021 Jan	$184,374,721	$175,093,710	$47,319	$43,467	
2021 Feb	$168,402,468	$176,388,595	$43,056	$39,382	
2021 Mar	$193,457,854	$180,930,161	$48,897	$43,467	
2021 Apr	$247,822,161	$220,640,007	$58,582	$42,106	
2021 May	$0	$123,911,080	$33,996	$43,467	
2021 June	$9,909,031	$4,954,515	$1,315	$42,106	
2021 Jul	$135,844,477	$72,876,754	$21,073	$43,467	
2021 Aug	$74,119,606	$104,982,042	$30,356	$43,467	
2021 Sep	$19,353,155	$46,736,380	$13,078	$42,106	
2021 Oct	$97,366,081	$58,359,618	$18,748	$43,467	
2021 Nov	$57,929,317	$77,647,699	$24,140	$42,106	
2021 Dec	$33,188,058	$45,558,687	$14,636	$43,467	
Average	$101,813,911	$107,339,937			
Total			$ 355,198	$ 512,076	
			0.33%	0.48%	0.81%

Notes:

(1) January through December Average of Month End Balances.

(2) Monthly Interest Expense is based on the weighted average of short term debt outstanding and Interest Rates are based on the Global Insights and Bloomberg Forecast.

(3) 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.)

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%	$ 558	$ 249,442	$ 17,813	$ 141	$ 17,953	7.20%	30	7.42%	7.50%
Series due March 1, 2028 (FMB)	$ 150,000	3/11/1998	3/1/2028	30	6.500%	$ 715	$ 149,285	$ 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%	$ 1,642	$ 248,358	$ 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%	$ (4,993)	$ 404,993	$ 25,000	$ (335)	$ 24,665	6.09%	30	6.27%	6.59%
Series Due July 1, 2037 (FMB)	$ 350,000	6/1/2007	7/1/2037	30	6.200%	$ 3,363	$ 346,637	$ 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%	$ 4,844	$ 295,156	$ 16,050	$ 265	$ 16,315	5.53%	30	5.57%	6.23%
Series Due August 15, 2040 (FMB)	$ 250,000	8/11/2010	8/15/2040	30	4.850%	$ 2,370	$ 247,630	$ 12,125	$ 124	$ 12,249	4.95%	30	5.25%	5.76%
Series Due August 15, 2022 (FMB)	$ 300,000	8/13/2012	8/15/2022	10	2.150%	$ 383	$ 299,617	$ 6,450	$ 355	$ 6,805	2.27%	10	2.78%	3.53%
Series Due August 15, 2042 (FMB)	$ 500,000	8/13/2012	8/15/2042	30	3.400%	$ 38,659	$ 461,341	$ 17,000	$ 1,833	$ 18,833	4.08%	30	3.74%	4.19%
Series Due May 15, 2023 (FMB)	$ 400,000	5/20/2013	5/15/2023	10	2.600%	$ 963	$ 399,037	$ 10,400	$ 527	$ 10,927	2.74%	10	2.81%	3.38%
Series Due May 15, 2044 (FMB)	$ 300,000	5/13/2014	5/15/2044	30	4.125%	$ 3,573	$ 296,427	$ 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%	$ 7,060	$ 292,940	$ 12,000	$ 293	$ 12,293	4.20%	30	4.37%	4.77%
Series Due May 15, 2046 (FMB)	$ 350,000	5/31/2016	5/15/2046	30	3.600%	$ 6,217	$ 343,783	$ 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%	$ 20,192	$ 579,808	$ 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%	$ 19,074	$ 580,926	$ 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%	$ 22,146	$ 677,854	$ 18,200	$ 741	$ 18,941	2.79%	31	3.12%	3.55%
													Bloomberg Fair Value Curve A-Rated	Bloomberg Fair Value Curve BBB-Rated
TOTAL	$ 6,000,000		Weighted Averages:		4.07%						4.25%		4.35%	4.75%

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

Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for the
Proxy Group of Fifteen Electric Companies

Proxy Group of Fifteen Electric 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)
ALLETE, Inc.	4.31 %	5.50 %	NA %	6.40 %	7.00 %	6.30 %	4.45 %	10.75 %
Alliant Energy Corporation	2.96	6.50	5.50	5.59	5.30	5.72	3.04	8.76
Ameren Corporation	2.58	6.00	6.80	7.02	5.85	6.42	2.66	9.08
Duke Energy Corporation	4.65	5.00	4.30	4.39	2.75	4.11	4.75	8.86
Edison International	4.62	NMF	3.30	4.38	1.40	3.03	4.69	7.72
Entergy Corporation	3.75	3.00	5.80	4.85	5.95	4.90	3.84	8.74
Evergy, Inc.	3.44	3.00	6.40	6.41	6.80	5.65	3.54	9.19
IDACORP, Inc.	2.99	3.50	2.60	3.00	2.60	2.93	3.03	5.96
NorthWestern Corporation	4.36	1.50	3.40	4.00	3.80	3.18	4.43	7.61
OGE Energy Corporation	4.87	3.00	3.70	3.59	2.40	3.17	4.95	8.12
Otter Tail Corporation	3.76	3.50	NA	6.00	9.00	6.17	3.88	10.05
Pinnacle West Capital Corp.	4.03	4.00	4.70	4.57	3.75	4.25	4.12	8.37
PNM Resources, Inc.	2.99	6.00	4.90	5.46	4.95	5.33	3.07	8.40
Portland General Electric Co.	3.83	4.00	5.00	4.90	4.30	4.55	3.92	8.47
Xcel Energy, Inc.	2.57	6.00	5.90	6.02	6.10	6.01	2.65	8.66
							Average	8.58 %
							Median	8.66 %
							Average of Mean and Median	8.62 %

NA= Not Available
NMF= Not Meaningful Figure

Notes:

(1) Indicated dividend at 08/31/2020 divided by the average closing price of the last 60 trading days ending 08/31/2020 for each company.

(2) From pages 2 through 16 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 ALLETE, Inc., 4.31% x (1+(1/2 x 6.30%)) = 4.45%.

(5) Column 6 + column 7.

Source of Information:

Value Line Investment Survey
www.zacks.com Downloaded on 08/31/2020
www.yahoo.com Downloaded on 08/31/2020
Bloomberg Professional Services

ALLETE NYSE-ALE

RECENT PRICE 59.20 | P/E RATIO 19.4 (Trailing: 17.2 Median: 18.0) | RELATIVE P/E RATIO 0.98 | DIV'D YLD 4.3% | VALUE LINE

TIMELINESS 3 Lowered 4/5/19
SAFETY 2 New 10/1/04
TECHNICAL 3 Raised 5/1/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$49-$106	$78 (30%)

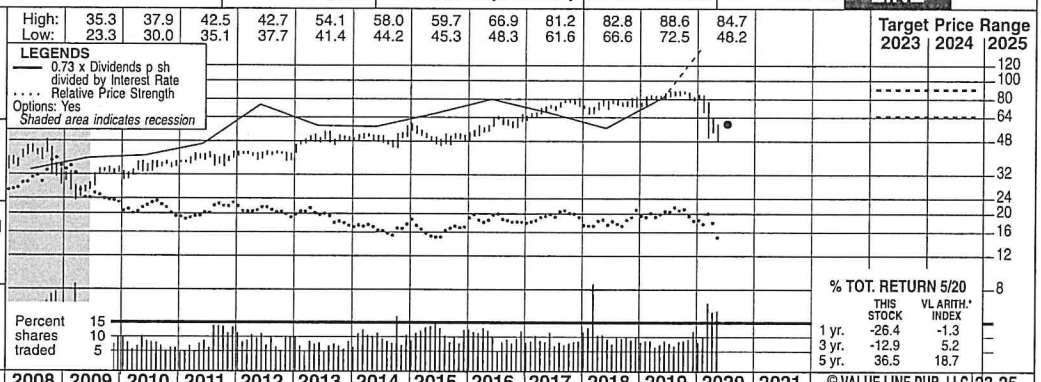
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	90	(+50%)	*14%*
Low	65	(+10%)	*7%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	125	158	124
to Sell	142	120	154
Hld's(000)	38347	38235	38410

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
High:	35.3	37.9	42.5	42.7	54.1	58.0	59.7	66.9	81.2	82.8	88.6	84.7								
Low:	23.3	30.0	35.1	37.7	41.4	44.2	45.3	48.3	61.6	66.6	72.5	48.2								
	25.30	24.50	25.23	27.33	24.57	21.57	25.34	24.75	24.40	24.60	24.77	30.27	27.01	27.78	29.10	23.99	*22.00*	*23.25*	Revenues per sh	*25.75*
	2.97	3.85	4.14	4.42	4.23	3.57	4.35	4.91	5.01	5.35	5.68	6.79	7.08	6.59	7.37	7.24	*7.05*	*7.65*	"Cash Flow" per sh	*9.00*
	1.35	2.48	2.77	3.08	2.82	1.89	2.19	2.65	2.58	2.63	2.90	3.38	3.14	3.13	3.38	3.33	*3.05*	*3.50*	Earnings per sh A	*4.25*
	.30	1.25	1.45	1.64	1.72	1.76	1.76	1.78	1.84	1.90	1.96	2.02	2.08	2.14	2.24	2.35	*2.47*	*2.58*	Div'd Decl'd per sh B ■ †	*2.90*
	2.12	1.95	3.37	6.82	9.24	9.05	6.95	6.38	10.30	7.93	12.48	5.84	5.35	4.08	6.07	11.55	*14.80*	*11.20*	Cap'l Spending per sh	*3.25*
	21.23	20.03	21.90	24.11	25.37	26.41	27.26	28.78	30.48	32.44	35.06	37.07	38.17	40.47	41.86	43.17	*46.30*	*47.65*	Book Value per sh C	*51.75*
	29.70	30.10	30.40	30.80	32.60	35.20	35.80	37.50	39.40	41.40	45.90	49.10	49.60	51.10	51.50	51.70	*52.75*	*53.50*	Common Shs Outst'g D	*54.25*
	25.2	17.9	16.5	14.8	13.9	16.1	16.0	14.7	15.9	18.6	17.2	15.1	18.6	23.0	22.2	24.7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.5*
	1.33	.95	.89	.79	.84	1.07	1.02	.92	1.01	1.05	.91	.76	.98	1.16	1.20	1.32			Relative P/E Ratio	*1.05*
	.9%	2.8%	3.2%	3.6%	4.4%	5.8%	5.0%	4.6%	4.5%	3.9%	3.9%	4.0%	3.6%	3.0%	3.0%	2.9%			Avg Ann'l Div'd Yield	*3.8%*
	907.0	928.2	961.2	1018.4	1136.8	1486.4	1339.7	1419.3	1498.6	1240.5	*1160*	*1245*	Revenues ($mill)	*1450*
	75.3	93.8	97.1	104.7	124.8	163.4	155.3	159.2	174.1	172.4	*160*	*185*	Net Profit ($mill)	*230*
	37.2%	27.6%	28.1%	21.5%	22.6%	19.4%	11.3%	14.8%	14.8%	NMF	*NMF*	*Nil*	Income Tax Rate	*Nil*
	8.9%	2.7%	5.3%	4.4%	6.3%	2.0%	1.4%	.8%	.7%	1.3%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*1.0%*
	44.2%	44.3%	43.7%	44.6%	44.2%	46.3%	42.0%	41.0%	39.9%	38.6%	*41.0%*	*40.0%*	Long-Term Debt Ratio	*41.0%*
	55.8%	55.7%	56.3%	55.4%	55.8%	53.7%	58.0%	59.0%	60.1%	61.4%	*59.0%*	*60.0%*	Common Equity Ratio	*59.0%*
	1747.6	1937.2	2134.6	2425.9	2882.2	3388.9	3263.4	3507.4	3584.3	3632.8	*4140*	*4250*	Total Capital ($mill)	*4750*
	1805.6	1982.7	2347.6	2576.5	3286.4	3669.1	3741.2	3822.4	3904.4	4377.0	*4945*	*5320*	Net Plant ($mill)	*5575*
	5.4%	6.0%	5.6%	5.3%	5.2%	5.8%	5.8%	5.5%	5.8%	5.6%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.5%*
	7.7%	8.7%	8.1%	7.8%	7.8%	9.0%	8.2%	7.7%	8.1%	7.7%	*6.5%*	*7.5%*	Return on Shr. Equity	*8.0%*
	7.7%	8.7%	8.1%	7.8%	7.8%	9.0%	8.2%	7.7%	8.1%	7.7%	*6.5%*	*7.5%*	Return on Com Equity E	*8.0%*
	1.5%	2.9%	2.3%	2.2%	2.5%	3.6%	2.8%	2.4%	2.7%	2.3%	*1.5%*	*2.0%*	Retained to Com Eq	*2.5%*
	81%	66%	71%	72%	67%	60%	66%	68%	66%	70%	*81%*	*74%*	All Div'ds to Net Prof	*69%*



CAPITAL STRUCTURE as of 3/31/20
Total Debt $1722.9 mill. **Due in 5 Yrs** $562.6 mill.
LT Debt $1399.9 mill. **LT Interest** $61.1 mill.
(LT interest earned: 3.6x)

Leases, Uncapitalized Annual rentals $6.6 mill.

Pension Assets-12/19 $699.6 mill.
Oblig $854.0 mill.

Pfd Stock None

Common Stock 51,787,412 shs.

MARKET CAP: $3.1 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+8.4	-.2	-1.5
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	1599	1589	1573
Annual Load Factor (%)	NA	NA	NA
% Change Customers (avg.)	NA	NA	NA
Fixed Charge Cov. (%)	339	296	277

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	1.0%	2.0%	*-1.0%*
"Cash Flow"	5.5%	6.0%	*4.0%*
Earnings	2.5%	4.0%	*5.5%*
Dividends	3.0%	3.5%	*4.5%*
Book Value	5.0%	5.0%	*3.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	365.6	353.3	362.5	337.9	1419.3
2018	358.2	344.1	348.0	448.3	1498.6
2019	357.2	290.4	288.3	304.6	1240.5
2020	311.6	*280*	*280*	*288.4*	*1160*
2021	*330*	*300*	*300*	*315*	*1245*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.97	.72	.88	.56	3.13
2018	.99	.61	.59	1.18	3.38
2019	1.18	.64	.60	.92	3.33
2020	1.28	*.50*	*.52*	*.75*	*3.05*
2021	*1.20*	*.70*	*.65*	*.95*	*3.50*

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.52	.52	.52	.52	2.08
2017	.535	.535	.535	.535	2.14
2018	.56	.56	.56	.56	2.24
2019	.5875	.5875	.5875	.5875	2.35
2020	.6175	.6175			

BUSINESS: ALLETE, Inc. is the parent of Minnesota Power, which supplies electricity to 146,000 customers in northeastern MN, & Superior Water, Light & Power in northwestern WI. Electric rev. breakdown: taconite mining/processing, 26%; paper/wood products, 9%; other industrial, 8%; residential, 12%; commercial, 13%; wholesale, 16% other, 16%. ALLETE Clean Energy (ACE) owns renewable energy projects. Acq'd U.S. Water Services 2/15; sold it 3/19. Generating sources: coal & lignite, 30%; wind, 11%; other, 5%; purchased, 54%. Fuel costs: 31% of revs. '19 deprec. rate: 3.3%. Has 1,400 employees. Chairman: Alan R. Hodnik. President & CEO: Bethany M. Owen. Inc.: MN. Address: 30 West Superior St., Duluth, MN 55802-2093. Tel.: 218-279-5000. Internet: www.allete.com.

ALLETE's main utility subsidiary had its interim rate increase reduced. Last November, Minnesota Power filed for a $65.9 million (10.6%) rate increase, based on a return on equity of 10.05% and a common-equity ratio of 53.81%. At the start of 2020, Minnesota Power received an interim hike of $36.1 million (5.8%). The interim hike was reduced to $25.5 million (4.1%), and the effective date postponed to May 1st, in response to the economic problems caused by the coronavirus situation. This will result in a $12 million revenue refund to customers. The utility also withdrew its rate application and will not refile a case before November 1, 2021. It may file as early as March 1st under certain conditions, such as a 50-megawatt loss of load for three months.

We lowered our 2020 and 2021 earnings estimates. The revenue refund will result in a charge of $0.16 a share against second-quarter results, and having a lower interim rate hike will affect the company's earning power until Minnesota Power files its next rate case. In addition, revenues from large industrial customers will probably be lower in the last four months of 2020. (For now, there is no revenue impact because these customers put forth full power-demand nominations, before the economy worsened, through the end of August.) Putting it all together, we cut our 2020 share-net estimate by $0.50, to $3.05, and our 2021 expectation by $0.30, to $3.50. Due to the problems and increased uncertainty caused by the coronavirus, ALLETE has withdrawn its earnings guidance. Management hopes to update guidance with its second-quarter release.

ALLETE Clean Energy is faring well. Its wind projects are on track, and the coronavirus has not disrupted construction. Most significantly, a 300-megawatt project is scheduled for completion by yearend at an expected cost of $450 million.

This has been one of the poorest-performing stocks in this industry in 2020. The price is down 27% in this time frame. Minnesota Power's service area has a much-larger industrial sector than most utilities, which worries investors. The dividend yield is above the industry average, and total return potential for the 18-month period is strong.

Paul E. Debbas, CFA *June 12, 2020*

(A) Diluted EPS. Excl. nonrec. gains (losses): '04, (25¢); '05, ($1.84); '15, (46¢); '17, 25¢; '19, 26¢; gain (losses) on disc. ops.: '04, $2.57, '05, (16¢); '06, (2¢). '18 & '19 EPS don't sum due to rounding. Next earnings report due early Aug. (B) Div'ds historically paid in early Mar., June, Sept. and Dec. ■ Div'd reinvest. plan avail. † Shareholder invest. plan avail. (C) Incl. deferred charges. In '19: $8.15/sh. (D) In mill. (E) Rate base: Orig. cost depr. Rate allowed in MN on com. eq. in '18: 9.25%; earned on avg. com. eq., '19: 7.9%. Regulatory Climate: Avg.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	60
Earnings Predictability	80

ALLIANT ENERGY NDQ-LNT

RECENT PRICE 49.46 | P/E RATIO 20.2 (Trailing: 19.6 Median: 17.0) | RELATIVE P/E RATIO 1.03 | DIV'D YLD 3.1% | VALUE LINE

TIMELINESS 2 Lowered 5/29/20
SAFETY 2 Raised 9/28/07
TECHNICAL 2 Lowered 6/12/20
BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$38-$83	$61 (20%)

2023-25 PROJECTIONS

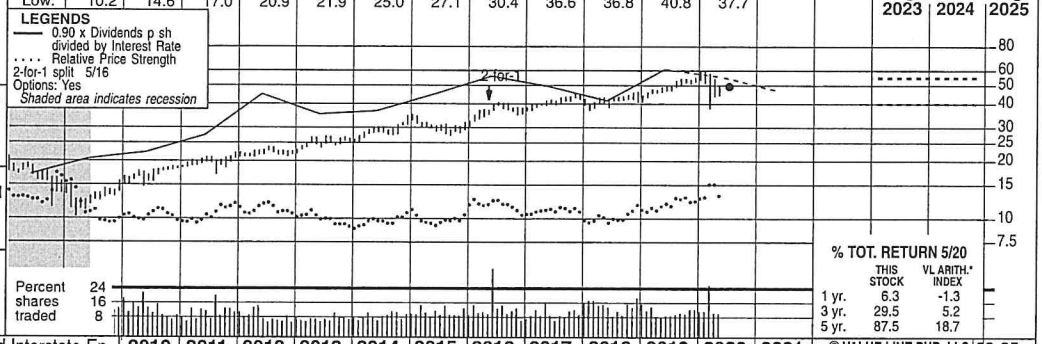
	Price	Gain	Ann'l Total Return
High	55	(+10%)	6%
Low	40	(-20%)	-1%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	248	272	236
to Sell	233	209	272
Hld's(000)	185069	188011	182284

High: 15.8 18.8 22.2 23.8 27.1 34.9 35.4 41.0 45.6 46.6 55.4 60.3
Low: 10.2 14.6 17.0 20.9 21.9 25.0 27.1 30.4 36.6 36.8 40.8 37.7

LEGENDS
0.90 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
2-for-1 split 5/16
Options: Yes
Shaded area indicates recession



% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	6.3	-1.3
3 yr.	29.5	5.2
5 yr.	87.5	18.7

Alliant Energy, formerly called Interstate Energy Corporation, was formed on April 21, 1998 through the merger of WPL Holdings, IES Industries, and Interstate Power. WPL stockholders received one share of Interstate Energy stock for each WPL share, IES stockholders received 1.14 Interstate Energy shares for each IES share, and Interstate Power stockholders received 1.11 Interstate Energy shares for each Interstate Power share.

CAPITAL STRUCTURE as of 3/31/20
Total Debt $6461.6 mill. **Due in 5 Yrs** $1000.0 mill.
LT Debt $5833.9 mill. **LT Interest** $250.0 mill.
(LT interest earned: 3.1x)

Pension Assets-12/19 $930.4 mill. **Oblig.** $1279.7 mill.
Pfd Stock $400.0 mill. **Pfd Div'd** $10.2 mill.
16,000,000 shs.

Common Stock 249,503,754 shs.

MARKET CAP: $12.3 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-1.0	+2.0	-2.2
Avg. Indust. Use (MWH)	11769	11830	11448
Avg. Indust. Revs. per KWH (¢)	7.16	7.25	6.98
Capacity at Peak (Mw)	5375	5459	5626
Peak Load, Summer (Mw)	5375	5459	5626
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.4	+.4	+.6
Fixed Charge Cov. (%)	319	322	324

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-.5%	-.5%	2.0%
"Cash Flow"	4.5%	3.5%	6.0%
Earnings	5.0%	5.0%	6.5%
Dividends	7.0%	7.0%	5.5%
Book Value	4.0%	5.0%	7.5%

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	853.9	765.3	906.9	856.1	3382.2
2018	916.3	816.1	928.6	873.5	3534.5
2019	987.2	790.2	990.2	880.1	3647.7
2020	915.7	*840*	*1020*	*899.3*	*3675*
2021	*1040*	*860*	*1040*	*910*	*3850*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.44	.41	.73	.41	1.99
2018	.52	.43	.87	.37	2.19
2019	.53	.40	.94	.46	2.33
2020	.72	*.43*	*.90*	*.40*	*2.45*
2021	*.60*	*.50*	*1.00*	*.45*	*2.55*

QUARTERLY DIVIDENDS PAID B ■†

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.295	.295	.295	.295	1.18
2017	.315	.315	.315	.315	1.26
2018	.335	.335	.335	.335	1.34
2019	.355	.355	.355	.355	1.42
2020	.38	.38			

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
	15.40	16.51	13.94	14.77	15.10	14.34	14.58	14.62	14.97	14.89	*14.70*	*15.10*	Revenues per sh	*15.85*
	2.60	2.75	2.95	3.34	3.44	3.45	3.45	3.10	4.32	4.59	*4.75*	*4.90*	"Cash Flow" per sh	*5.25*
	1.38	1.38	1.53	1.65	1.74	1.69	1.65	1.99	2.19	2.33	*2.45*	*2.55*	Earnings per sh A	*3.00*
	.79	.85	.90	.94	1.02	1.10	1.18	1.26	1.34	1.42	*1.52*	*1.64*	Div'd Decl'd per sh B■†	*2.00*
	3.91	3.03	5.22	3.32	3.78	4.25	5.26	6.34	6.34	6.28	*5.65*	*5.90*	Cap'l Spending per sh	*6.15*
	13.05	13.57	14.12	14.79	15.54	16.41	16.96	17.21	19.43	21.24	*22.75*	*24.10*	Book Value per sh C	*28.25*
	221.79	222.04	221.97	221.89	221.87	226.92	227.67	231.35	236.06	245.02	*250.00*	*255.00*	Common Shs Outst'g D	*265.00*
	12.5	14.5	14.5	15.3	16.6	18.1	22.3	20.6	19.1	21.2	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.0*
	.80	.91	.92	.86	.87	.91	1.17	1.04	1.03	1.19			Relative P/E Ratio	*.90*
	4.6%	4.3%	4.1%	3.7%	3.5%	3.6%	3.2%	3.1%	3.2%	2.9%			Avg Ann'l Div'd Yield	*4.2%*
	3416.1	3665.3	3094.5	3276.8	3350.3	3253.6	3320.0	3382.2	3534.5	3647.7	*3675*	*3850*	Revenues ($mill)	*4205*
	303.9	304.4	337.8	382.1	385.5	380.7	373.8	455.9	512.1	557.2	*610*	*630*	Net Profit ($mill)	*790*
	30.1%	19.0%	21.5%	12.4%	10.1%	15.3%	13.4%	12.5%	8.4%	10.8%	*NMF*	*11.0%*	Income Tax Rate	*11.0%*
	--	--	--	--	--	6.5%	7.0%	7.6%	7.8%	7.6%	*7.5%*	*7.5%*	AFUDC % to Net Profit	*7.5%*
	46.3%	45.7%	48.4%	46.1%	49.7%	48.6%	52.8%	49.0%	53.4%	51.5%	*52.0%*	*52.0%*	Long-Term Debt Ratio	*52.0%*
	49.5%	50.9%	48.4%	50.8%	47.5%	51.4%	47.2%	48.6%	46.6%	48.5%	*48.0%*	*48.0%*	Common Equity Ratio	*48.0%*
	5840.8	5921.2	6476.6	6461.0	7257.2	7246.3	8177.6	8192.8	9832.0	10226	*10000*	*10500*	Total Capital ($mill)	*12000*
	6730.6	7037.1	7838.0	7147.3	6442.0	8970.2	9809.9	10798	12031	13527	*14000*	*15000*	Net Plant ($mill)	*18000*
	6.6%	6.4%	6.3%	7.0%	6.3%	6.3%	5.6%	6.8%	6.3%	4.1%	*4.0%*	*6.0%*	Return on Total Cap'l	*6.5%*
	9.7%	9.5%	10.1%	11.0%	10.6%	10.2%	9.7%	10.9%	11.2%	10.7%	*10.5%*	*10.0%*	Return on Shr. Equity	*10.5%*
	9.9%	9.5%	10.3%	11.3%	10.9%	10.2%	9.7%	6.4%	11.2%	10.7%	*10.5%*	*10.0%*	Return on Com Equity E	*10.5%*
	3.8%	3.3%	3.9%	4.9%	4.3%	3.6%	2.8%	4.0%	4.4%	4.2%	*4.0%*	*3.5%*	Retained to Com Eq	*3.5%*
	64%	67%	64%	57%	61%	65%	71%	63%	61%	61%	*62%*	*64%*	All Div'ds to Net Prof	*67%*

BUSINESS: Alliant Energy Corp., formerly named Interstate Energy, is a holding company formed through the merger of WPL Holdings, IES Industries, and Interstate Power. Supplies electricity, gas, and other services in Wisconsin, Iowa, and Minnesota. Elect. revs. by state: WI, 42%; IA, 57%; MN, 1%. Elect. rev.: residential, 34%; commercial, 29%; industrial, 28%; wholesale, 7%; other, 2%. Fuel sources, 2019: coal, 27%; gas, 34%; other, 39%. Fuel costs: 41% of revs. 2019 depreciation rate: 5.9%. Estimated plant age: 17 years. Has approximately 3,597 employees. Chairman & Chief Executive Officer: John O. Larsen. Incorporated: Wisconsin. Address: 4902 N. Biltmore Lane, Madison, Wisconsin 53718. Telephone: 608-458-3311. Internet: www.alliantenergy.com.

We look for modest earnings increases at Alliant Energy in 2020 and 2021. The utility's largest subsidiary, Interstate Power and Light, is receiving rate relief through an order from the Iowa Utilities Board. The company's rates were increased by $127 million and $12 million for electricity and gas, respectively, at the beginning of 2020. Alliant is also benefiting from customer growth, lower fuel expenditures, cost savings, and tax credits tied to its renewable energy portfolio. Our 2020 share-net estimate, now at $2.45—up a nickel since our March review—represents growth of 5% over 2019's tally.

The COVID-19 outbreak has affected Alliant. The utility saw a 9% drop in retail power sales during the month of April, due to declines in the commercial and industrial sector, partially offset by an increase in residential activity. Although leadership kept its 2020 EPS guidance range untouched at $2.34-$2.48, it did say the pandemic has increased earnings risk through higher operating expenses and elevated macroeconomic uncertainty. The company has responded to this by deferring some capital expenditures and accelerating planned cost-saving initiatives.

Alliant has taken several steps to improve its liquidity situation. During the first quarter, it refinanced a $300 million term loan and issued $350 million in 30-year debentures for its Wisconsin Utility. Both deals were well received by the market at favorable interest rates. In addition, the company generated $222 million from common equity issuance, in line with prior projections, and reiterated its plan to move forward with a $300 million debt issuance for its Iowa utility subsidiary. At the end of March, total available liquidity, including borrowing capacity under its existing credit revolver, stood at $1.2 billion.

This stock is now ranked 2 (Above Average) for year-ahead relative price performance, having slipped a notch on our Timeliness scale since March. Like many utility issues, the recent quotation is well within our 2023-2025 Target Price Range, resulting in unexciting total return potential over that time frame. In addition, at 3.1%, the dividend yield doesn't stand out for a utility, further reducing the equity's investment appeal.

Daniel Henigson, CFA *June 12, 2020*

(A) Diluted EPS. Excl. nonrecur. gains (losses): '10, (8¢); '11, (1¢); '12, (8¢). Next earnings rpt. due early August. (B) Dividends historically paid in mid-Feb., May, Aug., and Nov. ■ Div'd reinvest. plan avail. † Shareholder invest. plan avail. (C) Incl. deferred chgs. In '19: $72.0 mill., $0.29/sh. (D) In millions, adjusted for split. (E) Rate base: Orig. cost. Rates all'd on com. eq. in IA in '19: 10.0%; in WI in '19 Regul. Clim.: WI, Above Avg.; IA, Avg.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	90

AMEREN NYSE-AEE

RECENT PRICE 74.37 | P/E RATIO 21.6 (Trailing: 23.5 Median: 17.0) | RELATIVE P/E RATIO 1.10 | DIV'D YLD 2.8% | VALUE LINE

TIMELINESS 3 Lowered 3/29/19
SAFETY 2 Raised 6/20/14
TECHNICAL 1 Raised 5/8/20
BETA .80 (1.00 = Market)

18-Month Target Price Range

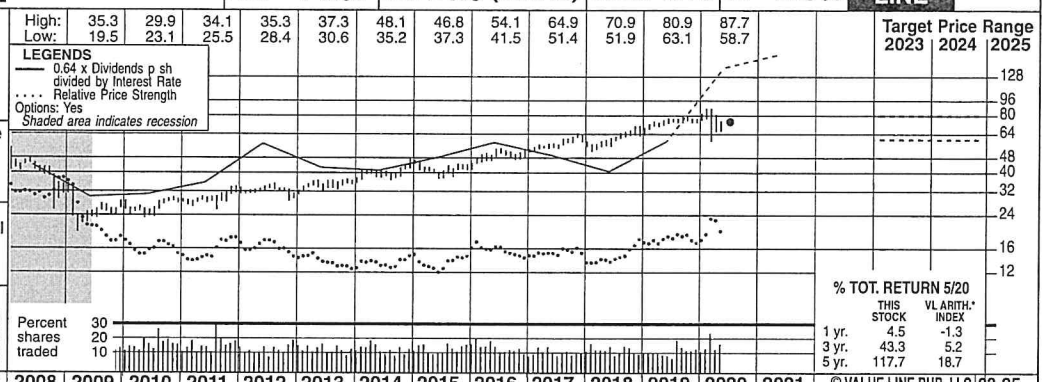
Low-High	Midpoint (% to Mid)
$56-$117	$87 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(+10%)	5%
Low	60	(-20%)	-1%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	257	266	242
to Sell	257	265	273
Hld's(000)	186859	186367	187833



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
26.43	33.12	33.30	36.23	36.92	29.87	31.77	31.04	28.14	24.06	24.95	25.13	25.04	25.46	25.73	24.00	*22.05*	*22.70*	Revenues per sh	*24.25*
5.57	6.10	6.02	6.76	6.44	6.06	6.33	5.87	5.87	5.25	5.77	6.08	6.59	6.80	7.64	7.83	*8.05*	*8.50*	"Cash Flow" per sh	*10.00*
2.82	3.13	2.66	2.98	2.88	2.78	2.77	2.47	2.41	2.10	2.40	2.38	2.68	2.77	3.32	3.35	*3.45*	*3.65*	Earnings per sh A	*4.50*
2.54	2.54	2.54	2.54	2.54	1.54	1.54	1.56	1.60	1.60	1.61	1.66	1.72	1.78	1.85	1.92	*2.01*	*2.11*	Div'd Decl'd per sh B ■	*2.45*
4.13	4.63	4.99	6.96	9.75	7.51	4.66	4.50	5.49	5.87	7.66	8.12	8.78	9.05	9.56	9.92	*15.85*	*11.55*	Cap'l Spending per sh	*11.00*
29.71	31.09	31.86	32.41	32.80	33.08	32.15	32.64	27.27	26.97	27.67	28.63	29.27	29.61	31.21	32.73	*35.70*	*37.40*	Book Value per sh C	*43.50*
195.20	204.70	206.60	208.30	212.30	237.40	240.40	242.60	242.63	242.63	242.63	242.63	242.63	242.63	244.50	246.20	*254.00*	*260.00*	Common Shs Outst'g D	*275.00*
16.3	16.7	19.4	17.4	14.2	9.3	9.7	11.9	13.4	16.5	16.7	17.5	18.3	20.6	18.3	22.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*15.5*
.86	.89	1.05	.92	.85	.62	.62	.75	.85	.93	.88	.88	.96	1.04	.99	1.18			Relative P/E Ratio	*.85*
5.5%	4.9%	4.9%	4.9%	6.2%	6.0%	5.8%	5.3%	5.0%	4.6%	4.0%	4.0%	3.5%	3.1%	3.0%	2.6%			Avg Ann'l Div'd Yield	*3.5%*
7638.0	7531.0	6828.0	5838.0	6053.0	6098.0	6076.0	6177.0	6291.0	5910.0	*5600*	*5900*	Revenues ($mill)	*6700*
669.0	602.0	589.0	518.0	593.0	585.0	659.0	683.0	821.0	834.0	*875*	*950*	Net Profit ($mill)	*1230*
36.8%	37.3%	36.9%	37.5%	38.9%	38.3%	36.7%	38.2%	22.4%	17.9%	*12.5%*	*12.5%*	Income Tax Rate	*12.5%*
7.8%	5.6%	6.1%	7.1%	5.7%	5.1%	4.1%	5.6%	6.9%	5.8%	*6.0%*	*5.0%*	AFUDC % to Net Profit	*4.0%*
48.2%	45.3%	49.5%	45.2%	47.2%	49.3%	47.7%	49.2%	50.3%	52.1%	*54.0%*	*51.0%*	Long-Term Debt Ratio	*49.5%*
50.9%	53.7%	49.4%	53.7%	51.7%	49.7%	51.3%	49.8%	48.8%	47.1%	*45.5%*	*48.5%*	Common Equity Ratio	*50.0%*
15185	14738	13384	12190	12975	13968	13840	14420	15632	17116	*20000*	*20150*	Total Capital ($mill)	*23900*
17853	18127	16096	16205	17424	18799	20113	21466	22810	24376	*27225*	*28950*	Net Plant ($mill)	*33600*
6.0%	5.6%	6.0%	5.6%	5.8%	5.3%	6.0%	6.0%	6.4%	6.0%	*5.5%*	*6.0%*	Return on Total Cap'l	*6.5%*
8.5%	7.5%	8.7%	7.7%	8.7%	8.3%	9.1%	9.3%	10.6%	10.2%	*9.5%*	*9.5%*	Return on Shr. Equity	*10.0%*
8.6%	7.5%	8.8%	7.8%	8.7%	8.3%	9.2%	9.4%	10.7%	10.3%	*9.5%*	*9.5%*	Return on Com Equity E	*10.0%*
3.8%	2.8%	3.0%	1.9%	2.9%	2.5%	3.3%	3.4%	4.8%	4.4%	*4.0%*	*4.0%*	Retained to Com Eq	*4.5%*
56%	63%	66%	76%	67%	70%	64%	64%	56%	57%	*58%*	*58%*	All Div'ds to Net Prof	*55%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $10350 mill. **Due in 5 Yrs** $2660 mill.
LT Debt $9378 mill. **LT Interest** $428 mill.
(LT interest earned: 3.4x)
Leases, Uncapitalized Annual rentals $8 mill.
Pension Assets-12/19 $4564 mill.
Oblig $4967 mill.
Pfd Stock $142 mill. **Pfd Div'd** $6 mill.
807,595 sh. $3.50 to $5.50 cum. (no par), $100 stated val., redeem. $102.176-$110/sh.; 616,323 sh. 4.00% to 6.625%, $100 par, redeem. $100-$104/sh.
Common Stock 246,891,031 shs. as of 4/30/20
MARKET CAP: $18 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-3.4	+5.6	-3.5
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	350	313	307

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-3.0%	-.5%	*-.5%*
"Cash Flow"	1.5%	5.5%	*5.0%*
Earnings	1.0%	6.5%	*6.0%*
Dividends	-2.0%	3.0%	*5.0%*
Book Value	-.5%	2.5%	*5.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1514	1538	1723	1402	6177.0
2018	1585	1563	1724	1419	6291.0
2019	1556	1379	1659	1316	5910.0
2020	1440	*1300*	*1600*	*1260*	*5600*
2021	*1600*	*1350*	*1650*	*1300*	*5900*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.42	.79	1.18	.39	2.77
2018	.62	.97	1.45	.28	3.32
2019	.78	.72	1.47	.38	3.35
2020	.59	*.80*	*1.61*	*.45*	*3.45*
2021	*.65*	*.85*	*1.70*	*.45*	*3.65*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.425	.425	.425	.44	1.72
2017	.44	.44	.44	.4575	1.78
2018	.4575	.4575	.4575	.475	1.85
2019	.475	.475	.475	.495	1.92
2020	.495	.495			

BUSINESS: Ameren Corporation is a holding company formed through the merger of Union Electric and CIPSCO. Has 1.2 million electric and 127,000 gas customers in Missouri; 1.2 million electric and 813,000 gas customers in Illinois. Discontinued nonregulated power-generation operation in '13. Electric revenue breakdown: residential, 43%; commercial, 32%; industrial, 8%; other, 17%. Generating sources: coal, 63%; nuclear, 23%; hydro & other, 6%; purchased, 8%. Fuel costs: 24% of revenues. '19 reported deprec. rates: 3%-4%. Has 9,300 employees. Chairman, President & CEO: Warner L. Baxter. Inc.: Missouri. Address: One Ameren Plaza, 1901 Chouteau Ave., P.O. Box 66149, St. Louis, Missouri 63166-6149. Tel.: 314-621-3222. Internet: www.ameren.com.

We cut our 2020 and 2021 earnings estimates for Ameren. The company's electric business in Missouri is being hurt by kilowatt-hour sales reductions resulting from the weak economy. Ameren's electric operations in Illinois have had a cut in the allowed return on equity, which tracks the 30-year U.S. Treasury bond rate. At least Ameren Illinois isn't being hurt by a decline in sales because it operates under a regulatory mechanism that decouples volume and revenues. Moreover, the company's transmission business does not depend on retail sales. We lowered our 2020 earnings estimate by $0.05 a share, to $3.45. This is still within the company's guidance of $3.40-$3.60, which management did not change upon releasing March-quarter results. Because any growth in 2021 will come off a lower base, we cut our estimate by $0.10 a share, to $3.65. The 6% increase we estimate for next year is within Ameren's target of 6%-8% for annual profit growth.

Ameren's electric rates were reduced in Missouri, but this wasn't a bad outcome for the utility. The commission cut Ameren's rates by $32 million, effective April 1, 2020. But this included the pass-through to customers of some $115 million of lower fuel costs and $50 million of decreased nonfuel expenses. This was a "black box" order in which an allowed ROE and common-equity ratio were not specified, but the decision was based on an implicit ROE in a range of 9.4%-9.8%.

A gas rate application is pending in Illinois. Ameren filed for $102 million, including $46 million that would otherwise be recovered through riders (surcharges) on customers' bills. The utility requested a 10.5% ROE and a 54.1% common-equity ratio. A ruling is due by January, with new tariffs taking effect in February.

Ameren is adding wind projects. The company is spending $1.2 billion to add 700 megawatts of capacity. Most, if not all, of this should be in service by yearend.

The stock has outperformed most utility equities in 2020. Its price has fallen just 3%. The dividend yield is almost one percentage point below the industry average. Total return potential is average for the next 18 months, but not for the 2023-2025 period.

Paul E. Debbas, CFA *June 12, 2020*

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	80
Earnings Predictability	85

(A) Dil. EPS. Excl. nonrec. gain (losses): '05, (11¢); '10, ($2.19); '11, (32¢); '12, ($6.42); '17, (63¢); gain (loss) from disc. ops.: '13, (92¢); '15, 21¢. '17 EPS don't sum due to rounding. Next egs. report due early Aug. (B) Div'ds pd. late Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. (C) Incl. intang. In '19: $5.70/sh. (D) In mill. (E) Rate base: Orig. cost depr. Rate all'd on com. eq. in MO in '20: elec., none; in '11: gas, none; in IL in '14: elec., 8.7%, in '18: gas, 9.87%; earned on avg. com. eq., '19: 10.5%. Reg. Climate: MO, Avg.; IL, Below Avg.

DUKE ENERGY NYSE-DUK

RECENT PRICE 83.81 | P/E RATIO 16.1 (Trailing: 16.5 Median: 18.0) | RELATIVE P/E RATIO 0.75 | DIV'D YLD 4.6% | VALUE LINE

TIMELINESS 3 Lowered 3/13/20
SAFETY 2 New 6/1/07
TECHNICAL 3 Raised 8/14/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

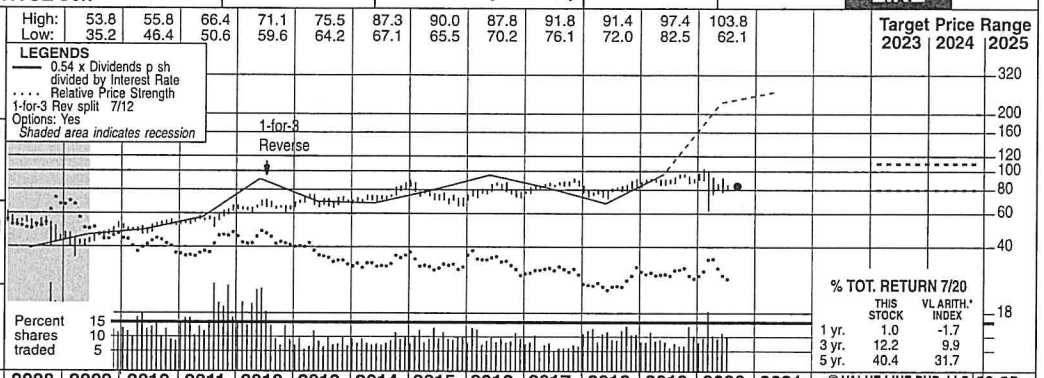
Low-High	Midpoint (% to Mid)
$62-$138	$100 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	110	(+30%)	*11%*
Low	80	(-5%)	*4%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	711	806	682
to Sell	582	557	723
Hld's(000)	445072	476731	473369



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	©VALUE LINE PUB. LLC	23-25
--	--	25.32	30.24	31.15	29.18	32.22	32.63	27.88	34.84	33.84	34.10	32.49	33.66	33.73	34.21	*30.95*	*32.15*	Revenues per sh	*34.50*
--	--	7.86	8.11	7.34	7.58	8.49	8.68	6.80	8.56	9.11	9.40	9.20	10.01	10.49	12.13	*12.10*	*12.75*	"Cash Flow" per sh	*14.50*
--	--	2.76	3.60	3.03	3.39	4.02	4.14	3.71	3.98	4.13	4.10	3.71	4.22	4.13	5.07	*5.10*	*5.30*	Earnings per sh [A]	*6.00*
--	--	--	2.58	2.70	2.82	2.91	2.97	3.03	3.09	3.15	3.24	3.36	3.49	3.64	3.75	*3.82*	*3.90*	Div'd Decl'd per sh [B] ■	*4.15*
--	--	8.07	7.43	10.35	9.85	10.84	9.80	7.81	7.83	7.62	9.83	11.29	11.50	12.91	15.17	*15.50*	*14.70*	Cap'l Spending per sh	*13.75*
--	--	62.30	50.40	49.51	49.85	50.84	51.14	58.04	58.54	57.81	57.74	58.62	59.63	60.27	61.20	*63.80*	*65.35*	Book Value per sh [C]	*71.00*
--	--	418.96	420.62	423.96	436.29	442.96	445.29	704.00	706.00	707.00	688.00	700.00	700.00	727.00	733.00	*764.00*	*770.00*	Common Shs Outst'g [D]	*785.00*
--	--	--	16.1	17.3	13.3	12.7	13.8	17.5	17.4	17.9	18.2	21.3	19.9	19.4	17.7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*15.5*
--	--	--	.85	1.04	.89	.81	.87	1.11	.98	.94	.92	1.12	1.00	1.05	.95			Relative P/E Ratio	*.85*
--	--	--	4.4%	5.2%	6.2%	5.7%	5.2%	4.7%	4.4%	4.3%	4.3%	4.3%	4.2%	4.5%	4.2%			Avg Ann'l Div'd Yield	*4.4%*
14272	14529	19624	24598	23925	23459	22743	23565	24521	25079	*23650*	*24750*	Revenues ($mill)	*27000*						
1765.0	1839.0	2136.0	2813.0	2934.0	2854.0	2560.0	2963.0	2928.0	3755.0	*3865*	*4175*	Net Profit ($mill)	*4750*						
32.6%	31.3%	30.2%	32.6%	30.6%	32.2%	31.0%	30.4%	14.2%	12.7%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*						
22.7%	23.2%	22.3%	8.8%	7.2%	9.2%	11.7%	12.3%	13.0%	7.9%	*9.0%*	*8.0%*	AFUDC % to Net Profit	*8.0%*						
44.3%	45.1%	47.0%	48.0%	47.7%	48.6%	52.6%	54.0%	53.8%	54.0%	*52.5%*	*53.0%*	Long-Term Debt Ratio	*53.5%*						
55.7%	54.9%	52.9%	52.0%	52.3%	51.4%	47.4%	46.0%	46.2%	44.1%	*45.5%*	*45.5%*	Common Equity Ratio	*45.0%*						
40457	41451	77307	79482	78088	77222	86609	90774	94940	101807	*106650*	*110725*	Total Capital ($mill)	*123600*						
40344	42661	68558	69490	70046	75709	82520	86391	91694	102127	*108475*	*114050*	Net Plant ($mill)	*128400*						
5.5%	5.6%	3.6%	4.6%	4.8%	4.8%	4.0%	4.3%	4.2%	4.8%	*4.5%*	*5.0%*	Return on Total Cap'l	*5.0%*						
7.8%	8.1%	5.2%	6.8%	7.2%	7.2%	6.2%	7.1%	6.7%	8.0%	*7.5%*	*8.0%*	Return on Shr. Equity	*8.0%*						
7.8%	8.1%	5.2%	6.8%	7.2%	7.2%	6.2%	7.1%	6.7%	8.3%	*7.5%*	*8.0%*	Return on Com Equity [E]	*8.5%*						
2.1%	2.2%	.9%	1.5%	1.7%	1.5%	.6%	1.2%	1.0%	2.4%	*2.0%*	*2.0%*	Retained to Com Eq	*2.5%*						
73%	72%	82%	78%	76%	79%	91%	83%	84%	71%	*77%*	*74%*	All Div'ds to Net Prof	*71%*						

CAPITAL STRUCTURE as of 3/31/20
Total Debt $64421 mill. **Due in 5 Yrs** $20638 mill.
LT Debt $56311 mill. **LT Interest** $2191 mill.
Incl. $969 mill. capitalized leases.
(LT interest earned: 2.8x)
Leases, Uncapitalized Annual rentals $268 mill.
Pension Assets-12/19 $8910 mill.
Oblig $8231 mill.
Pfd Stock $1962 mill. **Pfd Div'd** $58 mill.
40 mill. shs. 5.75%, cum., $25 liq. value, redeemable at $25.50 prior to 6/15/24; 1 mill. shs. 4.875%, cum., $1000 liq. value.
Common Stock 734,852,532 shs. **as of 4/30/20**
MARKET CAP: $62 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-2.0	+3.9	-.9
Avg. Indust. Use (MWH)	2914	2953	2934
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (avg.)	+1.3	+1.4	+1.5
Fixed Charge Cov. (%)	272	218	233

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	1.0%	1.0%	*.5%*
"Cash Flow"	3.5%	6.0%	*5.0%*
Earnings	3.0%	2.5%	*5.0%*
Dividends	3.0%	3.0%	*2.5%*
Book Value	2.0%	1.0%	*2.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	5729	5555	6482	5799	23565
2018	6135	5643	6628	6115	24521
2019	6163	5873	6940	6103	25079
2020	5949	*5300*	*6600*	*5801*	*23650*
2021	*6200*	*5650*	*6850*	*6050*	*24750*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.02	.98	1.36	.86	4.22
2018	1.17	.71	1.63	.61	4.13
2019	1.24	1.12	1.82	.89	5.07
2020	1.24	*1.05*	*1.86*	*.95*	*5.10*
2021	*1.35*	*1.10*	*1.90*	*.95*	*5.30*

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.825	.825	.855	.855	3.36
2017	.855	.855	.89	.89	3.49
2018	.89	.89	.927	.928	3.64
2019	.927	.928	.945	.945	3.75
2020	.945	.945	.965		

BUSINESS: Duke Energy Corporation is a holding company for utilities with 7.6 mill. elec. customers in NC, FL, IN, SC, OH, & KY, and 1.6 mill. gas customers in OH, KY, NC, SC, and TN. Owns independent power plants & has 25% stake in National Methanol in Saudi Arabia. Acq'd Progress Energy 7/12; Piedmont Natural Gas 10/16; discontinued most int'l ops. in '16. Elec. rev. breakdown: residential, 44%; commercial, 28%; industrial, 14%; other, 14%. Generating sources: gas, 29%; nuclear, 29%; coal, 22%; other, 1%; purchased, 19%. Fuel costs: 30% of revs. '19 reported deprec. rate: 3.1%. Has 28,800 employees. Chairman, President & CEO: Lynn J. Good. Inc.: DE. Address: 550 South Tryon St., Charlotte, NC 28202-1803. Tel.: 704-382-3853. Internet: www.duke-energy.com.

The Atlantic Coast Pipeline project, 47%-owned by Duke Energy, has been canceled. The project was plagued by delays and cost overruns stemming from litigation. This wasn't expected to be completed until early 2022, more than three years after the original target. The total cost had risen to an expected $8.0 billion, from $4.5 billion-$5.0 billion initially. Two unfavorable rulings from U.S. courts convinced Duke and its partner, Dominion Energy, to pull the plug. As a result, the company will take a nonrecurring, noncash pretax charge of $2.0 billion-$2.5 billion, most of which will be recorded against June-quarter results. However, the cancelation will also affect ongoing earnings because Duke will no longer record the Allowance for Funds Used During Construction, a noncash credit to earnings. Accordingly, management is now guiding analysts toward the low end of its 2020 earnings target of $5.05-$5.45 a share. The project was expected to contribute $0.30-$0.35 a share to profits in 2021. However, we did not change our expectations because our 2020 estimate of $5.10 a share was already near the low end of the range.

Duke received a rate increase in Indiana and reached partial settlements in North Carolina. The commission granted the utility an increase of $146 million, based on a return on equity of 9.7% and a common-equity ratio of 53%. About 75% of the increase took effect last month, with the remainder set to take effect in the first quarter of 2021. The company's two utilities in North Carolina reached partial settlements of their rate cases, subject to approval by the state commission. When new tariffs will take effect is unknown.

The board of directors raised the dividend this quarter. The quarterly increase was two cents a share (2.1%). This growth rate is less than half the utility average, which is a result of Duke's high payout ratio.

Duke stock has an above-average dividend yield for a utility. The write-off of the pipeline project did not surprise Wall Street, and the stock price has fallen at a low double-digit percentage this year—less than many utility equities. Total return potential is attractive for the 18-month span, but not for the 3- to 5-year period.

Paul E. Debbas, CFA *August 14, 2020*

(A) Diluted EPS. Excl. nonrec. losses: '12, 70¢; '13, 24¢; '14, 67¢; '17, 15¢; '18, 41¢; losses on disc. ops.: '14, 80¢; '16, 60¢; '18 EPS don't sum due to rounding. Next earnings report due early Nov. (B) Div'ds paid mid-Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. (C) Incl. intang. In '19: $44.37/sh. (D) In mill., adj. for rev. split. (E) Rate base: Net orig. cost. Rates all'd on com. eq. in '18 in NC: 9.9%; in '19 in SC: 9.5%; in '20 in FL: 9.5%-11.5%; in '04 in IN: 10.5%; earned on avg. com. eq., '19: 8.3%. Reg. Clim.: NC Avg.; SC, OH, IN Above Avg.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	50
Earnings Predictability	90

EDISON INTERNAT'L NYSE-EIX

RECENT PRICE 55.98 | P/E RATIO 13.7 (Trailing: 14.5 Median: 14.0) | RELATIVE P/E RATIO 0.67 | DIV'D YLD 4.6% | VALUE LINE

TIMELINESS 3 Raised 8/30/19
SAFETY 3 Lowered 11/23/18
TECHNICAL 3 Raised 7/24/20
BETA .90 (1.00 = Market)

18-Month Target Price Range

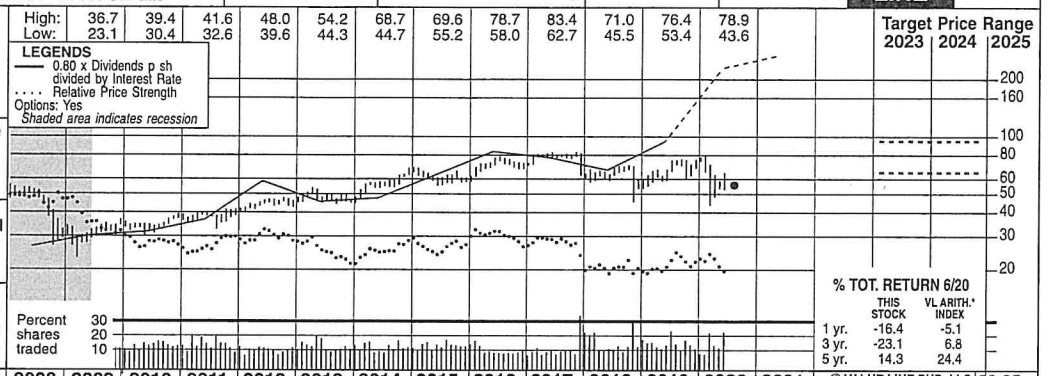
Low-High	Midpoint (% to Mid)
$45-$113	$79 (40%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	95	(+70%)	17%
Low	65	(+15%)	8%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	339	328	274
to Sell	231	243	304
Hld's(000)	316321	325429	318333



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
31.30	36.38	38.74	40.25	43.31	37.98	38.09	39.16	36.41	38.61	41.17	35.37	36.43	37.81	38.85	34.11	*31.75*	*33.35*	Revenues per sh	*39.25*
3.79	6.99	7.25	7.60	8.08	7.96	8.41	9.03	9.63	8.80	9.95	10.35	10.43	11.03	4.69	9.15	*10.30*	*10.85*	"Cash Flow" per sh	*12.75*
.69	3.34	3.28	3.32	3.68	3.24	3.35	3.23	4.55	3.78	4.33	4.15	3.94	4.51	d1.26	3.98	*4.10*	*4.25*	Earnings per sh A	*5.25*
.80	1.02	1.10	1.18	1.23	1.25	1.27	1.29	1.31	1.37	1.48	1.73	1.98	2.23	2.43	2.48	*2.58*	*2.68*	Div'd Decl'd per sh B ■	*3.00*
5.32	5.73	7.78	8.67	8.67	10.07	13.94	14.76	12.73	11.05	11.99	12.97	11.46	11.75	13.84	13.47	*13.25*	*14.30*	Cap'l Spending per sh	*14.25*
18.57	20.30	23.66	25.92	29.21	30.20	32.44	30.86	28.95	30.50	33.64	34.89	36.82	35.82	32.10	36.75	*39.10*	*40.65*	Book Value per sh C	*46.50*
325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	361.99	*378.00*	*378.00*	Common Shs Outst'g D	*378.00*
37.6	11.7	13.0	16.0	12.4	9.7	10.3	11.8	9.7	12.7	13.0	14.8	17.9	17.2	--	16.7	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*15.0*
1.99	.62	.70	.85	.75	.65	.66	.74	.62	.71	.68	.75	.94	.87	--	.90			Relative P/E Ratio	*.85*
3.1%	2.6%	2.6%	2.2%	2.7%	4.0%	3.7%	3.4%	3.0%	2.8%	2.6%	2.8%	2.8%	2.9%	3.8%	3.7%			Avg Ann'l Div'd Yield	*3.8%*
12409	12760	11862	12581	13413	11524	11869	12320	12657	12347	*12000*	*12600*	Revenues ($mill)	*14800*
1153.0	1112.0	1594.0	1344.0	1539.0	1480.0	1422.0	1603.0	d290.0	1477.0	*1645*	*1725*	Net Profit ($mill)	*2100*
32.1%	25.7%	14.3%	25.2%	22.4%	6.6%	11.1%	5.0%	--	NMF	*Nil*	*Nil*	Income Tax Rate	*Nil*
16.9%	14.8%	8.5%	7.8%	5.8%	8.0%	6.8%	7.2%	--	11.1%	*10.0%*	*10.0%*	AFUDC % to Net Profit	*8.0%*
51.8%	55.3%	45.2%	45.7%	44.1%	45.0%	41.8%	45.6%	53.6%	53.5%	*53.5%*	*55.0%*	Long-Term Debt Ratio	*58.0%*
44.3%	40.6%	46.2%	46.2%	47.2%	46.7%	49.2%	45.8%	38.3%	39.9%	*40.5%*	*39.5%*	Common Equity Ratio	*37.5%*
23861	24773	20422	21516	23216	24352	24362	25506	27284	33360	*36500*	*39025*	Total Capital ($mill)	*47200*
24778	32116	30273	30455	32981	35085	37000	39050	41348	44285	*46900*	*49800*	Net Plant ($mill)	*57700*
6.3%	6.0%	8.9%	7.3%	7.7%	7.1%	6.9%	7.3%	.1%	5.6%	*5.5%*	*5.5%*	Return on Total Cap'l	*6.0%*
10.0%	10.0%	14.2%	11.5%	11.9%	11.1%	10.0%	11.6%	NMF	9.5%	*9.5%*	*10.0%*	Return on Shr. Equity	*10.5%*
10.4%	10.5%	15.9%	12.5%	13.0%	12.0%	10.8%	12.7%	NMF	10.2%	*10.5%*	*10.5%*	Return on Com Equity E	*11.0%*
6.5%	6.3%	11.4%	8.1%	8.8%	7.2%	5.6%	6.6%	NMF	4.1%	*4.0%*	*4.0%*	Retained to Com Eq	*5.0%*
40%	43%	32%	40%	37%	44%	53%	52%	NMF	63%	*65%*	*66%*	All Div'ds to Net Prof	*60%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $21301 mill. **Due in 5 Yrs** $5647 mill.
LT Debt $19125 mill. **LT Interest** $896 mill.
(LT interest earned: 2.3x)
Leases, Uncapitalized Annual rentals $107 mill.
Pens. Assets-12/19 $3755 mill. **Oblig** $4139 mill.
Pfd Stock $2193 mill. **Pfd Div'd** $121 mill.
4,800,198 sh. 4.08%-4.78%, $25 par, call. $25.50-$28.75/sh.; 3,250,000 sh. variable, noncum., call. $100; 1,250,000 sh. 6.5%, cum., $100 liq. value; 350,000 sh. 6.25%, $1000 liq. value; 460,012 sh. 5.1%-5.75%, $2500 liq. value.
Common Stock 363,560,677 shs. **as of 4/27/20**
MARKET CAP: $20 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+.2	-.4	-2.7
Avg. Indust. Use (MWH)	643	667	657
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	23508	23766	22009
Annual Load Factor (%)	48.8	48.0	49.6
% Change Customers (yr-end)	+.7	+.6	+.5
Fixed Charge Cov. (%)	241	NMF	172

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-1.0%	-1.0%	*1.0%*
"Cash Flow"	.5%	-2.5%	*7.5%*
Earnings	-3.5%	-10.5%	*NMF*
Dividends	7.0%	11.5%	*4.0%*
Book Value	2.0%	2.5%	*5.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2463	2965	3672	3220	12320
2018	2564	2815	4269	3009	12657
2019	2824	2812	3741	2970	12347
2020	2790	*2710*	*3700*	*2800*	*12000*
2021	*2800*	*2900*	*3900*	*3000*	*12600*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.11	.85	1.43	1.12	4.51
2018	.82	.84	1.57	d4.49	d1.26
2019	.64	1.57	1.35	.45	3.98
2020	.50	*1.30*	*1.45*	*.85*	*4.10*
2021	*.70*	*1.20*	*1.50*	*.85*	*4.25*

Calendar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.48	.48	.48	.48	1.92
2017	.5425	.5425	.5425	.5425	2.17
2018	.605	.605	.605	.605	2.42
2019	.6125	.6125	.6125	.6125	2.45
2020	.6375	.6375			

BUSINESS: Edison International (formerly SCECorp) is a holding company for Southern California Edison Company (SCE), which supplies electricity to 5.1 mill. customers in a 50,000-sq.-mi. area in central, coastal, & southern CA (excl. Los Angeles & San Diego). Edison Energy is an energy svcs. co. Disc. Edison Mission Energy (independent power producer) in '12. Elec. rev. breakdown: residential, 39%; commercial, 43%; industrial, 4%; other, 14%. Generating sources: nuclear, 8%; gas, 7%; hydro, 5%; purchased, 80%. Fuel costs: 39% of revs. '19 reported depr. rate: 3.6%. Has 12,500 empls. Chairman: William P. Sullivan. Pres. & CEO: Pedro J. Pizzaro. Inc.: CA. Address: 2244 Walnut Grove Ave., P.O. Box 976, Rosemead, CA 91770. Tel.: 626-302-2222. Web: www.edison.com.

Edison International's utility subsidiary has a general rate case pending. Southern California Edison filed for increases of $1.109 billion (11.4%) for 2021, $423 million for 2022, and $514 million for 2023. The California Public Advocates proposed hikes of $458 million in 2021, $242 million in 2022, and $250 million in 2023, and recommended the approval of roughly 90% of SCE's proposed capital spending. Even if an order doesn't come by yearend, any rate relief the utility receives will be retroactive to the start of 2021.

Our 2020 earnings estimate is below the company's targeted range of $4.32-$4.62 a share for "core" earnings. Edison International's guidance excludes charges the company books for the amortization expense stemming from a fund utilities contributed to in order to address the potentially huge liabilities associated with wildfires in California. This amounted to $60 million after taxes in the March quarter. Note that the coronavirus should have little effect on the company's income because its revenues and volume are decoupled and it should be able to defer related costs for future recovery.

The company has completed its financing plans for 2020. Earlier this year, the parent and SCE issued $2.7 billion of long-term debt. Any debt the utility issues subsequently will be for refinancing. Edison International also sold $900 million of common stock (up from $800 million previously expected), and stated that its equity needs will be "minimal" beyond this year. Because of these significant financing moves, we estimate only a modest increase in share net next year, despite the benefit of rate relief from the aforementioned general rate case.

Wildfires in California continue to be an investment concern. The company took a big reserve in the fourth quarter of 2018 and a much-smaller charge in the same period of 2019 for potential liabilities stemming from wildfire damage. Additional charges might well occur. At least the aforementioned fund should help meet costs associated with future wildfires.

The stock's yield is about a percentage point above the utility average. Total return potential to 2023-2025 is modest, but above average for the group.

Paul E. Debbas, CFA *July 24, 2020*

(A) Dil. EPS. Excl. nonrec. gains (losses): '04, $2.12; '09, (64¢); '10, 54¢; '11, ($3.33); '13, ($1.12); '15, ($1.18); '17, ($1.37); '18, (15¢); '19, (21¢); gains (loss) from disc. ops.: '12, ($5.11); '13, 11¢; '14, 57¢; '15, 11¢; '18, 10¢. '19 EPS don't sum due to chng. in shs. Next earnings report due late July. (B) Div'ds paid late Jan., Apr., July, & Oct. ■ Div'd reinv. plan avail. (C) Incl. def'd charges. In '19: $16.82/sh. (D) In mill. (E) Rate base: net orig. cost. Rate all'd on com. eq. in '20: 10.3%; earned on avg. com. eq., '19: 11.5%. Regulatory Climate: Avg.

Company's Financial Strength	B+
Stock's Price Stability	75
Price Growth Persistence	60
Earnings Predictability	5

ENTERGY CORP. NYSE-ETR

RECENT PRICE 102.68 | P/E RATIO 20.3 (Trailing: 18.4 Median: 13.0) | RELATIVE P/E RATIO 1.03 | DIV'D YLD 3.7% | VALUE LINE

TIMELINESS 3 Raised 10/26/18
SAFETY 2 Raised 12/13/19
TECHNICAL 3 Lowered 6/5/20
BETA .95 (1.00 = Market)

18-Month Target Price Range

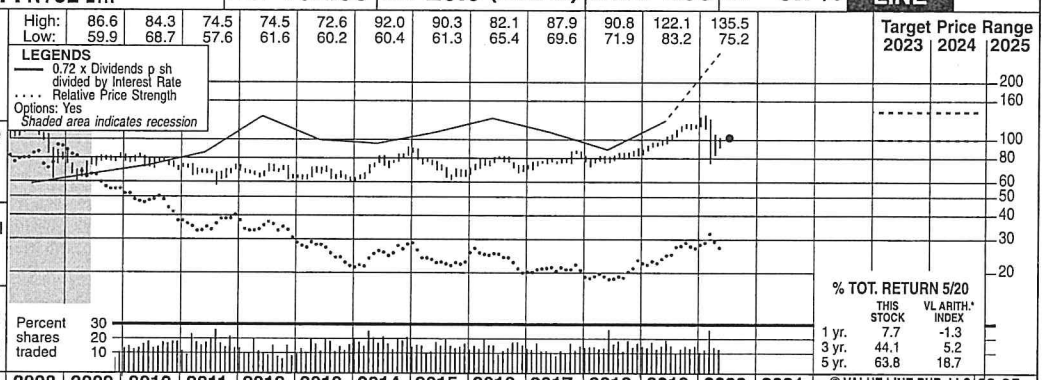
Low-High	Midpoint (% to Mid)
$74-$166	$120 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	140	(+35%)	*11%*
Low	100	(-5%)	*3%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	298	348	281
to Sell	248	242	349
Hld's(000)	175725	176392	172217



% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	7.7	-1.3
3 yr.	44.1	5.2
5 yr.	63.8	18.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
46.69	46.61	53.94	59.47	69.15	56.82	64.27	63.67	57.94	63.86	69.71	64.54	60.55	61.35	58.23	54.63	*51.25*	*50.50*	Revenues per sh	*50.00*
8.33	8.18	10.69	11.73	12.89	13.29	16.54	17.53	15.98	16.25	17.68	17.71	18.72	16.70	16.50	17.19	*16.70*	*17.95*	"Cash Flow" per sh	*21.00*
3.93	4.40	5.36	5.60	6.20	6.30	6.66	7.55	6.02	4.96	5.77	5.81	6.88	5.19	5.88	6.30	*5.05*	*5.80*	Earnings per sh A	*7.00*
1.89	2.16	2.16	2.58	3.00	3.00	3.24	3.32	3.32	3.32	3.32	3.34	3.42	3.50	3.58	3.66	*3.74*	*3.86*	Div'd Decl'd per sh B ■ †	*4.55*
6.51	6.72	9.44	10.29	13.92	12.99	13.33	15.21	18.18	15.73	14.82	16.79	17.28	22.07	22.45	21.72	*20.75*	*19.15*	Cap'l Spending per sh	*18.75*
38.26	35.71	40.45	40.71	42.07	45.54	47.53	50.81	51.73	54.00	55.83	51.89	45.12	44.28	46.78	51.34	*52.80*	*55.20*	Book Value per sh C	*62.75*
216.83	216.83	202.67	193.12	189.36	189.12	178.75	176.36	177.81	178.37	179.24	178.39	179.13	180.52	189.06	199.15	*200.00*	*204.00*	Common Shs Outst'g D	*212.00*
15.1	16.3	14.3	19.3	16.6	12.0	11.6	9.1	11.2	13.2	12.9	12.5	10.9	15.0	13.8	16.5	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.0*
.80	.87	.77	1.02	1.00	.80	.74	.57	.71	.74	.68	.63	.57	.75	.75	.88			Relative P/E Ratio	*.95*
3.2%	3.0%	2.8%	2.4%	2.9%	4.0%	4.2%	4.9%	4.9%	5.1%	4.5%	4.6%	4.6%	4.5%	4.4%	3.5%			Avg Ann'l Div'd Yield	*3.8%*
11488	11229	10302	11391	12495	11513	10846	11074	11009	10879	*10250*	*10300*	Revenues ($mill)	*10600*
1270.3	1367.4	1091.9	904.5	1060.0	1061.2	1249.8	950.7	1092.1	1258.2	*1030*	*1195*	Net Profit ($mill)	*1490*
32.7%	17.3%	13.0%	26.7%	37.8%	2.2%	11.3%	1.8%	1.8%	NMF	*18.0%*	*22.0%*	Income Tax Rate	*22.0%*
7.4%	8.9%	11.9%	10.1%	9.3%	7.4%	8.1%	14.7%	17.5%	16.7%	*19.0%*	*16.0%*	AFUDC % to Net Profit	*13.0%*
56.3%	52.2%	55.8%	55.1%	54.9%	57.8%	63.6%	63.6%	63.2%	62.0%	*62.0%*	*62.0%*	Long-Term Debt Ratio	*58.5%*
42.1%	46.4%	42.9%	43.6%	43.8%	40.8%	35.5%	35.5%	35.9%	37.1%	*37.5%*	*37.5%*	Common Equity Ratio	*41.0%*
20166	19324	21432	22109	22842	22714	22777	22528	24602	27557	*28350*	*30150*	Total Capital ($mill)	*32500*
23848	25609	27299	27882	28723	27824	27921	29664	31974	35183	*37050*	*38525*	Net Plant ($mill)	*41700*
7.7%	8.5%	6.4%	5.4%	6.0%	6.0%	6.9%	5.7%	5.8%	5.9%	*5.0%*	*5.5%*	Return on Total Cap'l	*6.0%*
14.4%	14.8%	11.5%	9.1%	10.3%	11.1%	15.1%	11.6%	12.0%	12.0%	*9.5%*	*10.5%*	Return on Shr. Equity	*11.0%*
14.7%	15.0%	11.6%	9.2%	10.4%	11.2%	15.2%	11.7%	12.2%	12.1%	*9.5%*	*10.5%*	Return on Com Equity E	*11.0%*
7.6%	8.4%	5.2%	3.0%	4.4%	4.8%	7.7%	3.9%	4.9%	5.2%	*2.5%*	*3.5%*	Retained to Com Eq	*4.0%*
49%	45%	56%	68%	58%	58%	50%	68%	61%	58%	*74%*	*67%*	All Div'ds to Net Prof	*66%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $21400 mill. **Due in 5 Yrs** $8317.4 mill.
LT Debt $18229 mill. **LT Interest** $810.0 mill.
Incl. $271.4 mill. of securitization bonds.
(LT interest earned: 1.8x)
Leases, Uncapitalized Annual rentals $62.1 mill.
Pension Assets-12/19 $6271.2 mill.
Oblig $8406.2 mill.
Pfd Stock $254.4 mill. **Pfd Div'd** $18.3 mill.
200,000 shs. 6.25%-7.5%, $100 par; 250,000 shs. 8.75%, 1.4 mill. shs. 5.375%; all cum., without sinking fund.
Common Stock 200,161,934 shs. **as of 4/30/20**
MARKET CAP: $21 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+.2	+4.1	-1.4
Avg. Indust. Use (MWH)	1034	946	NA
Avg. Indust. Revs. per KWH(¢)	5.41	5.16	5.24
Capacity at Peak (Mw)	24279	23121	NA
Peak Load, Summer (Mw)	21671	21587	21598
Annual Load Factor (%)	62	65	NA
% Change Customers (yr-end)	+.6	+.6	NA
Fixed Charge Cov. (%)	169	95	165

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-.5%	-2.0%	*-2.5%*
"Cash Flow"	3.0%	--	*4.0%*
Earnings	-.5%	.5%	*3.0%*
Dividends	2.5%	1.5%	*4.0%*
Book Value	1.0%	-2.5%	*5.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2588	2618	3244	2624	11074
2018	2724	2669	3104	2512	11009
2019	2610	2666	3141	2462	10879
2020	2427	*2423*	*3000*	*2400*	*10250*
2021	*2600*	*2500*	*2900*	*2300*	*10300*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.46	2.27	2.21	.25	5.19
2018	.73	1.34	3.42	.39	5.88
2019	1.32	1.22	1.82	1.94	6.30
2020	.59	*1.25*	*2.45*	*.76*	*5.05*
2021	*1.10*	*1.50*	*2.60*	*.60*	*5.80*

Calendar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.85	.85	.85	.87	3.42
2017	.87	.87	.87	.89	3.50
2018	.89	.89	.89	.91	3.58
2019	.91	.91	.91	.93	3.66
2020	.93	.93			

BUSINESS: Entergy Corporation supplies electricity to 2.9 million customers through subsidiaries in Arkansas, Louisiana, Mississippi, Texas, and New Orleans (regulated separately from Louisiana). Distributes gas to 202,000 customers in Louisiana. Has a nonutility subsidiary that owns six nuclear units (four no longer operating). Electric revenue breakdown: residential, 38%; commercial, 26%; industrial, 27%; other, 9%. Generating sources: gas, 40%; nuclear, 28%; coal, 6%; purchased, 26%. Fuel costs: 30% of revenues. '19 reported depreciation rate: 2.8%. Has 13,600 employees. Chairman & CEO: Leo P. Denault. Incorporated: Delaware. Address: 639 Loyola Avenue, P.O. Box 61000, New Orleans, Louisiana 70161. Telephone: 504-576-4000. Internet: www.entergy.com.

Entergy's earnings are likely to decline this year. The fourth quarter of 2019 benefited from tax credits, which we *included* in our earnings presentation because the company has recorded similar benefits in previous years. In addition, Entergy's nonutility activities (primarily nonregulated nuclear units) lost $0.55 a share in the first quarter of 2020. The company is exiting most of these operations and excludes these results from its 2020 earnings guidance of $5.45-$5.75, but we include these results. We cut our 2020 earnings estimate by $0.40 a share, to $5.05, because March-quarter results were below our $1.00 estimate.

The company did not change its earnings guidance, despite the falloff in the economy. Management estimates the slump in commercial and industrial kilowatt-hour sales will reduce revenues by $120 million-$140 million this year, only partially offset by rising residential volume. In response, Entergy is cutting operating and maintenance expenses by $100 million. The company's utilities are deferring for future recovery their costs associated with the coronavirus problem. Entergy's targeted range for 2021 profits remains $5.80-$6.10 a share. Our estimate is at the bottom end of this range.

Entergy Louisiana completed a gas-fired generating plant in March, and three more gas-fired facilities are under construction. The new plant cost $872 million for 994 megawatts of capacity. Entergy New Orleans is adding 128 mw at a cost of $210 million, Entergy Louisiana is building a 361-mw facility for $261 million, and Entergy Texas is constructing 993 mw at a cost of $937 million. These facilities are still needed to meet customer demand, despite the recession, and will boost the company's earning power. The utilities will recover the costs of these projects either with a general rate case or through a formula rate plan.

The valuation of Entergy stock is about average for a utility. The dividend yield is close to the industry mean. The stock has declined 14% this year, a similar proportion to many utility issues. Total return potential is about average for the 18-month span and unspectacular for the 3- to 5-year period.

Paul E. Debbas, CFA *June 12, 2020*

(A) Diluted EPS. Excl. nonrec. losses: '05, 21¢; '12, $1.26; '13, $1.14; '14, 56¢; '15, $6.99; '16, $10.14; '17, $2.91; '18, $1.25. Next earnings report due early Aug. (B) Div'ds historically paid in early Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. † Shareholder investment plan avail. (C) Incl. def'd charges. In '19: $29.67/sh. (D) In millions. (E) Rate base: Net original cost. Allowed ROE (blended): 9.95%; earned on avg. com. eq., '19: 13.0%. Regulatory Climate: Average.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	20
Earnings Predictability	60

EVERGY, INC. NYSE-EVRG

RECENT PRICE 62.96 | P/E RATIO 23.8 (Trailing: 23.1 Median: NMF) | RELATIVE P/E RATIO 1.21 | DIV'D YLD 3.4% | VALUE LINE

TIMELINESS —
SAFETY 2 New 9/14/18
TECHNICAL —
BETA 1.05 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$42-$97	$70 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	75	(+20%)	8%
Low	55	(-15%)	1%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	280	263	232
to Sell	237	278	302
Hld's(000)	198386	191230	185949

LEGENDS
..... Relative Price Strength
Options: Yes
Shaded area indicates recession

High: 61.1 67.8 76.6
Low: 50.9 54.6 42.0

Target Price Range 2023 | 2024 | 2025

128 96 80 64 48 40 32 24 16 12

Percent shares traded 36 24 12

% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	9.5	-1.3
3 yr.	—	5.2
5 yr.	—	18.7

Evergy, Inc. was formed through the merger of Great Plains Energy and Westar Energy in June of 2018. Great Plains Energy holders received .5981 of a share of Evergy for each of their shares, and Westar Energy holders received one share of Evergy for each of their shares. The merger was completed on June 4, 2018. Shares of Evergy began trading on the New York Stock Exchange one day later.

CAPITAL STRUCTURE as of 3/31/20
Total Debt $10390 mill. **Due in 5 Yrs** $3907.4 mill.
LT Debt $8993.5 mill. **LT Interest** $377.7 mill.
Incl. $47.9 mill. capitalized leases.
(LT interest earned: 3.1x)

Leases, Uncapitalized Annual rentals $20.5 mill.

Pension Assets-12/19 $1732.8 mill.
Oblig $2718.2 mill.

Pfd Stock None

Common Stock 226,740,469 shs.
as of 5/1/20
MARKET CAP: $14 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	NA	NA	NA
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	7.11	7.25
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	NA	NA	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	NA	NA	NA
Fixed Charge Cov. (%)	NA	322	305

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd 2019 to '23-'25
Revenues	--	--	1.5%
"Cash Flow"	--	--	4.5%
Earnings	--	--	3.0%
Dividends	--	--	5.5%
Book Value	--	--	2.0%

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	--	--	--	--	--
2018	600.2	893.4	1582.5	1199.8	4275.9
2019	1216.9	1221.7	1577.6	1131.6	5147.8
2020	1116.7	*1100*	*1533.3*	*1100*	*4850*
2021	*1200*	*1200*	*1550*	*1100*	*5050*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	--	--	--	--	--
2018	.42	.56	1.32	.07	2.50
2019	.39	.57	1.56	.28	2.79
2020	.31	*.49*	*1.55*	*.30*	*2.65*
2021	*.45*	*.60*	*1.60*	*.30*	*2.95*

Calendar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	--	--	--	--	--
2017	--	--	--	--	--
2018	.40	.40	.46	.475	1.74
2019	.475	.475	.475	.505	1.93
2020	.505	.505			

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
	--	--	--	--	--	--	--	--	16.75	22.71	*21.35*	*22.25*	Revenues per sh	*24.50*
	--	--	--	--	--	--	--	--	4.89	7.18	*6.95*	*7.50*	"Cash Flow" per sh	*9.00*
	--	--	--	--	--	--	--	--	2.50	2.79	*2.65*	*2.95*	Earnings per sh A	*3.25*
	--	--	--	--	--	--	--	--	1.74	1.93	*2.05*	*2.17*	Div'd Decl'd per sh B ■	*2.55*
	--	--	--	--	--	--	--	--	4.19	5.34	*6.90*	*7.20*	Cap'l Spending per sh	*6.00*
	--	--	--	--	--	--	--	--	39.28	37.82	*38.40*	*39.15*	Book Value per sh C	*41.50*
	--	--	--	--	--	--	--	--	255.33	226.64	*227.00*	*227.00*	Common Shs Outst'g D	*227.00*
	--	--	--	--	--	--	--	--	22.7	21.8	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*20.5*
	--	--	--	--	--	--	--	--	1.23	1.17			Relative P/E Ratio	*1.15*
	--	--	--	--	--	--	--	--	3.1%	3.2%			Avg Ann'l Div'd Yield	*3.8%*
	--	--	--	--	--	--	--	--	4275.9	5147.8	*4850*	*5050*	Revenues ($mill)	*5550*
	--	--	--	--	--	--	--	--	535.8	669.9	*625*	*685*	Net Profit ($mill)	*775*
	--	--	--	--	--	--	--	--	9.8%	12.6%	*13.0%*	*13.0%*	Income Tax Rate	*13.0%*
	--	--	--	--	--	--	--	--	2.5%	2.5%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
	--	--	--	--	--	--	--	--	40.0%	50.6%	*51.5%*	*52.5%*	Long-Term Debt Ratio	*53.5%*
	--	--	--	--	--	--	--	--	60.0%	49.4%	*48.5%*	*47.5%*	Common Equity Ratio	*46.5%*
	--	--	--	--	--	--	--	--	16716	17337	*17925*	*18700*	Total Capital ($mill)	*20300*
	--	--	--	--	--	--	--	--	18952	19346	*19950*	*20550*	Net Plant ($mill)	*21300*
	--	--	--	--	--	--	--	--	4.0%	4.8%	*4.5%*	*4.5%*	Return on Total Cap'l	*5.0%*
	--	--	--	--	--	--	--	--	5.3%	7.8%	*7.0%*	*7.5%*	Return on Shr. Equity	*8.0%*
	--	--	--	--	--	--	--	--	5.3%	7.8%	*7.0%*	*7.5%*	Return on Com Equity E	*8.0%*
	--	--	--	--	--	--	--	--	.6%	2.4%	*1.5%*	*2.0%*	Retained to Com Eq	*2.0%*
	--	--	--	--	--	--	--	--	89%	69%	*75%*	*72%*	All Div'ds to Net Prof	*75%*

BUSINESS: Evergy, Inc. was formed through the merger of Great Plains Energy and Westar Energy in June of 2018. Through its subsidiaries (now doing business under the Evergy name), provides electric service to 1.6 million customers in Kansas and Missouri, including the greater Kansas City area. Electric revenue breakdown: residential, 37%; commercial, 35%; industrial, 12%; wholesale, 7%; other, 9%. Generating sources: coal, 54%; nuclear, 17%; purchased, 29%. Fuel costs: 25% of revenues. '19 reported deprec. rate: 3%. Has 4,600 employees. Chairman: Mark A. Ruelle. President & Chief Executive Officer: Terry Bassham. Incorporated: Missouri. Address: 1200 Main Street, Kansas City, Missouri 64105. Tel.: 816-556-2200. Internet: www.evergyinc.com.

A strategic review of Evergy has been delayed two months. In January, Elliott Management, an activist investor group, took a stake in the company (equivalent to 11.3 million shares) because it felt Evergy was undervalued. Evergy appointed two directors supported by Elliott to its board. The new directors are part of a four-man Strategic Review & Operations Committee that will make a recommendation by July 30th, which the board will vote on by August 17th. These dates are two months later than the original schedule due to the turmoil in the markets. Evergy has already raised its five-year capital budget by $1.5 billion and ended its stock-repurchase program.

We cut our 2020 earnings estimate by $0.45 a share, to $2.65. First-quarter profits fell short of our $0.45-a-share estimate due mainly to a $27 million pretax charge for a voluntary severance plan. Winter weather patterns were milder than normal. Furthermore, the economic decline is hurting kilowatt-hour sales. Weather-adjusted volume declined 8% in April. Evergy is stepping up its cost-reduction efforts in response to the sales decline and a probable increase in bad-debt expense because utilities are not disconnecting customers for nonpayment. Management is not providing earnings guidance due to the strategic review.

We think profits in 2021 will be much improved. We assume normal weather in the first quarter and a better economy. Also, the March-period comparison will benefit from the absence of the charge for the headcount reduction. Even so, we lowered our estimate by $0.30 a share, to $2.95, because growth will be coming off a lower base.

Evergy stock has a dividend yield that is about average, by utility standards. There is some speculative appeal due to the possibility that a sale of the company will emerge from the strategic review. We think this is why the price has declined 3% in 2020, less than most stocks in the electric utility industry. The equity's total return potential is subpar for the 18-month span and the period to 2023-2025. It is unranked for Timeliness due to its short trading history since Evergy was formed in June of 2018.

Paul E. Debbas, CFA *June 12, 2020*

(A) Diluted EPS. '19 earnings don't sum to full-year total due to rounding. Next earnings report due early Aug. (B) Dividends paid in mid-March, June, September, and December. ■ Dividend reinvestment plan available. (C) Incl. intangibles. In '19: $4077.1 mill., $17.99/sh. (D) In millions. (E) Rate base: Original cost depreciated. Rate allowed on common equity in Missouri in '18: none specified; in Kansas in '18: 9.3%. Earned on average common equity, '19: 7.2%. Regulatory Climate: Average.

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

IDACORP, INC. NYSE-IDA

RECENT PRICE 90.28 | P/E RATIO 19.8 (Trailing: 20.0 Median: 16.0) | RELATIVE P/E RATIO 0.96 | DIV'D YLD 3.1% | VALUE LINE

TIMELINESS 3 Lowered 3/1/19
SAFETY 2 Raised 8/2/13
TECHNICAL 3 Raised 4/24/20
BETA .80 (1.00 = Market)

18-Month Target Price Range

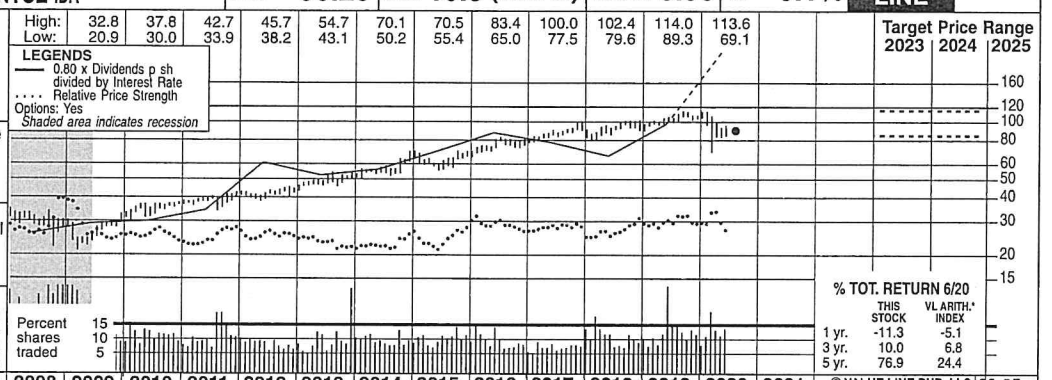
Low-High	Midpoint (% to Mid)
$71-$145	$108 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	115	(+25%)	9%
Low	85	(-5%)	2%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	148	172	167
to Sell	165	157	174
Hld's(000)	38815	39667	39043



% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-11.3	-5.1
3 yr.	10.0	6.8
5 yr.	76.9	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
20.00	20.15	21.23	19.51	20.47	21.92	20.97	20.55	21.55	24.81	25.51	25.23	25.04	26.76	27.19	26.70	*24.80*	*25.75*	Revenues per sh	*28.75*
4.12	3.87	4.58	4.11	4.27	5.07	5.35	5.84	5.93	6.29	6.58	6.70	6.86	7.50	7.85	8.07	*8.10*	*8.50*	"Cash Flow" per sh	*9.75*
1.90	1.75	2.35	1.86	2.18	2.64	2.95	3.36	3.37	3.64	3.85	3.87	3.94	4.21	4.49	4.61	*4.55*	*4.75*	Earnings per sh [A]	*5.50*
1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.37	1.57	1.76	1.92	2.08	2.24	2.40	2.56	*2.73*	*2.93*	Div'd Decl'd per sh [B] ■ †	*3.55*
4.73	4.53	5.16	6.39	5.19	5.26	6.85	6.76	4.78	4.68	5.45	5.84	5.89	5.66	5.51	5.53	*6.80*	*6.95*	Cap'l Spending per sh	*7.00*
23.88	24.04	25.77	26.79	27.76	29.17	31.01	33.19	35.07	36.84	38.85	40.88	42.74	44.65	47.01	48.88	*50.60*	*52.35*	Book Value per sh [C]	*58.00*
42.22	42.66	43.63	45.06	46.92	47.90	49.41	49.95	50.16	50.23	50.27	50.34	50.40	50.42	50.42	50.42	*50.45*	*50.45*	Common Shs Outst'g [D]	*50.40*
15.5	16.7	15.1	18.2	13.9	10.2	11.8	11.5	12.4	13.4	14.7	16.2	19.1	20.6	20.5	22.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.5*
.82	.89	.82	.97	.84	.68	.75	.72	.79	.75	.77	.82	1.00	1.04	1.11	1.21			Relative P/E Ratio	*1.05*
4.1%	4.1%	3.4%	3.5%	4.0%	4.5%	3.4%	3.1%	3.3%	3.2%	3.1%	3.1%	2.8%	2.6%	2.6%	2.5%			Avg Ann'l Div'd Yield	*3.5%*
1036.0	1026.8	1080.7	1246.2	1282.5	1270.3	1262.0	1349.5	1370.8	1346.4	*1250*	*1300*	Revenues ($mill)	*1450*
142.5	166.9	168.9	182.4	193.5	194.7	198.3	212.4	226.8	232.9	*230*	*240*	Net Profit ($mill)	*280*
--	--	13.4%	28.3%	8.0%	19.0%	15.5%	18.6%	7.1%	9.5%	*12.0%*	*12.0%*	Income Tax Rate	*12.0%*
19.1%	23.3%	20.3%	12.3%	13.6%	16.3%	16.3%	13.9%	15.2%	16.2%	*17.0%*	*17.0%*	AFUDC % to Net Profit	*15.0%*
49.3%	45.6%	45.5%	46.6%	45.3%	45.6%	44.8%	43.7%	43.6%	41.3%	*46.0%*	*46.0%*	Long-Term Debt Ratio	*46.5%*
50.7%	54.4%	54.5%	53.4%	54.7%	54.4%	55.2%	56.3%	56.4%	58.7%	*54.0%*	*54.0%*	Common Equity Ratio	*53.5%*
3020.4	3045.2	3225.4	3465.9	3567.6	3783.3	3898.5	3997.5	4205.1	4201.3	*4740*	*4900*	Total Capital ($mill)	*5450*
3161.4	3406.6	3536.0	3665.0	3833.5	3992.4	4172.0	4283.9	4395.7	4531.5	*4695*	*4860*	Net Plant ($mill)	*5300*
6.0%	6.8%	6.5%	6.4%	6.6%	6.2%	6.1%	6.3%	6.4%	6.5%	*6.0%*	*6.0%*	Return on Total Cap'l	*6.0%*
9.3%	10.1%	9.6%	9.9%	9.9%	9.5%	9.2%	9.4%	9.6%	9.4%	*9.0%*	*9.0%*	Return on Shr. Equity	*9.5%*
9.3%	10.1%	9.6%	9.9%	9.9%	9.5%	9.2%	9.4%	9.6%	9.4%	*9.0%*	*9.0%*	Return on Com Equity [E]	*9.5%*
5.5%	6.5%	5.7%	5.6%	5.4%	4.8%	4.3%	4.4%	4.4%	4.2%	*3.5%*	*3.5%*	Retained to Com Eq	*3.5%*
41%	36%	41%	43%	46%	50%	53%	53%	54%	56%	*60%*	*61%*	All Div'ds to Net Prof	*64%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $1837.0 mill. **Due in 5 Yrs** $299.8 mill.
LT Debt $1837.0 mill. **LT Interest** $78.6 mill.
(LT interest earned: 3.6x)

Pension Assets-12/19 $763.1 mill.
Oblig $1134.8 mill.

Pfd Stock None

Common Stock 50,453,936 shs.
as of 4/24/20

MARKET CAP: $4.6 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+2.6	+.1	-.3
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	5.83	5.64	5.32
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	3422	3392	3242
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+2.0	+2.3	+2.5
Fixed Charge Cov. (%)	329	309	307

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	2.5%	2.5%	*1.0%*
"Cash Flow"	5.5%	4.5%	*4.0%*
Earnings	7.0%	4.0%	*3.5%*
Dividends	7.0%	9.0%	*6.5%*
Book Value	5.5%	5.0%	*3.5%*

Calendar	QUARTERLY REVENUES($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	302.6	333.0	408.3	305.6	1349.5
2018	310.1	340.0	408.8	311.9	1370.8
2019	350.3	316.9	386.3	292.9	1346.4
2020	291.0	*309*	*375*	*275*	*1250*
2021	*305*	*325*	*385*	*285*	*1300*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.66	.99	1.80	.76	4.21
2018	.72	1.23	2.02	.52	4.49
2019	.84	1.05	1.78	.93	4.61
2020	.74	*1.10*	*1.90*	*.81*	*4.55*
2021	*.85*	*1.15*	*2.00*	*.75*	*4.75*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.51	.51	.51	.55	2.08
2017	.55	.55	.55	.59	2.24
2018	.59	.59	.59	.63	2.40
2019	.63	.63	.63	.67	2.56
2020	.67	.67			

BUSINESS: IDACORP, Inc. is a holding company for Idaho Power Company, a regulated electric utility that serves 572,000 customers throughout a 24,000-square-mile area in southern Idaho and eastern Oregon (population: 1.2 million). Most of the company's revenues are derived from the Idaho portion of its service area. Revenue breakdown: residential, 39%; commercial, 22%; industrial, 13%; irrigation, 10%; other, 16%. Generating sources: hydro, 45%; coal, 16%; gas, 11%; purchased, 28%. Fuel costs: 33% of revenues. '19 reported depreciation rate: 2.9%. Has 2,000 employees. Chairman: Richard J. Dahl. President & CEO: Lisa Grow. Incorporated: Idaho. Address: 1221 W. Idaho St., Boise, Idaho 83702. Telephone: 208-388-2200. Internet: www.idacorpinc.com.

IDACORP's utility subsidiary, Idaho Power, is faring better than many other utilities during the coronavirus problem. The company's service area has numerous food processing and agriculture-related businesses, which continued to operate even as some industries were shut down temporarily. In fact, Moody's estimates that the economy of the utility's service territory will grow 0.7% this year, which is good considering that the U.S. economy is in a recession. Customer growth for the 12-month period that ended on March 31st was 2.6%, which is well above the norm (slightly below 1%) for electric companies. Upon reporting first-quarter results, IDACORP maintained its 2020 earnings guidance of $4.45-$4.65 a share, and we did not change our estimate of $4.55 a share. This would amount to a slight decline from the 2019 tally of $4.61 a share, which benefited from an unusually high fourth-quarter showing.

We expect record profits in 2021. The economy will likely be much better, with Moody's estimating economic growth of 5.0% in Idaho Power's service area. This should enable the utility's healthy customer growth to continue. The company might well benefit from an increase in data-center customers, now that the state has eliminated the sales tax on data centers. Our estimate of $4.75 a share would produce a 4% increase.

A regulatory mechanism is available to stabilize the utility's income, if needed. Idaho Power may use up to $25 million of accumulated deferred investment tax credits annually if its return on equity falls below 9.4%. The company does not expect to use any of these credits in order to attain its earnings target for 2020.

The board of directors will probably raise the dividend in September. IDACORP's target for a payout ratio is 60%-70%, and management plans to recommend to the board annual increases of at least 5%. We estimate a hike of $0.05 a share (7.5%) quarterly.

The stock price is down 15% in 2020. This is less than many utility issues. The dividend yield is below the utility mean. Total return potential is below the median for both the 18-month span and the 3- to 5-year period.

Paul E. Debbas, CFA *July 24, 2020*

(A) Diluted EPS. Excl. nonrecurring gain (loss): '05, (24¢); '06, 17¢. '17 & '19 earnings don't sum due to rounding. Next earnings report due late July. (B) Dividends historically paid in late Feb., May, Aug., and Nov. ■ Dividend reinvestment plan available. † Shareholder investment plan available. (C) Incl. intangibles. In '19: $26.31/sh. (D) In millions. (E) Rate base: Net original cost. Rate allowed on common equity in '11: 10% (imputed); earned on avg. com. eq., '19: 9.6%. Regulatory Climate: Above Average.

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

NORTHWESTERN NYSE-NWE

RECENT PRICE 53.13 | P/E RATIO 16.1 (Trailing: 17.2 / Median: 17.0) | RELATIVE P/E RATIO 0.78 | DIV'D YLD 4.6% | VALUE LINE

TIMELINESS 3 Lowered 5/8/20
SAFETY 2 Raised 7/27/18
TECHNICAL 3 Raised 7/24/20
BETA .90 (1.00 = Market)

18-Month Target Price Range

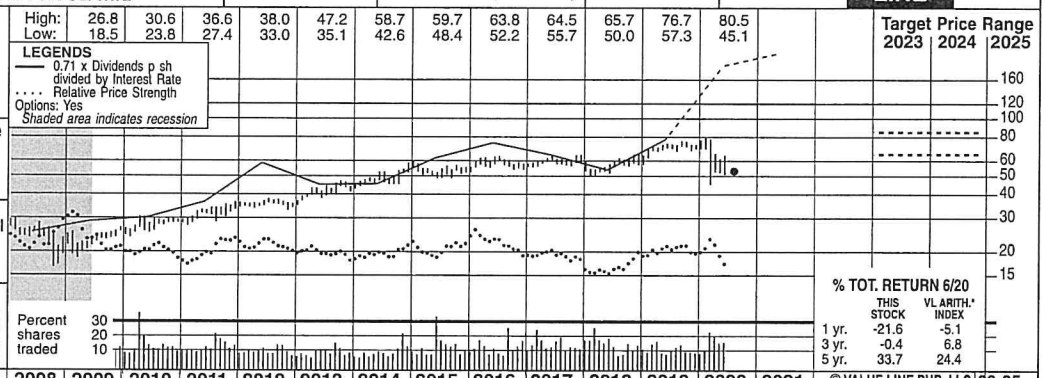
Low-High	Midpoint (% to Mid)
$44-$101	$73 (35%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+60%)	*16%*
Low	65	(+20%)	*9%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	113	127	127
to Sell	150	133	144
Hld's(000)	49607	49394	48390



% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-21.6	-5.1
3 yr.	-0.4	6.8
5 yr.	33.7	24.4

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
29.18	32.57	31.49	30.79	35.09	31.72	30.66	30.80	28.76	29.80	25.68	25.21	26.01	26.45	23.81	24.93	*23.75*	*24.25*	Revenues per sh	*26.50*
3.20	4.00	3.62	3.70	4.40	4.62	4.76	5.42	5.18	5.45	5.39	5.92	6.74	6.76	6.96	7.07	*6.85*	*7.15*	"Cash Flow" per sh	*8.00*
d14.32	1.71	1.31	1.44	1.77	2.02	2.14	2.53	2.26	2.46	2.99	2.90	3.39	3.34	3.40	3.53	*3.30*	*3.50*	Earnings per sh [A]	*3.75*
--	1.00	1.24	1.28	1.32	1.34	1.36	1.44	1.48	1.52	1.60	1.92	2.00	2.10	2.20	2.30	*2.40*	*2.50*	Div'd Decl'd per sh [B] ■ †	*2.80*
2.25	2.26	2.81	3.00	3.47	5.26	6.30	5.20	5.89	5.95	5.76	5.89	5.96	5.60	5.64	6.26	*7.90*	*7.85*	Cap'l Spending per sh	*6.00*
19.92	20.60	20.65	21.12	21.25	21.86	22.64	23.68	25.09	26.60	31.50	33.22	34.68	36.44	38.60	40.42	*41.80*	*43.00*	Book Value per sh [C]	*45.75*
35.60	35.79	35.97	38.97	35.93	36.00	36.23	36.28	37.22	38.75	46.91	48.17	48.33	49.37	50.32	50.45	*50.50*	*51.50*	Common Shs Outst'g [D]	*53.00*
--	17.1	26.0	21.7	13.9	11.5	12.9	12.6	15.7	16.9	16.2	18.4	17.2	17.8	16.8	19.9	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*19.5*
--	.91	1.40	1.15	.84	.77	.82	.79	1.00	.95	.85	.93	.90	.90	.91	1.08			Relative P/E Ratio	*1.10*
--	3.4%	3.6%	4.1%	5.4%	5.7%	4.9%	4.5%	4.2%	3.7%	3.3%	3.6%	3.4%	3.5%	3.9%	3.3%			Avg Ann'l Div'd Yield	*3.8%*
1110.7	1117.3	1070.3	1154.5	1204.9	1214.3	1257.2	1305.7	1198.1	1257.9	*1200*	*1250*	Revenues ($mill)	*1400*
77.4	92.6	83.7	94.0	120.7	138.4	164.2	162.7	171.1	179.3	*170*	*180*	Net Profit ($mill)	*200*
25.0%	9.8%	9.6%	13.2%	--	13.7%	--	7.6%	7.6%	1.6%	*NMF*	*Nil*	Income Tax Rate	*10.0%*
14.2%	3.3%	9.4%	8.7%	8.9%	9.8%	4.3%	5.2%	3.4%	4.6%	*6.0%*	*6.0%*	AFUDC % to Net Profit	*4.0%*
57.2%	52.2%	53.8%	53.5%	53.4%	53.1%	52.0%	50.2%	52.2%	52.5%	*49.0%*	*51.0%*	Long-Term Debt Ratio	*50.0%*
42.8%	47.8%	46.2%	46.5%	46.6%	46.9%	48.0%	49.8%	47.8%	47.5%	*51.0%*	*49.0%*	Common Equity Ratio	*50.0%*
1916.4	1797.1	2020.7	2215.7	3168.0	3408.6	3493.9	3614.5	4064.6	4289.8	*4120*	*4520*	Total Capital ($mill)	*4825*
2118.0	2213.3	2435.6	2690.1	3758.0	4059.5	4214.9	4358.3	4521.3	4700.9	*4920*	*5140*	Net Plant ($mill)	*5500*
5.9%	7.0%	5.5%	5.5%	4.8%	5.2%	5.9%	5.6%	5.2%	5.2%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.0%*
9.4%	10.8%	9.0%	9.1%	8.2%	8.6%	9.8%	9.0%	8.8%	8.8%	*8.0%*	*8.0%*	Return on Shr. Equity	*8.5%*
9.4%	10.8%	9.0%	9.1%	8.2%	8.6%	9.8%	9.0%	8.8%	8.8%	*8.0%*	*8.0%*	Return on Com Equity [E]	*8.5%*
3.5%	4.7%	3.2%	3.5%	3.8%	3.0%	4.1%	3.4%	3.2%	3.1%	*2.0%*	*2.5%*	Retained to Com Eq	*2.0%*
63%	56%	65%	61%	54%	65%	58%	62%	64%	64%	*72%*	*71%*	All Div'ds to Net Prof	*73%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $2258.7 mill. **Due in 5 Yrs** $448.1 mill.
LT Debt $2256.2 mill. **LT Interest** $83.7 mill.
Incl. $16.8 mill. capitalized leases.
(LT interest earned: 2.8x)

Pension Assets-12/19 $609.0 mill.
Oblig $735.6 mill.

Pfd Stock None

Common Stock 50,568,881 shs.
as of 4/17/20

MARKET CAP: $2.7 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+3.8	+2.9	+4.6
Avg. Indust. Use (MWH)	30987	34573	37808
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	2133	2173	2237
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.3	+1.2	+1.2
Fixed Charge Cov. (%)	275	275	284

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-2.5%	-2.0%	*1.0%*
"Cash Flow"	5.0%	5.5%	*2.5%*
Earnings	7.0%	6.0%	*1.5%*
Dividends	5.5%	7.5%	*4.0%*
Book Value	6.0%	7.0%	*3.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	367.3	283.9	309.9	344.6	1305.7
2018	341.5	261.8	279.9	314.9	1198.1
2019	384.2	270.7	274.8	328.2	1257.9
2020	335.3	*254.7*	*290*	*320*	*1200*
2021	*355*	*270*	*295*	*330*	*1250*

Calendar	EARNINGS PER SHARE [A] Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	1.17	.44	.75	.98	3.34
2018	1.18	.61	.56	1.06	3.40
2019	1.44	.49	.42	1.18	3.53
2020	1.00	*.45*	*.65*	*1.20*	*3.30*
2021	*1.15*	*.50*	*.65*	*1.20*	*3.50*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.50	.50	.50	.50	2.00
2017	.525	.525	.525	.525	2.10
2018	.55	.55	.55	.55	2.20
2019	.575	.575	.575	.575	2.30
2020	.60	.60			

BUSINESS: NorthWestern Corporation (doing business as NorthWestern Energy) supplies electricity & gas in the Upper Midwest and Northwest, serving 443,000 electric customers in Montana and South Dakota and 292,000 gas customers in Montana (85% of gross margin), South Dakota (14%), and Nebraska (1%). Electric revenue breakdown: residential, 39%; commercial, 47%; industrial, 4%; other, 10%. Generating sources: hydro, 34%; coal, 28%; wind, 5%; other, 3%; purchased, 30%. Fuel costs: 25% of revenues. '19 reported deprec. rate: 2.8%. Has 1,500 employees. Chairman: Stephen P. Adik. President & CEO: Robert C. Rowe. Inc.: Delaware. Address: 3010 West 69th Street, Sioux Falls, South Dakota 57108. Tel.: 605-978-2900. Internet: www.northwesternenergy.com.

Upon reporting first-quarter earnings in late April, NorthWestern cut its guidance for 2020. Previously, the company expected share net to wind up in a range of $3.45-$3.60. Now, management's target is $3.30-$3.45. This is only partly due to the economic weakness caused by the coronavirus, which was felt most noticeably in the second quarter. First-period profits fell short of management's expectation due to some unusual costs. NorthWestern bases its guidance on normal weather, but we note that a mild winter reduced share earnings by $0.06. Putting it all together, we lowered our 2020 earnings estimate from $3.45 a share to $3.30. Because growth in 2021 will come off a lower base, we trimmed our estimate from $3.55 a share to $3.50.

The utility needs additional generating capacity. NorthWestern has more exposure to the purchased-power markets than other electric companies in the region. The utility intends to build a gas-fired facility in South Dakota, which will add about 60 megawatts of capacity in late 2021 at an expected cost of $80 million. NorthWestern also agreed to pay 50 cents to Puget Sound Energy for a 12.5% stake (92.5 mw) in Unit 4 of the Colstrip coal-fired plant. NorthWestern would sell 45 mw back to Puget Sound Energy and use the remainder to serve its customers. (This deal was originally twice the size, but was halved after another company exercised its purchase option.) The transaction requires the approval of the Montana commission. NorthWestern issued a request for proposals for up to 280 mw of peaking and intermediate capacity for commercial operation in early 2023. The successful project(s) are expected to be selected by early 2021.

The company added some debt in April, and plans to add some equity as well. In the second quarter, NorthWestern issued a $100 million term loan and $150 million of long-term debt. The company plans to issue common equity, possibly in late 2020 but more likely in 2021.

The stock's yield is above the utility average. The price has fallen 26% in 2020, affected by the cut in earnings guidance. Total return potential is strong for the 18-month span, but not as impressive for the 3- to 5-year period.

Paul E. Debbas, CFA *July 24, 2020*

(A) Diluted EPS. Excl. gain (loss) on disc. ops.: '05, (6¢); '06, 1¢; nonrec. gains: '12, 39¢ net; '15, 27¢; '18, 52¢; '19, 45¢. '18 EPS don't sum due to rounding. Next earnings report due late July. (B) Div'ds historically paid in late Mar., June, Sept. & Dec. ■ Div'd reinvestment plan avail. (C) Incl. def'd charges. In '19: $16.68/sh. (D) In mill. (E) Rate base: Net orig. cost. Rate allowed on com. eq. in MT in '19 (elec.): 9.65%; in '17 (gas): 9.55%; in SD in '15: none spec.; in NE in '07: 10.4%; earned on avg. com. eq., '19: 9.0%. Reg. Climate: Below Avg.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	75
Earnings Predictability	85

OGE ENERGY CORP. NYSE-OGE

RECENT PRICE 31.86 | P/E RATIO 15.0 (Trailing: 14.2 Median: 17.0) | RELATIVE P/E RATIO 0.70 | DIV'D YLD 5.1% | VALUE LINE

TIMELINESS 3 Lowered 3/6/20
SAFETY 2 Lowered 12/18/15
TECHNICAL 3 Lowered 5/1/20
BETA 1.05 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$23-$61	$42 (30%)

2023-25 PROJECTIONS

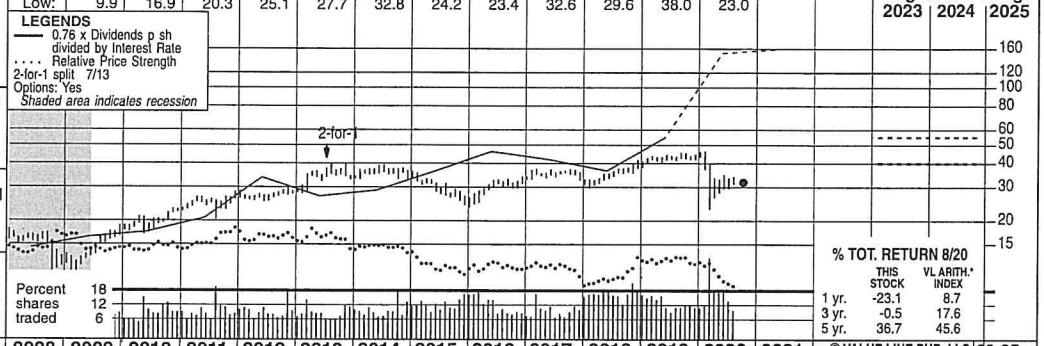
	Price	Gain	Ann'l Total Return
High	55	(+75%)	18%
Low	40	(+25%)	10%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	205	176	203
to Sell	185	221	182
Hld's(000)	133273	128589	129209

High:	18.9	23.1	28.6	30.1	40.0	39.3	36.5	34.2	37.4	41.8	45.8	46.4
Low:	9.9	16.9	20.3	25.1	27.7	32.8	24.2	23.4	32.6	29.6	38.0	23.0

LEGENDS
0.76 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
2-for-1 split 7/13
Options: Yes
Shaded area indicates recession



% TOT. RETURN 8/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-23.1	8.7
3 yr.	-0.5	17.6
5 yr.	36.7	45.6

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
27.37	32.83	21.96	20.68	21.77	14.79	19.04	19.96	18.58	14.45	12.30	11.00	11.31	11.32	11.37	11.15	*10.50*	*11.50*	Revenues per sh	*13.75*
1.87	1.94	2.23	2.39	2.40	2.69	3.01	3.31	3.69	3.46	3.40	3.23	3.31	3.34	3.74	4.02	*4.05*	*4.35*	"Cash Flow" per sh	*5.00*
.89	.92	1.23	1.32	1.25	1.33	1.50	1.73	1.79	1.94	1.98	1.69	1.69	1.92	2.12	2.24	*2.10*	*2.25*	Earnings per sh A	*2.50*
.67	.67	.67	.68	.70	.71	.73	.76	.80	.85	.95	1.05	1.16	1.27	1.40	1.51	*1.60*	*1.68*	Div'd Decl'd per sh B ■	*1.95*
1.51	1.65	2.67	3.04	4.01	4.37	4.36	6.48	5.85	4.99	2.86	2.74	3.31	4.13	2.87	3.18	*2.90*	*3.65*	Cap'l Spending per sh	*3.75*
7.14	7.59	8.79	9.16	10.14	10.52	11.73	13.06	14.00	15.30	16.27	16.66	17.24	19.28	20.06	20.69	*18.25*	*18.85*	Book Value per sh C	*20.50*
180.00	181.20	182.40	183.60	187.00	194.00	195.20	196.20	197.60	198.50	199.40	199.70	199.70	199.70	199.70	200.10	*200.00*	*200.00*	Common Shs Outst'g D	*200.00*
14.1	14.9	13.7	13.8	12.4	10.8	13.3	14.4	15.2	17.7	18.3	17.7	17.7	18.3	16.5	19.0	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*19.5*
.74	.79	.74	.73	.75	.72	.85	.90	.97	.99	.96	.89	.93	.92	.89	1.02			Relative P/E Ratio	*1.10*
5.3%	4.9%	4.0%	3.8%	4.5%	5.0%	3.7%	3.1%	2.9%	2.5%	2.6%	3.5%	3.9%	3.6%	4.0%	3.5%			Avg Ann'l Div'd Yield	*4.0%*
3716.9	3915.9	3671.2	2867.7	2453.1	2196.9	2259.2	2261.1	2270.3	2231.6	*2100*	*2300*	Revenues ($mill)	*2750*
295.3	342.9	355.0	387.6	395.8	337.6	338.2	384.3	425.5	449.6	*420*	*450*	Net Profit ($mill)	*505*
34.9%	30.7%	26.0%	24.9%	30.4%	29.2%	30.5%	32.5%	14.5%	7.4%	*13.0%*	*13.0%*	Income Tax Rate	*13.0%*
5.7%	9.0%	2.7%	2.6%	1.7%	3.7%	6.4%	15.0%	8.3%	1.6%	*1.0%*	*2.0%*	AFUDC % to Net Profit	*2.0%*
50.8%	51.6%	50.7%	43.1%	45.9%	44.3%	41.1%	41.7%	42.0%	43.6%	*49.0%*	*48.0%*	Long-Term Debt Ratio	*49.0%*
49.2%	48.4%	49.3%	56.9%	54.1%	55.7%	58.9%	58.3%	58.0%	56.4%	*51.0%*	*52.0%*	Common Equity Ratio	*51.0%*
4652.5	5300.4	5615.8	5337.2	5999.7	5971.6	5849.6	6600.7	6902.0	7334.7	*7150*	*7265*	Total Capital ($mill)	*8050*
6464.4	7474.0	8344.8	6672.8	6979.9	7322.4	7696.2	8339.9	8643.8	9044.6	*9235*	*9545*	Net Plant ($mill)	*10325*
7.8%	7.8%	7.7%	8.6%	7.8%	6.9%	7.0%	7.0%	7.3%	7.1%	*7.0%*	*7.0%*	Return on Total Cap'l	*7.5%*
12.9%	13.4%	12.8%	12.8%	12.2%	10.2%	9.8%	10.0%	10.6%	10.9%	*11.5%*	*12.0%*	Return on Shr. Equity	*12.0%*
12.9%	13.4%	12.8%	12.8%	12.2%	10.2%	9.8%	10.0%	10.6%	10.9%	*11.5%*	*12.0%*	Return on Com Equity E	*12.0%*
6.7%	7.7%	7.2%	7.3%	6.5%	4.0%	3.3%	3.5%	3.8%	3.6%	*3.0%*	*3.0%*	Retained to Com Eq	*2.5%*
48%	43%	44%	43%	47%	61%	67%	64%	64%	67%	*76%*	*74%*	All Div'ds to Net Prof	*78%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $3568.4 mill. **Due in 5 Yrs** $75.0 mill.
LT Debt $3493.4 mill. **LT Interest** $154.4 mill.
(LT interest earned: 4.2x)

Leases, Uncapitalized Annual rentals $6.2 mill.

Pension Assets-12/19 $530.3 mill.
Oblig $616.9 mill.

Pfd Stock None

Common Stock 200,169,838 shs.

MARKET CAP: $6.4 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-2.2	+6.8	+1.1
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	5.30	4.86	4.69
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	6456	6863	6817
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.0	+.9	+1.0
Fixed Charge Cov. (%)	315	292	335

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-5.0%	-5.5%	*3.5%*
"Cash Flow"	4.0%	1.0%	*5.0%*
Earnings	5.0%	2.0%	*3.0%*
Dividends	7.0%	10.0%	*6.0%*
Book Value	7.0%	5.5%	*.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	456.0	586.4	716.8	501.9	2261.1
2018	492.7	567.0	698.8	511.8	2270.3
2019	490.0	513.7	755.4	472.5	2231.6
2020	431.3	503.5	*715.2*	*450*	*2100*
2021	*500*	*550*	*750*	*500*	*2300*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.18	.52	.92	.30	1.92
2018	.27	.55	1.02	.27	2.12
2019	.24	.50	1.25	.26	2.24
2020	.23	.51	*1.13*	*.23*	*2.10*
2021	*.25*	*.55*	*1.20*	*.25*	*2.25*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.275	.275	.275	.3025	1.13
2017	.3025	.3025	.3025	.3325	1.24
2018	.3325	.3325	.3325	.365	1.36
2019	.365	.365	.365	.3875	1.48
2020	.3875	.3875	.3875		

BUSINESS: OGE Energy Corp. is a holding company for Oklahoma Gas and Electric Company (OG&E), which supplies electricity to 858,000 customers in Oklahoma (84% of electric revenues) and western Arkansas (8%); wholesale is (8%). Owns 25.5% of Enable Midstream Partners. Electric revenue breakdown: residential, 40%; commercial, 23%; industrial, 10%; oilfield, 9%; other, 18%. Generating sources: gas, 35%; coal, 15%; wind, 5%; purchased, 45%. Fuel costs: 35% of revenues. '19 reported depreciation rate (utility): 2.7%. Has 2,400 employees. Chairman, President and Chief Executive Officer: Sean Trauschke. Incorporated: Oklahoma. Address: 321 North Harvey, P.O. Box 321, Oklahoma City, Oklahoma 73101-0321. Telephone: 405-553-3000. Internet: www.oge.com.

The price of Enable Midstream Partners stock continues to affect the price of OGE Energy stock. OGE has a 25.5% stake in the midstream natural gas master limited partnership. Enable has been hurt by reduced activity in the gas and oil sector this year, so its units have lost nearly 50% of their value since the start of 2020. The distributions that OGE receives from Enable have been halved. In addition, OGE took a pretax charge of $780 million in the first quarter to write down the value of its stake in Enable. (There will be tax adjustments throughout the remainder of 2020, and the company expects the aftertax nonrecurring charge for the full year to amount to $590 million.) The price of OGE stock has fallen 28% this year, making this one of the worst-performing equities in the electric utility industry.

We cut our 2020 earnings estimate by $0.05 a share, to $2.10. June-quarter profits were a bit below our estimate. Our revised estimate is near the low end of OGE's targeted range of $2.08-$2.18 a share, which is unchanged. Earnings are likely to fall short of the 2019 tally due to a decline in equity income from OGE's stake in Enable. Oklahoma Gas and Electric has held up well despite the coronavirus problem. Oklahoma has a relatively low unemployment rate, and OG&E received permission to defer for future recovery its coronavirus-related costs in Oklahoma and Arkansas. A better economy ought to help earnings rebound in 2021.

OG&E is awaiting a regulatory decision in Oklahoma. The utility is asking the state regulators to approve an $810 million grid modernization plan. The company wants to recover the costs through a rider (surcharge) on customers' bills. A ruling is expected by yearend.

A dividend increase is likely later this month, effective with the October payment. We estimate a boost of $0.09 a share (5.8%) in the annual disbursement, and project similar dividend growth over the 3- to 5-year period.

This stock has an attractive yield. This is more than one percentage point above the utility average. Total return potential is strong for the 18-month period and respectable for the pull to 2023-2025.

Paul E. Debbas, CFA *September 11, 2020*

(A) Diluted EPS. Excl. nonrecurring gain (losses): '04, (3¢); '15, (33¢); '17, $1.18; '19, (8¢); '20, ($2.95); gains on discont. ops.: '05, 25¢; '06, 20¢. '18 & '19 EPS don't sum due to rounding. Next earnings report due early Nov. (B) Div'ds historically paid in late Jan., Apr., July, & Oct. ■ Div'd reinvestment plan avail. (C) Incl. deferred charges. In '19: $1.53/sh. (D) In mill., adj. for split. (E) Rate base: Net original cost. Rate allowed on com. eq. in OK in '19: 9.5%; in AR in '18: 9.5%; earned on avg. com. eq., '19: 11.0%. Regulatory Climate: Average.

Company's Financial Strength	A
Stock's Price Stability	80
Price Growth Persistence	40
Earnings Predictability	85

OTTER TAIL CORP. NDQ-OTTR

RECENT PRICE 42.00 | P/E RATIO 20.5 (Trailing: 19.8 Median: 22.0) | RELATIVE P/E RATIO 1.04 | DIV'D YLD 3.6% | VALUE LINE

TIMELINESS 3 Lowered 3/1/19
SAFETY 2 Raised 6/17/16
TECHNICAL 3 Raised 5/8/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$37-$74	$56 (30%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(+45%)	*12%*
Low	45	(+5%)	*6%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	88	85	78
to Sell	61	69	84
Hld's(000)	18133	18484	18228

High: 25.4 25.4 23.5 25.3 31.9 32.7 33.4 42.6 48.7 51.9 57.7 56.9
Low: 15.5 18.2 17.5 20.7 25.2 26.5 24.8 25.8 35.7 39.0 45.9 31.0

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

Target Price Range 2023 | 2024 | 2025

Percent shares traded 9 6 3

% TOT. RETURN 5/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-11.5	-1.3
3 yr.	16.6	5.2
5 yr.	86.6	18.7

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
30.45	35.59	37.43	41.50	37.06	29.03	31.08	29.86	23.76	24.63	21.48	20.60	20.42	21.47	23.10	22.90	*20.70*	*22.60*	Revenues per sh	*26.50*
2.88	3.35	3.39	3.55	2.81	2.76	2.60	2.36	2.71	3.02	3.09	3.14	3.44	3.70	3.96	4.11	*4.00*	*4.25*	"Cash Flow" per sh	*5.00*
1.50	1.78	1.69	1.78	1.09	.71	.38	.45	1.05	1.37	1.55	1.56	1.60	1.86	2.06	2.17	*2.05*	*2.20*	Earnings per sh A	*2.50*
1.10	1.12	1.15	1.17	1.19	1.19	1.19	1.19	1.19	1.19	1.21	1.23	1.25	1.28	1.34	1.40	*1.48*	*1.56*	Div'd Decl'd per sh B ■	*1.80*
1.72	2.04	2.35	5.43	7.51	4.95	2.38	2.04	3.20	4.53	4.40	4.23	4.10	3.36	2.66	5.16	*9.30*	*3.40*	Cap'l Spending per sh	*2.75*
14.81	15.80	16.67	17.55	19.14	18.78	17.57	15.83	14.43	14.75	15.39	15.98	17.03	17.62	18.38	19.46	*20.60*	*21.20*	Book Value per sh C	*23.25*
28.98	29.40	29.52	29.85	35.38	35.81	36.00	36.10	36.17	36.27	37.22	37.86	39.35	39.56	39.66	40.16	*41.50*	*41.60*	Common Shs Outst'g D	*41.50*
17.3	15.4	17.3	19.0	30.1	31.2	55.1	47.5	21.7	21.1	18.8	18.2	20.2	22.1	22.2	23.5	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*20.5*
.91	.82	.93	1.01	1.81	2.08	3.51	2.98	1.38	1.19	.99	.92	1.06	1.11	1.20	1.26			Relative P/E Ratio	*1.15*
4.2%	4.1%	3.9%	3.5%	3.6%	5.4%	5.7%	5.6%	5.2%	4.1%	4.1%	4.3%	3.9%	3.1%	2.9%	2.7%			Avg Ann'l Div'd Yield	*3.5%*
1119.1	1077.9	859.2	893.3	799.3	779.8	803.5	849.4	916.4	919.5	*860*	*940*	Revenues ($mill)	*1115*
13.6	16.4	39.0	50.2	56.9	58.6	62.0	73.9	82.3	86.8	*85.0*	*90.0*	Net Profit ($mill)	*110*
--	14.5%	5.2%	21.3%	22.5%	27.0%	24.5%	25.5%	15.0%	16.7%	*18.0%*	*18.0%*	Income Tax Rate	*18.0%*
.6%	3.8%	1.7%	5.6%	3.9%	3.5%	2.2%	2.3%	4.1%	4.9%	*9.0%*	*4.0%*	AFUDC % to Net Profit	*3.0%*
40.2%	44.6%	44.0%	42.1%	46.5%	42.4%	43.0%	41.3%	44.7%	46.9%	*42.0%*	*45.5%*	Long-Term Debt Ratio	*47.0%*
58.4%	54.0%	54.4%	57.9%	53.5%	57.6%	57.0%	58.7%	55.3%	53.1%	*58.0%*	*54.5%*	Common Equity Ratio	*53.0%*
1083.3	1058.9	959.2	924.4	1071.3	1051.0	1175.4	1187.3	1318.9	1471.1	*1480*	*1615*	Total Capital ($mill)	*1850*
1108.7	1077.5	1049.5	1167.0	1268.5	1387.8	1477.2	1539.6	1581.1	1753.8	*2060*	*2115*	Net Plant ($mill)	*2275*
2.7%	3.2%	5.7%	6.8%	6.7%	6.8%	6.5%	7.3%	7.3%	7.0%	*6.5%*	*6.5%*	Return on Total Cap'l	*7.0%*
2.1%	2.8%	7.3%	9.4%	9.9%	9.7%	9.3%	10.6%	11.3%	11.1%	*10.0%*	*10.5%*	Return on Shr. Equity E	*11.0%*
2.0%	2.7%	7.3%	9.3%	9.9%	9.7%	9.3%	10.6%	11.3%	11.1%	*10.0%*	*10.5%*	Return on Com Equity	*11.0%*
NMF	NMF	NMF	1.2%	2.2%	2.0%	2.1%	3.3%	4.0%	4.0%	*3.0%*	*3.0%*	Retained to Com Eq	*3.5%*
NMF	NMF	113%	87%	78%	79%	78%	69%	65%	64%	*72%*	*70%*	All Div'ds to Net Prof	*69%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $744.5 mill. **Due in 5 Yrs** $190.3 mill.
LT Debt $724.3 mill. **LT Interest** $33.8 mill.
(LT interest earned: 4.1x)

Leases, Uncapitalized Annual rentals $22.3 mill.
Pension Assets-12/19 $329.8 mill.
Oblig $384.8 mill.

Pfd Stock None

Common Stock 40,416,779 shs.
as of 4/30/20

MARKET CAP: $1.7 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+1.4	+3.4	-.2
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	6.26	5.97	NA
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Winter (Mw)	917	912	NA
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.5	+.2	+.1
Fixed Charge Cov. (%)	608	409	407

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-4.5%	-.5%	*3.0%*
"Cash Flow"	2.5%	6.0%	*4.0%*
Earnings	5.5%	9.0%	*3.5%*
Dividends	1.5%	2.5%	*5.0%*
Book Value	--	4.5%	*4.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	214.1	212.1	216.5	206.7	849.4
2018	241.2	226.3	227.7	221.2	916.4
2019	246.0	229.2	228.6	215.7	919.5
2020	234.7	*200*	*215*	*210.3*	*860*
2021	*250*	*235*	*235*	*220*	*940*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.49	.42	.45	.50	1.86
2018	.66	.47	.58	.35	2.06
2019	.66	.39	.62	.51	2.17
2020	.60	*.35*	*.60*	*.50*	*2.05*
2021	*.65*	*.40*	*.65*	*.50*	*2.20*

Calendar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.3125	.3125	.3125	.3125	1.25
2017	.32	.32	.32	.32	1.28
2018	.335	.335	.335	.335	1.34
2019	.35	.35	.35	.35	1.40
2020	.37	.37			

BUSINESS: Otter Tail Corporation is the parent of Otter Tail Power Company, which supplies electricity to 132,000 customers in Minnesota (52% of retail electric revenues), North Dakota (38%), and South Dakota (10%). Electric rev. breakdown: residential, 32%; commercial & farms, 36%; industrial, 30%; other, 2%. Generating sources: coal, 45%; wind & hydro, 8%; other, 1%; purchased, 46%. Fuel costs: 14% of revenues. Also has operations in manufacturing and plastics (38% of '18 income). '19 reported deprec. rate (utility): 2.8%. Has 2,300 employees. Chairman: Nathan I. Partain. President & CEO: Charles S. MacFarlane. Inc.: Minnesota. Address: 215 South Cascade St., P.O. Box 496, Fergus Falls, Minnesota 56538-0496. Tel.: 866-410-8780. Internet: www.ottertail.com.

Otter Tail Corporation cut its earnings guidance for 2020. This is due to the effects of the weak economy, which is especially hurting the Manufacturing segment. Many customers of this division's businesses have had to close their facilities temporarily. Backlog is down, too. The division contributed $0.32 a share to the bottom line in 2019, and when management issued its 2020 earnings guidance of $2.22-$2.37 a share in February, it expected profits of $0.31-$0.35 a share from Manufacturing. In May, this was slashed to $0.14-$0.23 a share. As for Otter Tail Power, the economic troubles are hurting many of its industrial customers, and the suspension of shutoffs for nonpayment will cause bad-debt expense to rise. In response to these difficulties, the company is cutting costs. But there is only so much this can do, so Otter Tail reduced its 2020 earnings target to $2.00-$2.25 a share.

We lowered our 2020 and 2021 share-earnings estimates by $0.20 and $0.15, respectively. Demand from Otter Tail's customers isn't likely to bounce back to normal even as the economy continues to recover next year.

Otter Tail Power is building some significant capital projects. A $258 million, 150-megawatt wind project, the largest project in the company's history, is on budget but slightly behind schedule. An in-service date by yearend is still achievable, but there is an increased risk of supply-chain and labor-related delays due to coronavirus. This is significant because the company might lose production tax credits if the project is not completed by yearend. Otter Tail is also building a $158 million, 245-mw gas-fired facility. Completion is expected in late 2020 or early 2021. The company is financing these expenditures with a combination of long-term debt and common equity.

The reduction in earnings guidance didn't affect the stock price much. It came as no surprise to Wall Street that the economic troubles were hurting Otter Tail, especially its Manufacturing division. The price had already dropped significantly, and is down 18% in 2020. The dividend yield is about average for a utility. Total return potential is better for the 18-month span than for the 2023-2025 period.

Paul E. Debbas, CFA *June 12, 2020*

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	65
Earnings Predictability	85

To subscribe call 1-800-VALUELINE

(A) Dil. EPS. Excl. nonrec. gains (loss): '10, (44¢); '11, 26¢; '13, 2¢; gains (losses) from disc. ops.: '04, 8¢; '05, 33¢; '06, 1¢; '11, ($1.11); '12, ($1.22); '13, 2¢; '14, 2¢; '15, 2¢; '16, 1¢; '17, 1¢. '19 EPS don't sum due to rndg. Next egs. rept. due early Aug. (B) Div'ds histor. pd. in early Mar., Jun., Sept., & Dec. ■ Div'd reinv. plan avail. (C) Incl. intang. In '19: $4.67/sh. (D) In mill. (E) Rate all'd on com. eq. in MN in '17: 9.41%; in ND in '18: 9.77%; in SD in '19: 8.75%; earn. avg. com. eq., '19: 11.6%. Reg. Clim.: MN, ND, Avg.; SD, Above Avg.

PINNACLE WEST NYSE-PNW

RECENT PRICE 78.91 | P/E RATIO 16.6 (Trailing: 16.1 Median: 16.0) | RELATIVE P/E RATIO 0.81 | DIV'D YLD 4.1% | VALUE LINE

TIMELINESS 3 Lowered 8/30/19
SAFETY 1 Raised 5/3/13
TECHNICAL 4 Lowered 6/19/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

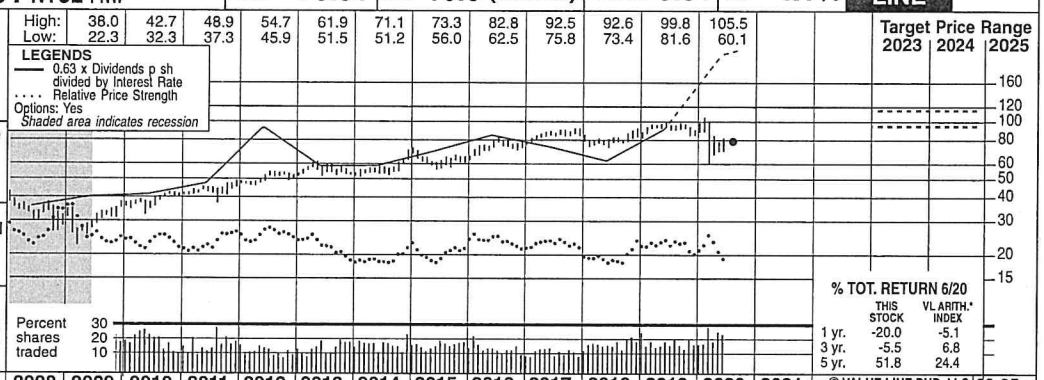
Low-High	Midpoint (% to Mid)
$60-$134	$97 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	115	(+45%)	*13%*
Low	95	(+20%)	*9%*

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	245	221	207
to Sell	225	251	277
Hld's(000)	98235	98387	95773



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
31.59	30.16	34.03	35.07	33.37	32.50	30.01	29.67	30.09	31.35	31.58	31.50	31.42	31.90	32.93	30.87	*27.05*	*28.75*	Revenues per sh	*31.25*
6.93	5.76	9.70	9.29	8.13	8.08	6.85	7.52	7.92	8.15	8.09	9.09	9.39	9.79	11.41	11.13	*11.30*	*12.00*	"Cash Flow" per sh	*14.00*
2.58	2.24	3.17	2.96	2.12	2.26	3.08	2.99	3.50	3.66	3.58	3.92	3.95	4.43	4.54	4.77	*4.75*	*5.05*	Earnings per sh A	*5.75*
1.83	1.93	2.03	2.10	2.10	2.10	2.10	2.10	2.67	2.23	2.33	2.44	2.56	2.70	2.87	3.04	*3.22*	*3.41*	Div'd Decl'd per sh B ■	*4.00*
5.86	6.39	7.59	9.37	9.46	7.64	7.03	8.26	8.24	9.36	8.38	9.84	11.64	12.80	10.73	10.76	*12.10*	*15.20*	Cap'l Spending per sh	*11.75*
32.14	34.57	34.48	35.15	34.16	32.69	33.86	34.98	36.20	38.07	39.50	41.30	43.15	44.80	46.59	48.30	*49.75*	*51.25*	Book Value per sh C	*57.25*
91.79	99.08	99.96	100.49	100.89	101.43	108.77	109.25	109.74	110.18	110.57	110.98	111.34	111.75	112.10	112.44	*112.70*	*113.00*	Common Shs Outst'g D	*118.00*
15.8	19.2	13.7	14.9	16.1	13.7	12.6	14.6	14.3	15.3	15.9	16.0	18.7	19.3	17.8	19.4	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*18.5*
.83	1.02	.74	.79	.97	.91	.80	.92	.91	.86	.84	.81	.98	.97	.96	1.05			Relative P/E Ratio	*1.05*
4.5%	4.5%	4.7%	4.8%	6.2%	6.8%	5.4%	4.6%	5.3%	4.0%	4.1%	3.9%	3.5%	3.2%	3.5%	3.3%			Avg Ann'l Div'd Yield	*3.8%*
3263.6	3241.4	3301.8	3454.6	3491.6	3495.4	3498.7	3565.3	3691.2	3471.2	*3050*	*3250*	Revenues ($mill)	*3700*
330.4	328.2	387.4	406.1	397.6	437.3	442.0	497.8	511.0	538.3	*540*	*570*	Net Profit ($mill)	*680*
31.9%	34.0%	36.2%	34.4%	34.2%	34.3%	33.9%	32.5%	20.2%	20.2%	*14.0%*	*14.0%*	Income Tax Rate	*14.0%*
11.7%	12.8%	9.7%	10.0%	11.6%	11.8%	14.1%	13.9%	15.2%	9.3%	*7.0%*	*12.0%*	AFUDC % to Net Profit	*7.0%*
45.3%	44.1%	44.6%	40.0%	41.0%	43.0%	45.6%	48.9%	47.0%	47.1%	*53.0%*	*53.0%*	Long-Term Debt Ratio	*53.5%*
54.7%	55.9%	55.4%	60.0%	59.0%	57.0%	54.4%	51.1%	53.0%	52.9%	*47.0%*	*47.0%*	Common Equity Ratio	*46.5%*
6729.1	6840.9	7171.9	6990.9	7398.7	8046.3	8825.4	9796.4	9861.1	10263	*11900*	*12375*	Total Capital ($mill)	*14525*
9578.8	9962.3	10396	10889	11194	11809	12714	13445	14030	14523	*15150*	*16100*	Net Plant ($mill)	*17900*
6.5%	6.4%	6.8%	7.1%	6.4%	6.4%	6.0%	6.1%	6.2%	6.3%	*5.5%*	*5.5%*	Return on Total Cap'l	*5.5%*
9.0%	8.6%	9.8%	9.7%	9.1%	9.5%	9.2%	9.9%	9.8%	9.9%	*9.5%*	*10.0%*	Return on Shr. Equity	*10.0%*
9.0%	8.6%	9.8%	9.7%	9.1%	9.5%	9.2%	9.9%	9.8%	9.9%	*9.5%*	*10.0%*	Return on Com Equity E	*10.0%*
3.1%	2.8%	4.1%	4.1%	3.5%	3.9%	3.5%	4.2%	3.9%	3.8%	*3.0%*	*3.0%*	Retained to Com Eq	*3.0%*
66%	68%	58%	58%	62%	59%	62%	58%	60%	61%	*67%*	*68%*	All Div'ds to Net Prof	*70%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $6046.3 mill. **Due in 5 Yrs** $1578.1mill.
LT Debt $4833.3 mill. **LT Interest** $198.7 mill.
Incl. $13.4 mill. Palo Verde sale leaseback lessor notes.
(LT interest earned: 3.2x)
Leases, Uncapitalized Annual rentals $14.7 mill.
Pension Assets-12/19 $3318.4 mill.
Oblig $3613.1 mill.
Pfd Stock None

Common Stock 112,493,458 shs.
as of 5/1/20
MARKET CAP: $8.9 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	--	-.3	-.3
Avg. Indust. Use (MWH)	620	662	714
Avg. Indust. Revs. per KWH (¢)	8.34	8.40	7.88
Capacity at Peak (Mw)	8438	8643	8241
Peak Load, Summer (Mw)	7363	7320	7115
Annual Load Factor (%)	46.3	47.0	47.1
% Change Customers (yr-end)	+1.8	+2.0	+2.0
Fixed Charge Cov. (%)	425	318	286

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-.5%	.5%	*-.5%*
"Cash Flow"	2.5%	6.0%	*4.5%*
Earnings	6.5%	5.0%	*4.0%*
Dividends	3.0%	3.5%	*5.5%*
Book Value	3.0%	4.0%	*3.5%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	677.7	944.6	1183.3	759.7	3565.3
2018	692.7	974.1	1268.0	756.4	3691.2
2019	740.5	869.5	1190.8	670.4	3471.2
2020	661.9	*700*	*1088.1*	*600*	*3050*
2021	*725*	*775*	*1100*	*625*	*3250*

EARNINGS PER SHARE A

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.21	1.49	2.46	.27	4.43
2018	.03	1.48	2.80	.23	4.54
2019	.16	1.28	2.77	.57	4.77
2020	.27	*1.23*	*2.95*	*.30*	*4.75*
2021	*.10*	*1.45*	*3.15*	*.35*	*5.05*

QUARTERLY DIVIDENDS PAID B ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.625	.625	.625	.655	2.53
2017	.655	.655	.655	.695	2.66
2018	.695	.695	.695	.7375	2.82
2019	.7375	.7375	.7375	.7825	3.00
2020	.7825	.7825			

BUSINESS: Pinnacle West Capital Corporation is a holding company for Arizona Public Service Company (APS), which supplies electricity to 1.3 million customers in most of Arizona, except about half of the Phoenix metro area, the Tucson metro area, and Mohave County in northwestern Arizona. Discontinued SunCor real estate subsidiary in '10. Electric revenue breakdown: residential, 51%; commercial, 38%; industrial, 5%; other, 6%. Generating sources: nuclear, 28%; gas & other, 28%; coal, 24%; purchased, 20%. Fuel costs: 30% of revenues. '19 reported deprec. rate: 2.8%. Has 6,200 employees. Chairman, President & CEO: Jeffrey B. Guldner. Inc.: AZ. Address: 400 North Fifth St., P.O. Box 53999, Phoenix, AZ 85072-3999. Tel.: 602-250-1000. Internet: www.pinnaclewest.com.

The rate case of Pinnacle West's utility subsidiary probably won't be resolved until 2021. Last year, Arizona Public Service requested an increase of $184 million (5.6%), based on a 10.15% return on equity and a 54.7% common-equity ratio. Among other things, the utility wants to place a $390 million environmental upgrade to a coal-fired plant in rates and get some regulatory mechanisms that would defer for future recovery increases in certain expenses, such as property taxes. When APS filed the application in the fall of 2019, the hope was to get an order as early as December 1, 2020. However, the proceedings have been delayed long enough so that the company can't estimate when in 2021 the decision is likely to come. We were already not expecting any rate relief in our 2020 earnings estimate, but the delay has added uncertainty to our 2021 estimate.

Management reiterated its 2020 earnings guidance of $4.75-$4.95 a share upon reporting first-quarter results in May. This is despite the company's disclosure that the reduction in kilowatt-hour sales stemming from the weak economy hurt the bottom line by $0.10 a share, compared with the original expectation, from March 13th through April 30th. We note that Pinnacle West posted a higher-than-usual March-period profit thanks to tax credits. Thus, we did not cut our 2020 estimate of $4.75 a share. However . . .

We trimmed our 2021 estimate by $0.10 a share. We are concerned that any rate relief the utility receives from the pending rate application will come later than we had expected. Our revised figure of $5.05 a share would still produce a solid 6% increase over our estimated 2020 tally.

Finances are solid. The company's earned ROE has been consistent for the past several years. The fixed-charge coverage and common-equity ratio are healthy. Pinnacle West merits a Financial Strength rating of A+.

This stock has appeal for conservative accounts stressing income. The Safety rank is 1 (Highest). The dividend yield is above average, even for a utility. Total return potential is attractive for the 18-month period and respectable (on a risk-adjusted basis) for the 3- to 5-year span.

Paul E. Debbas, CFA *July 24, 2020*

Company's Financial Strength	A+
Stock's Price Stability	90
Price Growth Persistence	70
Earnings Predictability	95

To subscribe call 1-800-VALUELINE

(A) Diluted EPS. Excl. nonrec. gain (loss): '09, ($1.45); '17, 8¢; gains (losses) from discont. ops.: '05, (36¢); '06, 10¢; '08, 28¢; '09, (13¢); '10, 18¢; '11, 10¢; '12, (5¢). '19 EPS don't sum due to rounding. Next earnings report due early Aug. (B) Div'ds historically paid in early Mar., June, Sept., & Dec. There were 5 declarations in '12. ■ Div'd reinvestment plan avail. (C) Incl. deferred charges. In '19: $14.00/sh. (D) In mill. (E) Rate base: Fair value. Rate allowed on com. eq. in '17: 10.0%; earned on avg. com. eq., '19: 10.1%. Regulatory Climate: Average.

PNM RESOURCES NYSE-PNM

RECENT PRICE 38.86 | P/E RATIO 20.5 (Trailing: 20.9 Median: 18.0) | RELATIVE P/E RATIO 1.00 | DIV'D YLD 3.2% | VALUE LINE

TIMELINESS 3 Lowered 4/24/20
SAFETY 3 Lowered 5/9/08
TECHNICAL 3 Raised 7/24/20
BETA .90 (1.00 = Market)

18-Month Target Price Range

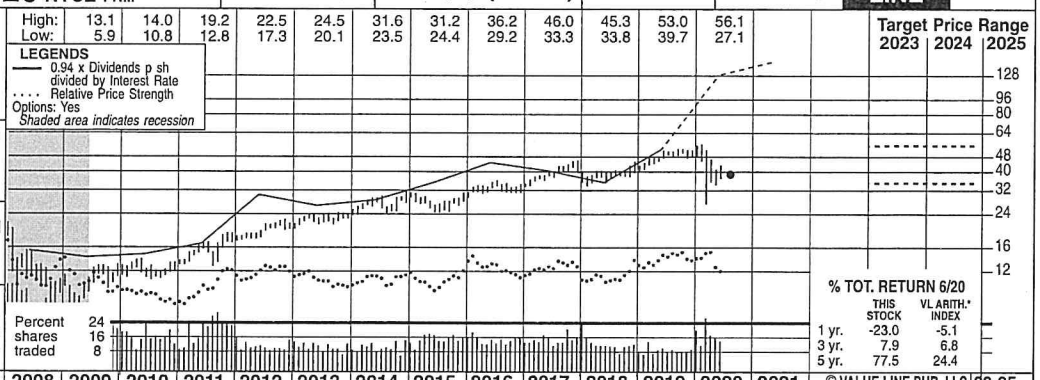
Low-High	Midpoint (% to Mid)
$29-$75	$52 (35%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+40%)	12%
Low	35	(-10%)	1%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	116	135	110
to Sell	130	116	144
Hld's(000)	72521	73262	79315



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
26.54	30.19	32.25	24.92	22.65	19.01	19.31	21.35	16.85	17.42	18.03	18.07	17.11	18.14	18.04	18.30	*16.30*	*16.90*	Revenues per sh	*18.00*
3.14	3.56	3.57	2.54	1.76	2.32	2.67	3.18	3.39	3.52	4.09	4.28	4.51	5.30	5.13	6.07	*5.45*	*6.15*	"Cash Flow" per sh	*7.25*
1.43	1.56	1.72	.76	.11	.58	.87	1.08	1.31	1.41	1.45	1.48	1.46	1.92	1.66	2.28	*1.90*	*2.25*	Earnings per sh A	*2.75*
.63	.79	.86	.91	.61	.50	.50	.50	.58	.68	.76	.82	.90	.99	1.09	1.18	*1.24*	*1.30*	Div'd Decl'd per sh B ■ †	*1.50*
2.25	3.07	4.04	5.94	3.99	3.32	3.25	4.10	3.88	4.37	5.78	7.01	7.53	6.28	6.29	7.74	*9.95*	*11.55*	Cap'l Spending per sh	*6.00*
18.19	18.70	22.09	22.03	18.89	18.90	17.60	19.62	20.05	20.87	22.39	20.78	21.04	21.28	21.20	21.08	*23.50*	*24.45*	Book Value per sh C	*29.25*
60.46	68.79	76.65	76.81	86.53	86.67	86.67	79.65	79.65	79.65	79.65	79.65	79.65	79.65	79.65	79.65	*85.83*	*85.83*	Common Shs Outst'g D	*92.00*
15.0	17.4	15.6	35.6	NMF	18.1	14.0	14.5	15.0	16.1	18.7	18.7	22.4	20.4	23.4	21.1	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*16.5*
.79	.93	.84	1.89	NMF	1.21	.89	.91	.95	.90	.98	.94	1.18	1.03	1.26	1.14			Relative P/E Ratio	*.90*
2.9%	2.9%	3.2%	3.4%	4.9%	4.8%	4.1%	3.2%	3.0%	3.0%	2.8%	3.0%	2.8%	2.5%	2.8%	2.5%			Avg Ann'l Div'd Yield	*3.3%*
1673.5	1700.6	1342.4	1387.9	1435.9	1439.1	1363.0	1445.0	1436.6	1457.6	*1400*	*1450*	Revenues ($mill)	*1650*
80.5	97.1	106.1	114.0	116.8	118.8	117.4	154.4	133.4	182.8	*170*	*210*	Net Profit ($mill)	*265*
32.6%	38.8%	31.4%	31.6%	34.8%	36.9%	32.4%	33.0%	13.8%	9.4%	*23.0%*	*23.0%*	Income Tax Rate	*23.0%*
7.1%	8.7%	7.1%	1.3%	10.7%	17.0%	11.0%	11.9%	14.5%	9.2%	*12.0%*	*10.0%*	AFUDC % to Net Profit	*7.0%*
50.4%	51.5%	50.9%	50.0%	47.8%	54.1%	55.7%	56.1%	61.1%	59.8%	*48.5%*	*54.0%*	Long-Term Debt Ratio	*50.5%*
49.2%	48.1%	48.7%	49.7%	51.9%	45.5%	44.0%	43.6%	38.6%	39.9%	*51.0%*	*46.0%*	Common Equity Ratio	*49.0%*
3100.3	3245.6	3277.9	3344.0	3437.1	3633.3	3806.8	3887.5	4370.0	4207.7	*3950*	*4575*	Total Capital ($mill)	*5475*
3444.4	3627.1	3746.5	3933.9	4270.0	4535.4	4904.7	4980.2	5234.6	5466.0	*6005*	*6660*	Net Plant ($mill)	*7500*
4.2%	4.5%	5.1%	5.2%	5.1%	4.8%	4.7%	5.3%	4.3%	5.8%	*5.5%*	*5.5%*	Return on Total Cap'l	*6.0%*
5.2%	6.2%	6.6%	6.8%	6.5%	7.1%	7.0%	9.0%	7.8%	10.8%	*7.5%*	*9.0%*	Return on Shr. Equity	*9.5%*
5.2%	6.2%	6.6%	6.8%	6.5%	7.1%	7.0%	9.1%	7.9%	10.9%	*7.5%*	*9.0%*	Return on Com Equity E	*9.5%*
2.2%	3.3%	3.8%	3.8%	3.2%	3.3%	2.8%	4.5%	2.9%	5.4%	*2.5%*	*4.0%*	Retained to Com Eq	*4.5%*
57%	47%	43%	45%	51%	54%	61%	51%	64%	51%	*67%*	*58%*	All Div'ds to Net Prof	*54%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $3308.9 mill. **Due in 5 Yrs** $1778.9 mill.
LT Debt $2468.7 mill. **LT Interest** $112.3 mill.
(LT interest earned: 2.7x)
Leases, Uncapitalized Annual rentals $30.7 mill.
Pension Assets-12/19 $590.8 mill.
Oblig $671.3 mill.
Pfd Stock $11.5 mill. **Pfd Div'd** $.5 mill.
115,293 shs. 4.58%, $100 par without mandatory redemption. Sinking fund began 2/1/84.

Common Stock 79,653,624 shs.
as of 5/1/20
MARKET CAP: $3.1 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+.3	+7.3	+5.0
Avg. Indust. Use (MWH)	NA	NA	NA
Avg. Indust. Revs. per KWH (¢)	NA	NA	NA
Capacity at Peak (Mw)	2580	2661	2761
Peak Load, Summer (Mw)	1843	1885	1937
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.8	+1.1	NA
Fixed Charge Cov. (%)	243	218	228

ANNUAL RATES

of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-2.0%	1.0%	*Nil*
"Cash Flow"	9.5%	8.5%	*4.5%*
Earnings	15.0%	7.0%	*6.0%*
Dividends	5.0%	10.0%	*5.5%*
Book Value	.5%	--	*5.5%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	330.2	362.3	419.9	332.6	1445.0
2018	317.9	352.3	422.7	343.7	1436.6
2019	349.7	330.2	433.6	344.1	1457.6
2020	333.6	*320*	*415*	*331.4*	*1400*
2021	*345*	*330*	*430*	*345*	*1450*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.29	.47	.92	.25	1.92
2018	.19	.48	1.09	d.10	1.66
2019	.23	.36	1.29	.40	2.28
2020	d.19	*.52*	*1.24*	*.33*	*1.90*
2021	*.18*	*.47*	*1.30*	*.30*	*2.25*

Calendar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.22	.22	.22	.22	.88
2017	.2425	.2425	.2425	.2425	.97
2018	.265	.265	.265	.265	1.06
2019	.29	.29	.29	.29	1.16
2020	.3075	.3075			

BUSINESS: PNM Resources, Inc. is a holding company with two regulated electric utilities. Public Service Company of New Mexico (PNM) serves 532,000 customers in north central New Mexico, incl. Albuquerque and Santa Fe. Texas-New Mexico Power Company (TNMP) transmits and distributes power to 257,000 customers in Texas. Electric revenue breakdown: residential, 40%; commercial, 35%; industrial, 6%; other, 19%. Generating sources not available. Fuel costs: 28% of revenues. '19 reported deprec. rates: 2.5%-7.9%. Has 1,700 employees. Chairman, President & CEO: Patricia K. Collawn. Incorporated: New Mexico. Address: 414 Silver Ave. SW, Albuquerque, New Mexico 87102-3289. Telephone: 505-241-2700. Internet: www.pnmresources.com.

PNM Resources' utility subsidiary in New Mexico delayed the filing of a general rate case, but there are still some regulatory matters pending. Public Service of New Mexico had planned to file an application in the second quarter, but decided not to do so due to the state of the economy. PNM did request a regulatory mechanism that would decouple revenues and volume for residential and small commercial customers. Currently, the fixed charges billed to these users aren't high enough to reflect the fixed costs of serving them. The company expects an order by yearend. By October 1, the New Mexico commission is expected to rule on PNM's plan to replace the capacity of a coal-fired facility that is scheduled for a shutdown (well before the end of its useful life). The utility would build 280 megawatts of gas-fired capacity and 70 mw of battery storage, a total investment of $278 million. The regulators have already approved the issuance of up to $361 million of securitized bonds so that PNM can recover the cost of the plant.

We raised our 2020 earnings estimate by $0.10 a share. Although kilowatt-hour sales declines stemming from the recession are hurting the company, PNM benefited from hotter-than-normal weather in the second quarter. The company has also cut certain expenses, such as executive travel. We are sticking with our 2021 estimate of $2.25 a share.

The company's TNMP subsidiary in Texas received some rate relief. Each year, TNMP gets revenues to recover transmission and distribution expenditures. In March, the utility was granted $7.8 million for transmission costs, and another such filing was expected this month. For distribution, TNMP reached a settlement calling for a $14.3 million increase, effective September 1st.

The share count will increase, probably in late 2020. In early 2020, PNM Resources raised $290 million through a forward sale of 6.18 million common shares.

Although the stock price has declined 23% this year, the dividend yield is still below the utility mean. The equity offers good total return potential for the next 18 months, but not for the period to 2023-2025.

Paul E. Debbas, CFA *July 24, 2020*

Company's Financial Strength	B+
Stock's Price Stability	80
Price Growth Persistence	90
Earnings Predictability	70

(A) Dil. EPS. Excl. nonrec. gain (losses): '08, ($3.77); '10, ($1.36); '11, 88¢; '13, (16¢); '15, ($1.28); '17, (92¢); '18, (59¢); '19, ($1.31). Excl. gains from disc. ops.: '08, 42¢; '09, 78¢. '17 EPS don't sum due to rounding. Next egs. report due late July. (B) Div'ds paid mid-Feb., May, Aug., & Nov. ■ Div'd reinv. plan avail. (C) Incl. intang. In '19: $11.81/sh. (D) In mill., adj. for split. (E) Rate base: net orig. cost. Rate all'd on com. eq. in NM in '18: 9.575%; in TX in '11: 10.125%; earned on avg. com. eq., '19: 10.2%. Regulatory Climate: NM, Below Avg.; TX, Avg.

PORTLAND GENERAL NYSE-POR

RECENT PRICE 42.31 | P/E RATIO 18.4 (Trailing: 17.1 Median: 17.0) | RELATIVE P/E RATIO 0.89 | DIV'D YLD 3.8% | VALUE LINE

TIMELINESS 3 Lowered 6/12/20
SAFETY 2 Raised 5/4/12
TECHNICAL 3 Lowered 6/12/20
BETA .85 (1.00 = Market)

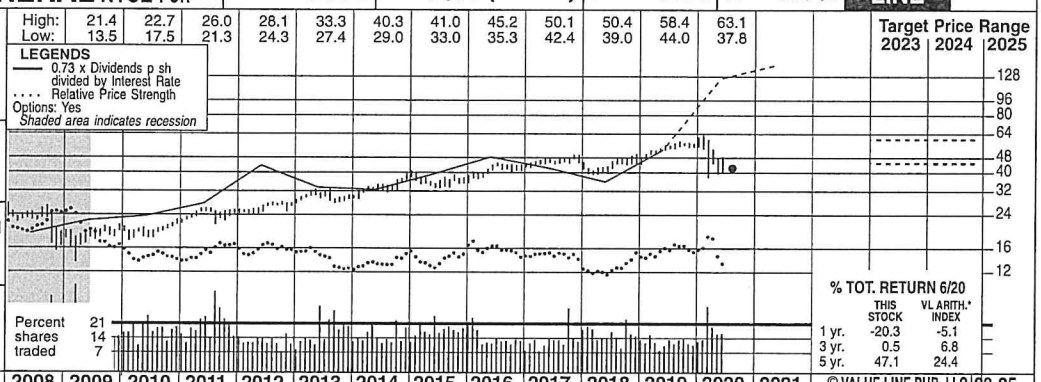
18-Month Target Price Range
Low-High Midpoint (% to Mid)
$34-$78 $56 (30%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(+40%)	12%
Low	45	(+5%)	6%

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	151	160	132
to Sell	157	159	197
Hld's(000)	84892	86645	86455



% TOT. RETURN 6/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-20.3	-5.1
3 yr.	0.5	6.8
5 yr.	47.1	24.4

2004	2005F	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
--	23.14	24.32	27.87	27.89	23.99	23.67	24.06	23.89	23.18	24.29	21.38	21.62	22.54	22.30	23.75	*23.45*	*24.55*	Revenues per sh	*27.25*
--	4.75	4.64	5.21	4.71	4.07	4.82	4.96	5.15	4.93	6.08	5.37	5.78	6.16	6.65	6.97	*7.05*	*7.55*	"Cash Flow" per sh	*9.00*
--	1.02	1.14	2.33	1.39	1.31	1.66	1.95	1.87	1.77	2.18	2.04	2.16	2.29	2.37	2.39	*2.30*	*2.55*	Earnings per sh A	*3.00*
--	--	.68	.93	.97	1.01	1.04	1.06	1.08	1.10	1.12	1.18	1.26	1.34	1.43	1.52	*1.54*	*1.62*	Div'd Decl'd per sh B ■ †	*1.95*
--	4.08	5.94	7.28	6.12	9.25	5.97	3.98	4.01	8.40	12.87	6.73	6.57	5.77	6.67	6.78	*8.50*	*6.45*	Cap'l Spending per sh	*6.00*
--	19.15	19.58	21.05	21.64	20.50	21.14	22.07	22.87	23.30	24.43	25.43	26.35	27.11	28.07	28.99	*29.70*	*30.65*	Book Value per sh C	*33.75*
--	62.50	62.50	62.53	62.58	75.21	75.32	75.36	75.56	78.09	78.23	88.79	88.95	89.11	89.27	89.39	*89.55*	*89.65*	Common Shs Outst'g D	*90.00*
--	--	23.4	11.9	16.3	14.4	12.0	12.4	14.0	16.9	15.3	17.7	19.1	20.0	18.4	22.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.0*
--	--	1.26	.63	.98	.96	.76	.78	.89	.95	.81	.89	1.00	1.01	.99	1.21			Relative P/E Ratio	*.95*
--	--	2.5%	3.3%	4.3%	5.4%	5.2%	4.4%	4.1%	3.7%	3.3%	3.3%	3.1%	2.9%	3.3%	2.8%			Avg Ann'l Div'd Yield	*3.8%*
1783.0	1813.0	1805.0	1810.0	1900.0	1898.0	1923.0	2009.0	1991.0	2123.0	*2100*	*2200*	Revenues ($mill)	*2450*
125.0	147.0	141.0	137.0	175.0	172.0	193.0	204.0	212.0	214.0	*210*	*230*	Net Profit ($mill)	*275*
30.5%	28.3%	31.4%	23.2%	26.0%	20.7%	20.6%	25.3%	7.4%	11.2%	*11.0%*	*11.0%*	Income Tax Rate	*11.0%*
17.6%	5.4%	7.1%	14.6%	33.7%	19.8%	16.6%	8.8%	8.0%	7.0%	*10.0%*	*7.0%*	AFUDC % to Net Profit	*5.0%*
53.0%	49.6%	47.1%	51.3%	52.7%	47.8%	48.4%	50.1%	46.5%	51.3%	*52.5%*	*53.5%*	Long-Term Debt Ratio	*52.5%*
47.0%	50.4%	52.9%	48.7%	47.3%	52.2%	51.6%	49.9%	53.5%	48.7%	*47.5%*	*46.5%*	Common Equity Ratio	*47.5%*
3390.0	3298.0	3264.0	3735.0	4037.0	4329.0	4544.0	4842.0	4684.0	5323.0	*5615*	*5905*	Total Capital ($mill)	*6400*
4133.0	4285.0	4392.0	4880.0	5679.0	6012.0	6434.0	6741.0	6887.0	7161.0	*7495*	*7630*	Net Plant ($mill)	*7725*
5.4%	6.2%	5.9%	5.1%	5.8%	5.4%	5.6%	5.5%	5.8%	5.1%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
7.9%	8.8%	8.2%	7.5%	9.2%	7.6%	8.2%	8.4%	8.5%	8.3%	*8.0%*	*8.5%*	Return on Shr. Equity	*9.0%*
7.9%	8.8%	8.2%	7.5%	9.2%	7.6%	8.2%	8.4%	8.5%	8.3%	*8.0%*	*8.5%*	Return on Com Equity E	*9.0%*
3.0%	4.1%	3.5%	2.9%	4.6%	3.3%	3.5%	3.6%	3.5%	3.1%	*2.5%*	*3.0%*	Retained to Com Eq	*3.0%*
62%	54%	57%	61%	50%	56%	57%	58%	59%	63%	*66%*	*63%*	All Div'ds to Net Prof	*64%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $2654 mill. **Due in 5 Yrs** $336 mill.
LT Debt $2478 mill. **LT Interest** $124 mill.
Incl. $135 mill. capitalized leases.
(LT interest earned: 3.0x)
Leases, Uncapitalized Annual rentals $8 mill.
Pension Assets-12/19 $695 mill.
Oblig $905 mill.
Pfd Stock None

Common Stock 89,488,773 shs.
as of 4/20/20

MARKET CAP: $3.8 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+3.9	-2.5	+1.2
Avg. Indust. Use (MWH)	16041	16207	17827
Avg. Indust. Revs. per KWH (¢)	4.94	4.79	4.75
Capacity at Peak (Mw)	4743	4859	NA
Peak Load, Summer (Mw)	3976	3816	3765
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+1.3	+1.1	+1.1
Fixed Charge Cov. (%)	298	266	265

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-1.5%	-1.0%	*3.0%*
"Cash Flow"	3.5%	4.0%	*5.5%*
Earnings	3.5%	4.0%	*4.0%*
Dividends	4.0%	5.5%	*5.5%*
Book Value	3.0%	3.5%	*3.0%*

Calendar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	530	449	515	515	2009
2018	493	449	525	524	1991
2019	573	460	542	548	2123
2020	573	*422*	*550*	*555*	*2100*
2021	*580*	*490*	*580*	*575*	*2200*

Calendar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.82	.36	.44	.67	2.29
2018	.72	.51	.59	.55	2.37
2019	.82	.28	.61	.68	2.39
2020	.91	*.29*	*.40*	*.70*	*2.30*
2021	*.85*	*.40*	*.55*	*.75*	*2.55*

Calendar	QUARTERLY DIVIDENDS PAID B ■ † Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.30	.30	.32	.32	1.24
2017	.32	.32	.34	.34	1.32
2018	.34	.34	.3625	.3625	1.41
2019	.3625	.3625	.385	.385	1.50
2020	.385	.385	.385		

BUSINESS: Portland General Electric Company (PGE) provides electricity to 899,000 customers in 52 cities in a 4,000-square-mile area of Oregon, including Portland and Salem. The company is in the process of decommissioning the Trojan nuclear plant, which it closed in 1993. Electric revenue breakdown: residential, 47%; commercial, 30%; industrial, 9%; other, 14%. Generating sources: gas, 36%; coal, 19%; wind, 8%; hydro, 6%; purchased, 31%. Fuel costs: 29% of revenues. '19 reported depreciation rate: 3.6%. Has 2,900 employees. Chairman: Jack E. Davis. President and Chief Executive Officer: Maria M. Pope. Incorporated: Oregon. Address: 121 S.W. Salmon Street, Portland, Oregon 97204. Telephone: 503-464-8000. Internet: www.portlandgeneral.com.

Portland General Electric slashed its 2020 earnings guidance upon issuing first-quarter results in late April. Not surprisingly, this was due to the effects of the weak economy and the costs of dealing with the coronavirus problem. Although PGE operates under a regulatory mechanism that decouples revenues and volume, this only partially protects the utility from the effects of the slump in kilowatt-hour sales. What's more, unlike many states, Oregon has not issued an accounting order that allows the company to defer for future recovery coronavirus-related expenses. (PGE did not report how much these costs were in the March quarter, nor did management state its expectation for the full year.) All told, the company lowered its 2020 targeted range for share profits from $2.50-$2.65 to $2.20-$2.50. The stock price has declined 24% this year, which is a larger falloff than for most utility issues. PGE's announcement prompted us to reduce our estimate from $2.50 to $2.30. Because any growth in 2021 will come off a lower base, we trimmed our expectation by $0.10, to $2.55.

The board of directors did not increase the dividend in the second quarter. This is noteworthy because this is when the board usually raises the disbursement. The directors will review the dividend every quarter, but we think they will be cautious until an economic recovery is clearly under way. We don't know when this will occur, but are estimating a hike in the first quarter of 2021. PGE's target for the payout ratio is 60%-70%.

The company cut its capital budget for 2020 and 2021. The reductions were $145 million for this year and $30 million for next year. Some of this spending will be deferred until 2022 or later. Two key projects were still on track as of late April: a $200 million integrated operations center and a $160 million investment for a one-third stake in a wind project. PGE won't need to issue equity to finance its spending, but has already issued debt. More issuances are likely by yearend.

This stock has an average dividend yield, by utility standards. Total return potential is attractive for the 18-month span, but doesn't stand out for the 3- to 5-year period.

Paul E. Debbas, CFA *July 24, 2020*

(A) Diluted EPS. Excl. nonrecurring losses: '13, 42¢; '17, 19¢. Next earnings report due late July. (B) Div'ds paid mid-Jan., Apr., July, and Oct. ■ Div'd reinvestment plan avail. † Shareholder investment plan avail. (C) Incl. deferred charges. In '19: $483 mill., $5.40/sh. (D) In mill. (E) Rate base: Net orig. cost. Rate allowed on com. eq. in '19: 9.5%; earned on avg. com. eq., '19: 8.4%. Regulatory Climate: Average. (F) '05 per-share data are pro forma, based on shs. outstanding when stock began trading in '06.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	75
Earnings Predictability	90

XCEL ENERGY NDQ-XEL

RECENT PRICE 64.17 | P/E RATIO 23.3 (Trailing: 24.8 Median: 16.0) | RELATIVE P/E RATIO 1.13 | DIV'D YLD 2.8% | VALUE LINE

TIMELINESS 3 Lowered 9/20/19
SAFETY 1 Raised 5/1/15
TECHNICAL 1 Raised 7/24/20
BETA .75 (1.00 = Market)

18-Month Target Price Range

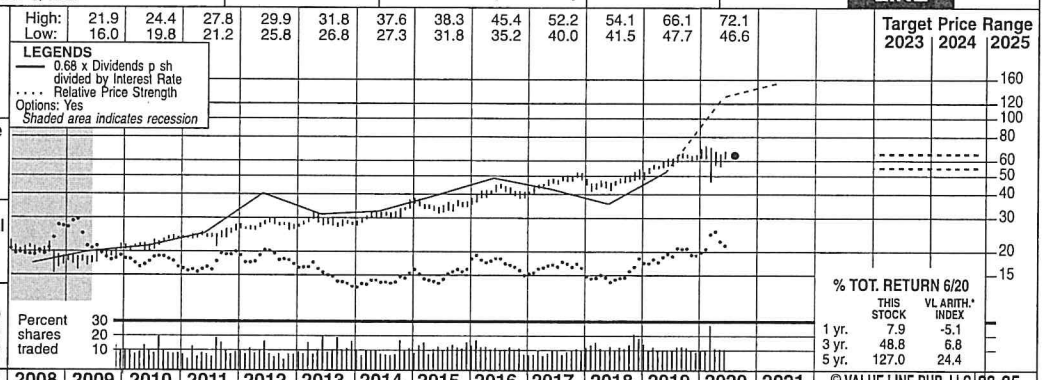
Low-High	Midpoint (% to Mid)
$47-$99	$73 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(Nil)	4%
Low	55	(-15%)	Nil

Institutional Decisions

	3Q2019	4Q2019	1Q2020
to Buy	347	395	365
to Sell	333	320	378
Hld's(000)	407757	409339	407479



2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
20.84	23.86	24.16	23.40	24.69	21.08	21.38	21.90	20.76	21.92	23.11	21.72	21.90	22.46	22.44	21.98	*19.10*	*20.30*	Revenues per sh	*22.75*
3.27	3.28	3.61	3.45	3.50	3.48	3.51	3.79	4.00	4.10	4.28	4.56	5.04	5.47	5.92	6.25	*6.50*	*7.05*	"Cash Flow" per sh	*8.50*
1.27	1.20	1.35	1.35	1.46	1.49	1.56	1.72	1.85	1.91	2.03	2.10	2.21	2.30	2.47	2.64	*2.75*	*2.90*	Earnings per sh [A]	*3.50*
.81	.85	.88	.91	.94	.97	1.00	1.03	1.07	1.11	1.20	1.28	1.36	1.44	1.52	1.62	*1.72*	*1.82*	Div'd Decl'd per sh [B] ■	*2.15*
3.19	3.25	4.00	4.89	4.66	3.91	4.60	4.53	5.27	6.82	6.33	7.26	6.42	6.54	7.70	8.05	*6.70*	*7.05*	Cap'l Spending per sh	*8.50*
12.99	13.37	14.28	14.70	15.35	15.92	16.76	17.44	18.19	19.21	20.20	20.89	21.73	22.56	23.78	25.24	*27.20*	*28.45*	Book Value per sh [C]	*32.25*
400.46	403.39	407.30	428.78	453.79	457.51	482.33	486.49	487.96	497.97	505.73	507.54	507.22	507.76	514.04	524.54	*539.00*	*542.00*	Common Shs Outst'g [D]	*548.00*
13.6	15.4	14.8	16.7	13.7	12.7	14.1	14.2	14.8	15.0	15.4	16.5	18.5	20.2	18.9	22.3	*Bold figures are Value Line estimates*		Avg Ann'l P/E Ratio	*17.0*
.72	.82	.80	.89	.82	.85	.90	.89	.94	.84	.81	.83	.97	1.02	1.02	1.21			Relative P/E Ratio	*.95*
4.7%	4.6%	4.4%	4.0%	4.7%	5.1%	4.5%	4.2%	3.9%	3.9%	3.8%	3.7%	3.3%	3.1%	3.3%	2.7%			Avg Ann'l Div'd Yield	*3.6%*
10311	10655	10128	10915	11686	11024	11107	11404	11537	11529	*10300*	*11000*	Revenues ($mill)	*12500*
727.0	841.4	905.2	948.2	1021.3	1063.6	1123.4	1171.0	1261.0	1372.0	*1445*	*1570*	Net Profit ($mill)	*1865*
37.5%	35.8%	33.2%	33.8%	33.9%	35.8%	34.1%	30.7%	12.6%	8.5%	*Nil*	*Nil*	Income Tax Rate	*Nil*
11.7%	9.4%	10.8%	13.4%	12.5%	7.7%	7.8%	9.4%	12.4%	8.3%	*10.0%*	*8.0%*	AFUDC % to Net Profit	*8.0%*
53.1%	51.1%	53.3%	53.3%	53.0%	54.1%	56.3%	55.9%	56.4%	56.8%	*57.0%*	*57.0%*	Long-Term Debt Ratio	*57.5%*
46.3%	48.9%	46.7%	46.7%	47.0%	45.9%	43.7%	44.1%	43.6%	43.2%	*43.0%*	*43.0%*	Common Equity Ratio	*42.5%*
17452	17331	19018	20477	21714	23092	25216	25975	28025	30646	*34175*	*35950*	Total Capital ($mill)	*41700*
20663	22353	23809	26122	28757	31206	32842	34329	36944	39483	*41025*	*42600*	Net Plant ($mill)	*48300*
5.7%	6.5%	6.1%	6.0%	6.0%	5.8%	5.7%	5.8%	5.7%	5.6%	*5.5%*	*5.5%*	Return on Total Cap'l	*5.5%*
8.9%	9.9%	10.2%	9.9%	10.0%	10.0%	10.2%	10.2%	10.3%	10.4%	*10.0%*	*10.0%*	Return on Shr. Equity	*10.5%*
8.9%	9.9%	10.2%	9.9%	10.0%	10.0%	10.2%	10.2%	10.3%	10.4%	*10.0%*	*10.0%*	Return on Com Equity [E]	*10.5%*
3.6%	4.3%	4.7%	4.5%	4.5%	4.3%	4.0%	3.9%	4.3%	4.4%	*3.5%*	*4.0%*	Retained to Com Eq	*4.0%*
59%	56%	54%	54%	55%	57%	61%	62%	58%	58%	*63%*	*63%*	All Div'ds to Net Prof	*63%*

CAPITAL STRUCTURE as of 3/31/20
Total Debt $19877 mill. **Due in 5 Yrs** $4990 mill.
LT Debt $17010 mill. **LT Interest** $721 mill.
Incl. $77 mill. capitalized leases.
(LT interest earned: 2.9x)

Leases, Uncapitalized Annual rentals $262 mill.
Pension Assets-12/19 $3184 mill.
Oblig $3701 mill.

Pfd Stock None

Common Stock 525,170,820 shs.
as of 4/30/20
MARKET CAP: $34 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	-.7	+3.2	-1.2
Large C & I Use (MWH)	22642	23004	NA
Large C & I Revs. per KWH (¢)	6.36	5.91	5.96
Capacity at Peak (Mw)	NA	NA	NA
Peak Load, Summer (Mw)	19591	20293	20146
Annual Load Factor (%)	NA	NA	NA
% Change Customers (yr-end)	+.9	+1.1	+1.0
Fixed Charge Cov. (%)	330	281	272

ANNUAL RATES of change (per sh)

	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	-.5%	.5%	*.5%*
"Cash Flow"	5.5%	7.5%	*6.5%*
Earnings	5.5%	5.0%	*6.0%*
Dividends	5.0%	6.5%	*6.0%*
Book Value	4.5%	4.5%	*5.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	2946	2645	3017	2796	11404
2018	2951	2658	3048	2880	11537
2019	3141	2577	3013	2798	11529
2020	2811	*2189*	*2700*	*2600*	*10300*
2021	*3000*	*2400*	*2850*	*2750*	*11000*

EARNINGS PER SHARE [A]

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.47	.45	.97	.42	2.30
2018	.57	.52	.96	.42	2.47
2019	.61	.46	1.01	.56	2.64
2020	.56	*.54*	*1.10*	*.55*	*2.75*
2021	*.65*	*.55*	*1.15*	*.55*	*2.90*

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.32	.34	.34	.34	1.34
2017	.34	.36	.36	.36	1.42
2018	.36	.38	.38	.38	1.50
2019	.38	.405	.405	.405	1.60
2020	.405	.43	.43		

BUSINESS: Xcel Energy Inc. is the parent of Northern States Power, which supplies electricity to Minnesota, Wisconsin, North Dakota, South Dakota & Michigan & gas to Minnesota, Wisconsin, North Dakota & Michigan; P.S. of Colorado, which supplies electricity & gas to Colorado; & Southwestern Public Service, which supplies electricity to Texas & New Mexico. Customers: 3.7 mill. elec., 2.1 mill. gas. Elec. rev. breakdown: res'l, 31%; sm. comm'l & ind'l, 36%; lg. comm'l & ind'l, 18%; other, 15%. Generating sources not avail. Fuel costs: 39% of revs. '19 reported depr. rate: 3.3%. Has 11,300 empls. Chairman & CEO: Ben Fowke. President & COO: Bob Frenzel. Inc.: MN. Address: 414 Nicollet Mall, Minneapolis, MN 55401. Tel.: 612-330-5500. Internet: www.xcelenergy.com.

Xcel Energy's utilities have reached settlements on pending rate cases. The New Mexico commission approved a settlement calling for a $31 million electric increase for Southwestern Public Service, based on a 9.45% return on equity and a 54.8% common-equity ratio. New tariffs took effect on May 28th. In Texas, SPS reached a "black box" agreement calling for an $88 million hike without specifying an allowed ROE or common-equity ratio. A ruling from the state regulators is expected in the current quarter, with the increase retroactive to September of 2019. Public Service of Colorado, the state commission's staff, and intervenors have reached a settlement calling for a gas rate increase of $76.9 million, based on a 9.2% ROE and a 55.6% common-equity ratio. If the regulators approve the agreement, new tariffs will be implemented on April 1, 2021, retroactive to November of 2020.

Xcel believes it can reduce expenses enough to offset the effects of the recession on kilowatt-hour sales. Cost cuts should enable operating and maintenance expenses to decline 4%-5% in 2020. Accordingly, management did not adjust its earnings guidance of $2.73-$2.83 a share for this year. Our estimate of $2.75 a share is unchanged. We have also stuck with our 2021 estimate of $2.90 a share. This would produce profit growth of 5%, which is within the company's annual goal of 5%-7%.

At least one rate case is upcoming. P.S. of Colorado plans to put forth an electric application later this summer. Northern States Power is considering filing for new electric and gas tariffs in Minnesota in November, but might well postpone its case if it can reach an agreement with the commission that compensates the utility for the decline in volume.

This high-quality stock has been one of the top performers in the electric utility industry in 2020. While the prices of most electric equities have fallen more than 10%, Xcel is almost unchanged from yearend 2019, thanks in part to its maintaining profit guidance. The dividend yield is a percentage point below the industry average, and with the recent quotation near the top of our 2023-2025 Target Price Range, total return potential is low.

Paul E. Debbas, CFA *July 24, 2020*

(A) Diluted EPS. Excl. nonrecurring gain (losses): '10, 5¢; '15, (16¢); '17, (5¢); gains (losses) on discontinued ops.: '04, (30¢); '05, 3¢; '06, 1¢; '09, (1¢); '10, 1¢. '17 EPS don't sum due to rounding. Next earnings report due late July. (B) Div'ds historically paid mid-Jan., Apr., July, and Oct. ■ Div'd reinvestment plan available. (C) Incl. intangibles. In '19: $5.60/sh. (D) In mill. (E) Rate base: Varies. Rate allowed on com. eq. (blended): 9.6%; earned on avg. com. eq., '19: 10.8%. Regulatory Climate: Average.

Company's Financial Strength	A+
Stock's Price Stability	95
Price Growth Persistence	60
Earnings Predictability	100

Summary of Risk Premium Models for the
Proxy Group of Fifteen Electric Companies

	Proxy Group of Fifteen Electric Companies
Predictive Risk Premium Model (PRPM) (1)	10.09 %
Risk Premium Using an Adjusted Total Market Approach (2)	10.76 %
Average	10.43 %

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

Indicated ROE
Derived by the Predictive Risk Premium Model (1)

Proxy Group of Fifteen Electric 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)
ALLETE, Inc.	0.28%	0.46%	0.28%	2.0821	7.36%	2.05%	9.41%
Alliant Energy Corporation	0.27%	0.46%	0.27%	2.6438	8.81%	2.05%	10.86%
Ameren Corporation	0.23%	0.38%	0.23%	1.9611	5.52%	2.05%	7.57%
Duke Energy Corporation	0.31%	0.34%	0.31%	1.7362	6.70%	2.05%	8.75%
Edison International	0.43%	0.76%	0.43%	1.4573	7.82%	2.05%	9.87%
Entergy Corporation	0.40%	0.75%	0.40%	2.2188	11.20%	2.05%	13.25%
Evergy, Inc.	0.33%	1.02%	0.33%	(0.1779)	-0.71%	2.05%	NMF
IDACORP, Inc.	0.28%	0.35%	0.28%	2.1635	7.64%	2.05%	9.69%
NorthWestern Corporation	0.34%	0.33%	0.34%	2.3171	9.79%	2.05%	11.84%
OGE Energy Corporation	0.31%	0.54%	0.31%	2.1119	8.12%	2.05%	10.17%
Otter Tail Corporation	0.37%	0.35%	0.37%	1.5742	7.28%	2.05%	9.33%
Pinnacle West Capital Corp.	0.60%	0.87%	0.60%	1.2237	9.20%	2.05%	11.25%
PNM Resources, Inc.	0.53%	0.71%	0.53%	1.2936	8.55%	2.05%	10.60%
Portland General Electric Co.	0.27%	0.44%	0.27%	1.7368	5.72%	2.05%	7.77%
Xcel Energy, Inc.	0.27%	0.36%	0.27%	2.8114	9.65%	2.05%	11.70%
						Average	10.15%
						Median	10.02%
						Average of Mean and Median	10.09%

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) Given current market conditions, I recommend using the long-term average predicted variance.

(3) (1+(Column [3] * Column [4])^12) - 1.

(4) From note 2 on page 2 of Exhibit__(DWD-1), Schedule 7.

(5) Column [5] + Column [6].

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

Line No.		Proxy Group of Fifteen Electric Companies
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	2.98 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A Rated Public Utility Bonds	0.58 (2)
3.	Adjusted Prospective Yield on A Rated Public Utility Bonds	3.56 %
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	0.12 (3)
5.	Adjusted Prospective Bond Yield	3.68 %
6.	Equity Risk Premium (4)	7.08
7.	Risk Premium Derived Common Equity Cost Rate	10.76 %

Notes:
(1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 10-11 of this Schedule).
(2) The average yield spread of A rated public utility bonds over Aaa rated corporate bonds of 0.58% from page 4 of this Schedule.
(3) Adjustment to reflect the A3 Moody's LT issuer rating of the Utility Proxy Group as shown on page 5 of this Schedule. The 0.12% upward adjustment is derived by taking 1/3 of the spread between A2 and Baa2 Public Utility Bonds (1/3 * 0.35% = 0.12%) as derived from page 4 of this Schedule.
(4) From page 7 of this Schedule.

Interest Rates and Bond Spreads for
Moody's Corporate and Public Utility Bonds

Selected Bond Yields

	[1] Aaa Rated Corporate Bond	[2] A Rated Public Utility Bond	[3] Baa Rated Public Utility Bond
Aug-2020	2.25 %	2.73 %	3.06 %
Jul-2020	2.14	2.74	3.09
Jun-2020	2.41	3.07	3.44
Average	2.27 %	2.85 %	3.20 %

Selected Bond Spreads

A Rated Public Utility Bonds Over Aaa Rated Corporate Bonds:

0.58 % (1)

Baa Rated Public Utility Bonds Over A Rated Public Utility Bonds:

0.35 % (2)

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

Source of Information:
Bloomberg Professional Service

Comparison of Long-Term Issuer Ratings for
Proxy Group of Fifteen Electric Companies

	Moody's Long-Term Issuer Rating August 2020		Standard & Poor's Long-Term Issuer Rating August 2020	
Proxy Group of Fifteen Electric Companies	Long-Term Issuer Rating (1)	Numerical Weighting (2)	Long-Term Issuer Rating (1)	Numerical Weighting (2)
ALLETE, Inc.	A3	7.0	NR	--
Alliant Energy Corporation	A3/Baa1	7.5	A/A-	6.5
Ameren Corporation	A3	7.0	BBB+	8.0
Duke Energy Corporation	A3	7.0	A-	7.0
Edison International	Baa2	9.0	BBB	9.0
Entergy Corporation	Baa1/Baa2	8.5	A-	7.0
Evergy, Inc.	Baa1	8.0	A-	7.0
IDACORP, Inc.	A3	7.0	BBB	9.0
NorthWestern Corporation	NR	--	NR	--
OGE Energy Corporation	A3	7.0	A-	7.0
Otter Tail Corporation	A3	7.0	BBB+	8.0
Pinnacle West Capital Corp.	A2	6.0	A-	7.0
PNM Resources, Inc.	Baa1	8.0	BBB+/BBB	8.5
Portland General Electric Co.	A3	7.0	BBB+	8.0
Xcel Energy, Inc.	A3	7.0	A-	7.0
Average	A3	7.4	BBB+	7.6

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-

Judgment of Equity Risk Premium for
Proxy Group of Fifteen Electric Companies

Line No.		Proxy Group of Fifteen Electric Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1)	9.07 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	6.25
3.	Predicted Equity Risk Premium Based on Regression Analysis of 1168 Fully-Litigated Electric Utility Rate Cases	5.92
4.	Average equity risk premium	7.08 %

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

Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Fifteen Electric Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Fifteen Electric Companies
	Ibbotson-Based Equity Risk Premiums:	
1.	Ibbotson Equity Risk Premium (1)	5.78 %
2.	Regression on Ibbotson Risk Premium Data (2)	9.39
3.	Ibbotson Equity Risk Premium based on PRPM (3)	9.62
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	11.47
5.	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	10.85
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	10.80
7.	Conclusion of Equity Risk Premium	9.65 %
8.	Adjusted Beta (7)	0.94
9.	Forecasted Equity Risk Premium	9.07 %

Notes provided on page 9 of this Schedule.

Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Fifteen Electric Companies

Notes:

(1) Based on the arithmetic mean historical monthly returns on large company common stocks from Ibbotson® SBBI® 2020 Market Report minus the arithmetic mean monthly yield of Moody's average Aaa and Aa corporate bonds from 1926-2019.

(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 1928-2019 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 August 2020.

(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 2.98% (from page 3 of this Schedule) from the projected 3-5 year total annual market return of 14.45% (described fully in note 1 on page 2 of Exhibit_(DWD-1), Schedule 7).

(5) Using data from Value Line for the S&P 500, an expected total return of 13.83% 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 2.98% results in an expected equity risk premium of 10.85%.

(6) Using data from the Bloomberg Professional Service for the S&P 500, an expected total return of 13.78% 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 2.98% results in an expected equity risk premium of 10.80%.

(7) Average of mean and median beta from Exhibit_(DWD-1), Schedule 7.

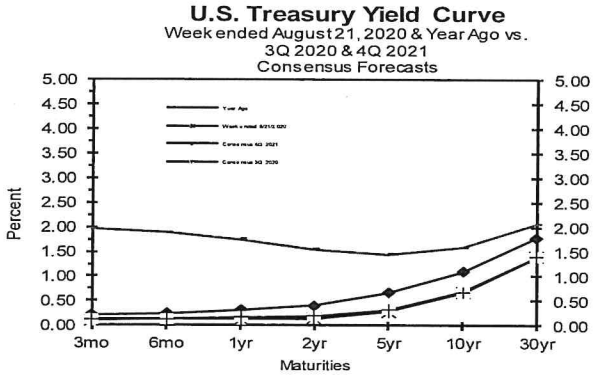
Sources of Information:

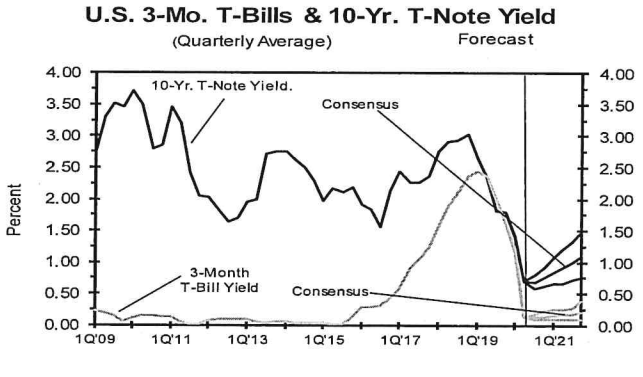
Stocks, Bonds, Bills, and Inflation - 2020 SBBI Yearbook, John Wiley & Sons, Inc.
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2020 and September 1, 2020
Bloomberg Professional Service

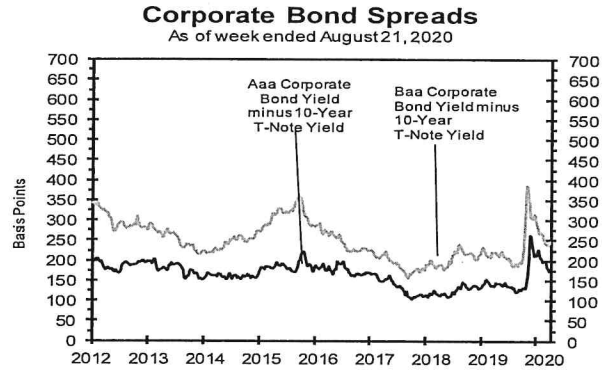
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*	3Q	4Q	1Q	2Q	3Q	4Q
Interest Rates	Aug 21	Aug 14	Aug 7	Jul 31	Jul	Jun	May	2Q 2020	2020	2020	2021	2021	2021	2021
Federal Funds Rate	0.10	0.10	0.10	0.09	0.09	0.08	0.05	0.06	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.	0.25	0.27	0.25	0.26	0.27	0.31	0.40	0.60	0.4	0.4	0.4	0.4	0.5	0.5
Commercial Paper, 1-mo.	0.09	0.10	0.10	0.11	0.11	0.12	0.13	0.24	0.2	0.2	0.2	0.2	0.2	0.3
Treasury bill, 3-mo.	0.10	0.11	0.10	0.10	0.13	0.16	0.13	0.14	0.1	0.1	0.2	0.2	0.2	0.2
Treasury bill, 6-mo.	0.12	0.12	0.11	0.12	0.14	0.18	0.15	0.17	0.1	0.2	0.2	0.2	0.2	0.2
Treasury bill, 1 yr.	0.13	0.14	0.13	0.13	0.15	0.18	0.16	0.17	0.2	0.2	0.2	0.2	0.3	0.3
Treasury note, 2 yr.	0.14	0.15	0.11	0.13	0.15	0.19	0.17	0.19	0.2	0.2	0.2	0.3	0.3	0.4
Treasury note, 5 yr.	0.28	0.28	0.21	0.25	0.28	0.34	0.34	0.36	0.3	0.4	0.4	0.5	0.6	0.7
Treasury note, 10 yr.	0.67	0.67	0.55	0.58	0.62	0.73	0.67	0.69	0.7	0.8	0.8	0.9	1.0	1.1
Treasury note, 30 yr.	1.40	1.36	1.21	1.22	1.31	1.49	1.38	1.38	1.4	1.5	1.6	1.6	1.7	1.8
Corporate Aaa bond	2.53	2.46	2.32	2.32	2.43	2.73	2.85	2.81	2.3	2.4	2.5	2.6	2.7	2.8
Corporate Baa bond	3.14	3.06	2.95	2.98	3.12	3.44	3.69	3.67	3.5	3.6	3.7	3.7	3.8	3.8
State & Local bonds	2.87	2.85	2.89	2.91	2.99	3.10	3.33	3.28	2.5	2.4	2.5	2.5	2.6	2.6
Home mortgage rate	2.99	2.96	2.88	2.99	3.02	3.16	3.23	3.23	3.0	3.1	3.1	3.1	3.2	3.2
	History								Consensus Forecasts-Quarterly					
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Key Assumptions	2018	2018	2019	2019	2019	2019	2020	2020	2020	2020	2021	2021	2021	2021
Fed's AFE $ Index	107.8	109.4	109.4	110.3	110.5	110.3	111.2	112.4	108.0	107.7	107.5	107.4	107.0	106.8
Real GDP	2.1	1.3	2.9	1.5	2.6	2.4	-5.0	-31.7	21.5	5.7	5.0	4.4	3.8	3.5
GDP Price Index	1.8	1.8	1.2	2.5	1.5	1.4	1.4	-2.0	1.9	1.3	1.5	1.4	1.6	1.6
Consumer Price Index	2.1	1.3	0.9	3.0	1.8	2.4	1.2	-3.5	3.2	1.8	1.9	1.7	2.0	2.0

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP 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 and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).



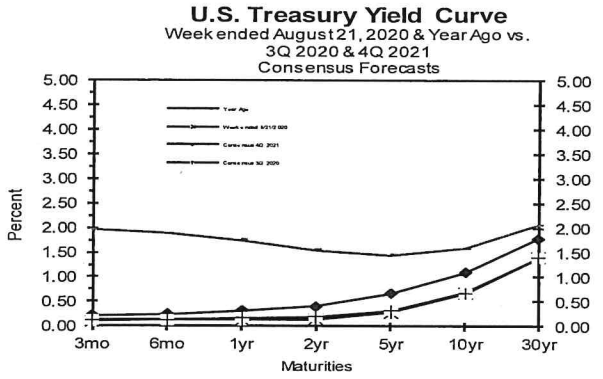


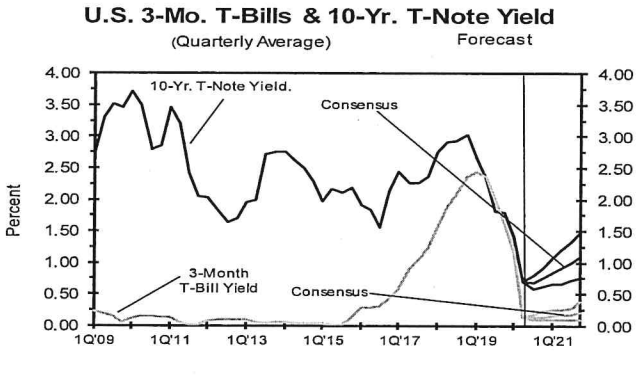


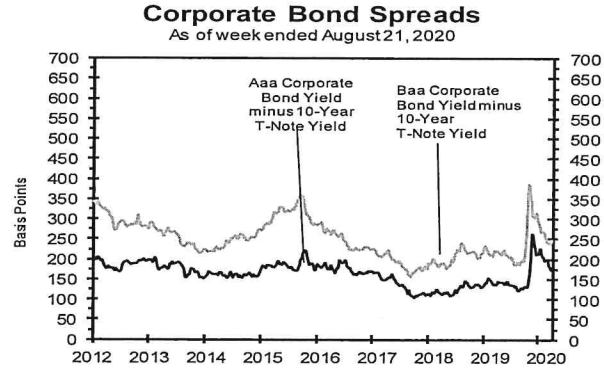
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

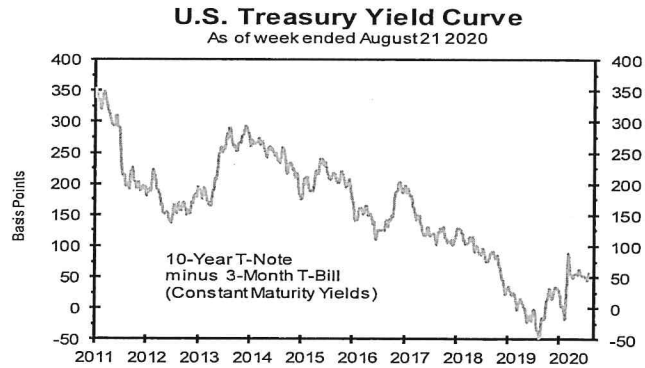
	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*	3Q	4Q	1Q	2Q	3Q	4Q
Interest Rates	Aug 21	Aug 14	Aug 7	Jul 31	Jul	Jun	May	2Q 2020	2020	2020	2021	2021	2021	2021
Federal Funds Rate	0.10	0.10	0.10	0.09	0.09	0.08	0.05	0.06	0.1	0.1	0.1	0.1	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.	0.25	0.27	0.25	0.26	0.27	0.31	0.40	0.60	0.4	0.4	0.4	0.4	0.5	0.5
Commercial Paper, 1-mo.	0.09	0.10	0.10	0.11	0.11	0.12	0.13	0.24	0.2	0.2	0.2	0.2	0.2	0.3
Treasury bill, 3-mo.	0.10	0.11	0.10	0.10	0.13	0.16	0.13	0.14	0.1	0.1	0.2	0.2	0.2	0.2
Treasury bill, 6-mo.	0.12	0.12	0.11	0.12	0.14	0.18	0.15	0.17	0.1	0.2	0.2	0.2	0.2	0.2
Treasury bill, 1 yr.	0.13	0.14	0.13	0.13	0.15	0.18	0.16	0.17	0.2	0.2	0.2	0.2	0.3	0.3
Treasury note, 2 yr.	0.14	0.15	0.11	0.13	0.15	0.19	0.17	0.19	0.2	0.2	0.2	0.3	0.3	0.4
Treasury note, 5 yr.	0.28	0.28	0.21	0.25	0.28	0.34	0.34	0.36	0.3	0.4	0.4	0.5	0.6	0.7
Treasury note, 10 yr.	0.67	0.67	0.55	0.58	0.62	0.73	0.67	0.69	0.7	0.8	0.8	0.9	1.0	1.1
Treasury note, 30 yr.	1.40	1.36	1.21	1.22	1.31	1.49	1.38	1.38	1.4	1.5	1.6	1.6	1.7	1.8
Corporate Aaa bond	2.53	2.46	2.32	2.32	2.43	2.73	2.85	2.81	2.3	2.4	2.5	2.6	2.7	2.8
Corporate Baa bond	3.14	3.06	2.95	2.98	3.12	3.44	3.69	3.67	3.5	3.6	3.7	3.7	3.8	3.8
State & Local bonds	2.87	2.85	2.89	2.91	2.99	3.10	3.33	3.28	2.5	2.4	2.5	2.5	2.6	2.6
Home mortgage rate	2.99	2.96	2.88	2.99	3.02	3.16	3.23	3.23	3.0	3.1	3.1	3.1	3.2	3.2
	History								Consensus Forecasts-Quarterly					
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Key Assumptions	2018	2018	2019	2019	2019	2019	2020	2020	2020	2020	2021	2021	2021	2021
Fed's AFE $ Index	107.8	109.4	109.4	110.3	110.5	110.3	111.2	112.4	108.0	107.7	107.5	107.4	107.0	106.8
Real GDP	2.1	1.3	2.9	1.5	2.6	2.4	-5.0	-31.7	21.5	5.7	5.0	4.4	3.8	3.5
GDP Price Index	1.8	1.8	1.2	2.5	1.5	1.4	1.4	-2.0	1.9	1.3	1.5	1.4	1.6	1.6
Consumer Price Index	2.1	1.3	0.9	3.0	1.8	2.4	1.2	-3.5	3.2	1.8	1.9	1.7	2.0	2.0

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP 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 and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).









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	4.21 %
2.	Regression of Historical Equity Risk Premium (2)	6.83
3.	Forecasted Equity Risk Premium Based on PRPM (3)	5.53
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Value Line Data) (4)	6.80
5.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg Data) (5)	7.89
6.	Average Equity Risk Premium (6)	6.25 %

Notes:
(1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2019. 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 A rated public utility bond yields from 1928 - 2019 referenced in note 1 above.

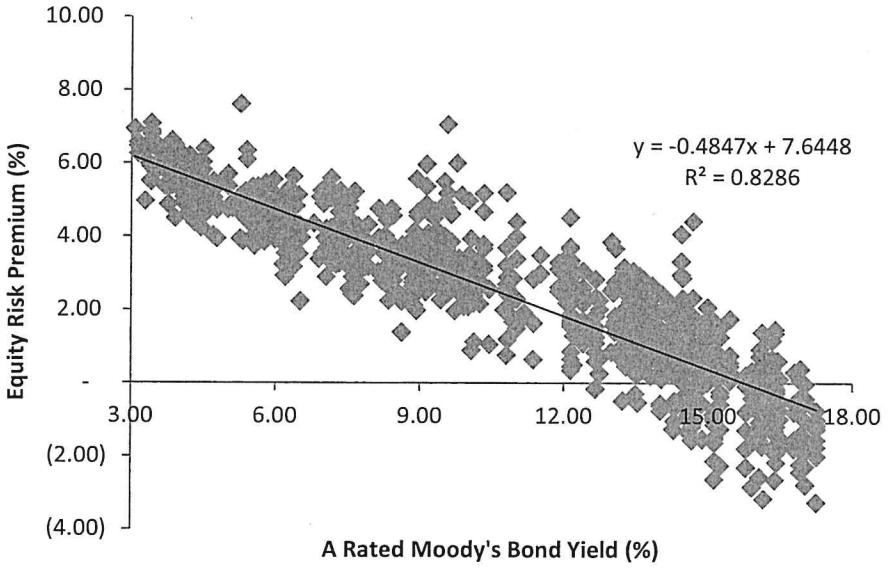
(3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A rated public utility bonds from January 1928 - August 2020.

(4) Using data from Value Line for the S&P Utilities Index, an expected return of 10.36% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A rated public utility bond yield of 3.56%, calculated on line 3 of page 3 of this Schedule results in an equity risk premium of 6.80%. (10.36% - 3.56% = 6.80%)

(5) Using data from Bloomberg Professional Service for the S&P Utilities Index, an expected return of 11.45% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A rated public utility bond yield of 3.56%, calculated on line 3 of page 3 of this Schedule results in an equity risk premium of 7.89%. (11.45% - 3.56% = 7.89%)

(6) Average of lines 1 through 5.

Prediction of Equity Risk Premiums Relative to
Moody's A Rated Utility Bond Yields



Constant	Slope	Prospective A Rated Utility Bond (1)	Prospective Equity Risk Premium
7.644759 %	-0.48471	3.56 %	5.92 %

Notes:

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

Source of Information: Regulatory Research Associates

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 Fifteen Electric 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)
ALLETE, Inc.	0.85	0.99	0.92	10.65 %	2.05 %	11.85 %	12.06 %	11.95 %
Alliant Energy Corporation	0.80	1.00	0.90	10.65	2.05	11.63	11.90	11.77
Ameren Corporation	0.80	0.92	0.86	10.65	2.05	11.21	11.58	11.39
Duke Energy Corporation	0.85	0.96	0.91	10.65	2.05	11.74	11.98	11.86
Edison International	0.90	1.03	0.96	10.65	2.05	12.27	12.38	12.33
Entergy Corporation	0.95	1.10	1.02	10.65	2.05	12.91	12.86	12.89
Evergy, Inc.	1.05	1.03	1.04	10.65	2.05	13.12	13.02	13.07
IDACORP, Inc.	0.80	0.99	0.90	10.65	2.05	11.63	11.90	11.77
NorthWestern Corporation	0.90	1.20	1.05	10.65	2.05	13.23	13.10	13.16
OGE Energy Corporation	1.05	1.17	1.11	10.65	2.05	13.87	13.58	13.72
Otter Tail Corporation	0.85	0.99	0.92	10.65	2.05	11.85	12.06	11.95
Pinnacle West Capital Corp.	0.85	1.04	0.95	10.65	2.05	12.17	12.30	12.23
PNM Resources, Inc.	0.90	1.26	1.08	10.65	2.05	13.55	13.34	13.44
Portland General Electric Co.	0.85	0.99	0.92	10.65	2.05	11.85	12.06	11.95
Xcel Energy, Inc.	0.75	0.95	0.85	10.65	2.05	11.10	11.50	11.30
Mean			0.96			12.27 %	12.37 %	12.32 %
Median			0.92			11.85 %	12.06 %	11.95 %
Average of Mean and Median			0.94			12.06 %	12.22 %	12.14 %

Notes on page 2 of this Schedule.

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 (1926-2019)

Arithmetic Mean Monthly Returns for Large Stocks 1926-2019:	12.10 %
Arithmetic Mean Income Returns on Long-Term Government Bonds:	5.09
MRP based on Ibbotson Historical Data:	7.01 %

Measure 2: Application of a Regression Analysis to Ibbotson Historical Data (1926-2019) 10.24 %

Measure 3: Application of the PRPM to Ibbotson Historical Data: (January 1926 - August 2020) 10.73 %

Value Line MRP Estimates:

Measure 4: Value Line Projected MRP (Thirteen weeks ending September 04, 2020)

Total projected return on the market 3-5 years hence*:	14.45 %
Projected Risk-Free Rate (see note 2):	2.05
MRP based on Value Line Summary & Index:	12.40 %

*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:	13.83 %
Projected Risk-Free Rate (see note 2):	2.05
MRP based on Value Line data	11.78 %

Measure 6: Bloomberg Projected MRP

Total return on the Market based on the S&P 500:	13.78 %
Projected Risk-Free Rate (see note 2):	2.05
MRP based on Bloomberg data	11.73 %

Average of Value Line, Ibbotson, and Bloomberg MRP: 10.65 %

(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 10-11 of Exhibit_(DWD-1), Schedule 6.) The projection of the risk-free rate is illustrated below:

Third Quarter 2020	1.40 %
Fourth Quarter 2020	1.50
First Quarter 2021	1.60
Second Quarter 2021	1.60
Third Quarter 2021	1.70
Fourth Quarter 2021	1.80
2022-2026	3.00
2027-2031	3.80
	2.05 %

(3) Average of Column 6 and Column 7.

Sources of Information:

Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2020 and September 1, 2020
Stocks, Bonds, Bills, and Inflation - 2020 SBBI Yearbook, John Wiley & Sons, Inc.
Bloomberg Professional Services

Northern States Power Company, a Minnesota Corporation
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 – 0.92 and residual standard error of the regression range of 2.5047 – 2.9871 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 0.1206. 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

$$\text{Thus, } 0.1206 = \frac{2.7459}{\sqrt{518}} = \frac{2.7459}{22.7596}$$

Source of Information: Value Line, Inc., June 2020
Value Line Investment Survey (Standard Edition)

Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

Proxy Group of Fifteen Electric Companies	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
ALLETE, Inc.	0.85	0.72	2.5517	0.0644
Alliant Energy Corporation	0.80	0.69	2.7475	0.0694
Ameren Corporation	0.80	0.66	2.6493	0.0669
Duke Energy Corporation	0.85	0.75	2.7615	0.0697
Edison International	0.90	0.82	3.2630	0.0824
Entergy Corporation	0.95	0.86	2.6168	0.0661
Evergy, Inc.	1.05	1.02	3.0695	0.0916
IDACORP, Inc.	0.80	0.64	2.5630	0.0647
NorthWestern Corporation	0.90	0.79	2.7647	0.0698
OGE Energy Corporation	1.05	1.05	2.6291	0.0664
Otter Tail Corporation	0.85	0.75	2.4932	0.0630
Pinnacle West Capital Corp.	0.85	0.75	2.6801	0.0677
PNM Resources, Inc.	0.90	0.84	3.0989	0.0782
Portland General Electric Co.	0.85	0.75	2.6422	0.0667
Xcel Energy, Inc.	0.75	0.61	2.6583	0.0671
Average	0.88	0.78	2.7459	0.0703
Beta Range (+/- 2 std. Devs. of Beta)	0.64	0.92		
2 std. Devs. of Beta	0.14			
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.5047	2.9871		
Std. dev. of the Res. Std. Err.	0.1206			
2 std. devs. of the Res. Std. Err.	0.2412			

Source of Information: Valueline Proprietary Database, June 2020

Proxy Group of Non-Price Regulated Companies
Domestic Non-Price Regulated Companies
Proxy Group of Fifteen Electric Companies

Proxy Group of Forty-Seven 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.	0.95	0.89	2.8953	0.0731
Analog Devices	0.95	0.90	2.7284	0.0689
Assurant Inc.	0.90	0.79	2.7586	0.0697
Amgen	0.85	0.74	2.6870	0.0678
Amer. Tower 'A'	0.90	0.85	2.8552	0.0721
ANSYS, Inc.	0.90	0.79	2.7316	0.0690
Smith (A.O.)	0.95	0.86	2.7319	0.0690
Becton, Dickinson	0.80	0.68	2.6431	0.0667
Brown-Forman 'B'	0.90	0.79	2.6084	0.0659
Bio-Rad Labs. 'A'	0.80	0.67	2.8493	0.0719
Black Knight, Inc.	0.85	0.73	2.6526	0.0670
Broadridge Fin'l	0.85	0.73	2.7938	0.0705
Cadence Design Sys.	0.95	0.88	2.8991	0.0732
CDW Corp.	0.95	0.92	2.7232	0.0688
Cerner Corp.	0.90	0.84	2.8660	0.0724
Chemed Corp.	0.85	0.77	2.5217	0.0637
Cooper Cos.	0.95	0.89	2.6587	0.0671
Dolby Labs.	0.95	0.85	2.6147	0.0660
Lauder (Estee)	0.90	0.82	2.6597	0.0672
ESCO Technologies	0.95	0.88	2.5170	0.0636
Exponent, Inc.	0.85	0.75	2.8247	0.0713
Forward Air	0.95	0.89	2.7021	0.0682
Gentex Corp.	0.95	0.92	2.7002	0.0682
Alphabet Inc.	0.90	0.83	2.7286	0.0689
Hershey Co.	0.85	0.73	2.6704	0.0674
Ingredion Inc.	0.90	0.78	2.8600	0.0722
Hunt (J.B.)	0.95	0.89	2.7263	0.0688
J&J Snack Foods	0.85	0.76	2.7347	0.0691
St. Joe Corp.	0.80	0.65	2.9722	0.0751
ManTech Int'l 'A'	0.85	0.75	2.9683	0.0750
McCormick & Co.	0.85	0.76	2.6762	0.0676
Altria Group	0.85	0.72	2.9098	0.0735
Motorola Solutions	0.85	0.75	2.6058	0.0658
Vail Resorts	0.90	0.78	2.9711	0.0750
NewMarket Corp.	0.85	0.70	2.5462	0.0643
Northrop Grumman	0.85	0.71	2.8334	0.0715
PerkinElmer Inc.	1.00	0.92	2.5564	0.0646
Pool Corp.	0.90	0.82	2.5263	0.0638
Rollins, Inc.	0.85	0.72	2.8610	0.0722
Selective Ins. Group	0.85	0.70	2.6898	0.0679
Sirius XM Holdings	0.95	0.87	2.5986	0.0656
Bio-Techne Corp.	0.85	0.72	2.8139	0.0711
Tetra Tech	0.90	0.78	2.8216	0.0712
Texas Instruments	0.85	0.75	2.6653	0.0673
AMERCO	0.90	0.80	2.6496	0.0669
VeriSign Inc.	0.95	0.90	2.5465	0.0643
West Pharmac. Svcs.	0.80	0.70	2.8223	0.0713
Average	0.89	0.79	2.7300	0.0700
Proxy Group of Fifteen Electric Companies	0.88	0.78	2.7459	0.0703

Source of Information: Valueline Proprietary Database, June 2020

Summary of Cost of Equity Models Applied to
Proxy Group of Forty-Seven Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Fifteen Electric Companies

Principal Methods	Proxy Group of Forty-Seven Non-Price Regulated Companies
Discounted Cash Flow Model (DCF) (1)	11.95 %
Risk Premium Model (RPM) (2)	12.68
Capital Asset Pricing Model (CAPM) (3)	11.83
	12.15 %
	11.95 %
	12.05 %

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

DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the Proxy Group of Fifteen Electric Companies

Proxy Group of Forty-Seven Non-Price Regulated Companies	[1] Average Dividend Yield	[2] Value Line Projected Five Year Growth in EPS	[3] Zack's Five Year Projected Growth Rate in EPS	Bloomberg's Five Year Projected Growth Rate in EPS	[4] Yahoo! Finance Projected Five Year Growth in EPS	[5] Average Projected Five Year Growth Rate in EPS	[6] Adjusted Dividend Yield	[7] Indicated Common Equity Cost Rate (1)
Apple Inc.	0.81 %	14.00 %	10.70 %	8.33 %	12.46 %	11.37 %	0.86 %	12.23 %
Analog Devices	2.09	7.00	13.30	12.15	8.44	10.22	2.20	12.42
Assurant Inc.	2.28	6.50	NA	36.60	19.40	20.83	2.52	23.35
Amgen	2.64	6.50	7.50	7.67	6.87	7.14	2.73	9.87
Amer. Tower 'A'	1.71	7.50	14.40	15.32	14.75	12.99	1.82	14.81
ANSYS, Inc.	-	10.00	NA	10.90	7.10	9.33	-	NA
Smith (A.O.)	1.97	5.00	8.00	NA	8.00	7.00	2.04	9.04
Becton, Dickinson	1.24	9.00	8.00	8.73	6.40	8.03	1.29	9.32
Brown-Forman 'B'	1.03	11.00	NA	NA	5.33	8.17	1.07	9.24
Bio-Rad Labs. 'A'	-	11.50	NA	21.75	17.80	17.02	-	NA
Black Knight, Inc.	-	9.50	6.00	8.00	9.30	8.20	-	NA
Broadridge Fin'l	1.76	9.00	NA	7.40	10.00	8.80	1.84	10.64
Cadence Design Sys.	-	10.00	13.70	10.89	13.70	12.07	-	NA
CDW Corp.	1.32	11.00	13.10	13.10	9.10	11.58	1.40	12.98
Cerner Corp.	1.02	9.00	11.90	11.76	11.63	11.07	1.08	12.15
Chemed Corp.	0.28	11.50	9.60	9.64	9.65	10.10	0.29	10.39
Cooper Cos.	0.02	14.50	11.00	8.45	10.00	10.99	0.02	11.01
Dolby Labs.	1.30	9.50	13.00	13.00	16.00	12.88	1.38	14.26
Lauder (Estee)	0.97	14.00	12.70	23.54	13.31	15.89	1.05	16.94
ESCO Technologies	0.37	11.00	NA	15.50	15.00	13.83	0.40	14.23
Exponent, Inc.	0.95	11.50	NA	15.00	15.00	13.83	1.02	14.85
Forward Air	1.37	12.00	NA	NA	13.16	12.58	1.46	14.04
Gentex Corp.	1.80	7.00	NA	5.34	15.00	9.11	1.88	10.99
Alphabet Inc.	-	14.50	16.20	15.77	6.09	13.14	-	NA
Hershey Co.	2.33	5.00	7.70	7.40	6.78	6.72	2.41	9.13
Ingredion Inc.	3.04	6.00	NA	8.60	1.90	5.50	3.12	8.62
Hunt (J.B.)	0.84	6.50	15.00	13.30	10.09	11.22	0.89	12.11
J&J Snack Foods	1.79	6.00	NA	NA	6.00	6.00	1.84	7.84
St. Joe Corp.	-	16.50	NA	NA	(28.10)	16.50	-	NA
ManTech Int'l 'A'	1.83	12.00	7.40	7.36	7.02	8.45	1.91	10.36
McCormick & Co.	1.31	6.50	5.80	10.13	5.00	6.86	1.35	8.21
Altria Group	8.30	6.00	5.00	4.45	6.10	5.39	8.52	13.91
Motorola Solutions	1.80	9.50	9.00	8.50	10.32	9.33	1.88	11.21
Vail Resorts	-	18.00	NA	0.24	(10.76)	9.12	-	NA
NewMarket Corp.	1.93	2.00	NA	NA	7.70	4.85	1.98	6.83
Northrop Grumman	1.81	10.50	NA	19.56	8.62	12.89	1.93	14.82
PerkinElmer Inc.	0.26	12.00	17.40	10.58	16.95	14.23	0.28	14.51
Pool Corp.	0.78	9.00	NA	17.00	17.00	14.33	0.84	15.17
Rollins, Inc.	0.66	12.00	NA	NA	8.20	10.10	0.69	10.79
Selective Ins. Group	1.68	6.50	NA	NA	(2.19)	6.50	1.73	8.23
Sirius XM Holdings	0.90	24.50	15.90	12.87	16.25	17.38	0.98	18.36
Bio-Techne Corp.	0.49	14.00	7.00	10.45	7.00	9.61	0.51	10.12
Tetra Tech	0.80	11.00	15.00	15.50	15.00	14.13	0.86	14.99
Texas Instruments	2.73	2.50	9.30	10.00	10.00	7.95	2.84	10.79
AMERCO	-	7.50	NA	NA	15.00	11.25	-	NA
VeriSign Inc.	-	9.50	NA	10.30	8.00	9.27	-	NA
West Pharmac. Svcs.	0.26	16.00	17.40	14.94	15.00	15.83	0.28	16.11
							Mean	12.23 %
							Median	11.66 %
							Average of Mean and Median	11.95 %

NA= Not Available
NMF= Not Meaningful Figure

(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 August 31, 2020. 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 08/31/2020
www.yahoo.com Downloaded on 08/31/2020
Bloomberg Professional Services

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

Line No.		Proxy Group of Forty-Seven Non-Price Regulated Companies
1.	Prospective Yield on Baa Rated Corporate Bonds (1)	4.10 %
2.	Adjustment to Reflect Proxy Group Bond Rating (2)	(0.20)
3.	Prospective Bond Rating	3.90
4.	Equity Risk Premium (3)	8.78
5	Risk Premium Derived Common Equity Cost Rate	12.68 %

Notes: (1) Average forecast of Baa corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated June 1, 2020 and September 1, 2020 (see pages 10-11 of Exhibit_(DWD-1), Schedule 6). The estimates are detailed below.

Third Quarter 2020	3.50 %
Fourth Quarter 2020	3.60
First Quarter 2021	3.70
Second Quarter 2021	3.70
Third Quarter 2021	3.80
Fourth Quarter 2021	3.80
2022-2026	5.00
2027-2031	5.70
Average	4.10 %

(2) To reflect the Baa1 average rating of the Non-Price Regulated Proxy Group, the prosepctive yield on Baa corporate bonds must be adjusted downward by 1/3 of the spread between A and Baa corporate bond yields as shown below:

	A Corp. Bond Yield	Baa Corp. Bond Yield	Spread
Aug-2020	2.68 %	3.27 %	0.59 %
Jul-2020	2.69	3.31	0.62
Jun-2020	3.02	3.65	0.63
		Average yield spread	0.61 %
		1/3 of spread	0.20 %

(3) From page 5 of this Schedule.

Comparison of Long-Term Issuer Ratings for the
Proxy Group of Forty-Seven Non-Price Regulated Companies of Comparable risk to the
Proxy Group of Fifteen Electric Companies

	Moody's Long-Term Issuer Rating August 2020		Standard & Poor's Long-Term Issuer Rating August 2020	
Proxy Group of Forty-Seven 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
Analog Devices	Baa1	8.0	BBB+	8.0
Assurant Inc.	Baa3	10.0	BBB	9.0
Amgen	Baa1	8.0	A-	7.0
Amer. Tower 'A'	Baa3	10.0	BBB-	10.0
ANSYS, Inc.	NR	--	NR	--
Smith (A.O.)	NR	--	NR	--
Becton, Dickinson	Ba1	11.0	BBB	9.0
Brown-Forman 'B'	A1	5.0	A-	7.0
Bio-Rad Labs. 'A'	Baa2	9.0	BBB	9.0
Black Knight, Inc.	Ba3	13.0	BB	12.0
Broadridge Fin'l	Baa1	8.0	BBB+	8.0
Cadence Design Sys.	Baa2	9.0	BBB+	8.0
CDW Corp.	WR	--	BB+	11.0
Cerner Corp.	NR	--	NR	--
Chemed Corp.	WR	--	NR	--
Cooper Cos.	WR	--	NR	--
Dolby Labs.	NR	--	NR	--
Lauder (Estee)	A1	5.0	A+	5.0
ESCO Technologies	NR	--	NR	--
Exponent, Inc.	NR	--	NR	--
Forward Air	NR	--	NR	--
Gentex Corp.	NR	--	NR	--
Alphabet Inc.	Aa2	3.0	AA+	2.0
Hershey Co.	A1	5.0	A	6.0
Ingredion Inc.	Baa1	8.0	BBB	9.0
Hunt (J.B.)	Baa1	8.0	BBB+	8.0
J&J Snack Foods	NR	--	NR	--
St. Joe Corp.	NR	--	NR	--
ManTech Int'l 'A'	WR	--	BB+	11.0
McCormick & Co.	Baa2	9.0	BBB	9.0
Altria Group	A3	7.0	BBB	9.0
Motorola Solutions	Baa3	10.0	BBB-	10.0
Vail Resorts	B2	15.0	BB	12.0
NewMarket Corp.	Baa2	9.0	BBB+	8.0
Northrop Grumman	Baa2	9.0	BBB	9.0
PerkinElmer Inc.	Baa3	10.0	BBB	9.0
Pool Corp.	NR	--	NR	--
Rollins, Inc.	NR	--	NR	--
Selective Ins. Group	Baa2	9.0	BBB	9.0
Sirius XM Holdings	NR	--	NR	--
Bio-Techne Corp.	NR	--	NR	--
Tetra Tech	NR	--	NR	--
Texas Instruments	A1	5.0	A+	5.0
AMERCO	WR	--	NR	--
VeriSign Inc.	Ba1	11.0	BBB-	10.0
West Pharmac. Svcs.	NR	--	NR	--
Average	Baa1	8.3	BBB+	8.3

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

Source of Information:
Bloomberg Professional Services

Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
Proxy Group of Forty-Seven Non-Price Regulated Companies of Comparable risk to the
Proxy Group of Fifteen Electric Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Forty-Seven Non-Price Regulated Companies
	Ibbotson-Based Equity Risk Premiums:	
1.	Ibbotson Equity Risk Premium (1)	5.78 %
2.	Regression on Ibbotson Risk Premium Data (2)	9.39
3.	Ibbotson Equity Risk Premium based on PRPM (3)	9.62
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	11.47
5	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	10.85
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	10.80
7.	Conclusion of Equity Risk Premium	9.65 %
8.	Adjusted Beta (7)	0.91
9.	Forecasted Equity Risk Premium	8.78 %

Notes:

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

Sources of Information:

Stocks, Bonds, Bills, and Inflation - 2020 SBBI Yearbook, John Wiley & Sons, Inc.
Value Line Summary and Index
Blue Chip Financial Forecasts, June 1, 2020 and September 1, 2020
Bloomberg Professional Services

Traditional CAPM and ECAPM Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the Proxy Group of Fifteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Forty-Seven 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.	0.95	1.00	0.98	10.65 %	2.05 %	12.49 %	12.54 %	12.51 %
Analog Devices	0.95	1.03	0.99	10.65	2.05	12.59	12.62	12.61
Assurant Inc.	0.90	1.06	0.98	10.65	2.05	12.49	12.54	12.51
Amgen	0.85	0.80	0.82	10.65	2.05	10.78	11.26	11.02
Amer. Tower 'A'	0.90	0.89	0.89	10.65	2.05	11.53	11.82	11.67
ANSYS, Inc.	0.90	0.96	0.93	10.65	2.05	11.95	12.14	12.05
Smith (A.O.)	0.95	1.02	0.98	10.65	2.05	12.49	12.54	12.51
Becton, Dickinson	0.80	0.68	0.74	10.65	2.05	9.93	10.62	10.28
Brown-Forman 'B'	0.90	0.93	0.92	10.65	2.05	11.85	12.06	11.95
Bio-Rad Labs. 'A'	0.80	0.72	0.76	10.65	2.05	10.14	10.78	10.46
Black Knight, Inc.	0.85	0.86	0.86	10.65	2.05	11.21	11.58	11.39
Broadridge Fin'l	0.85	0.83	0.84	10.65	2.05	10.99	11.42	11.21
Cadence Design Sys.	0.95	0.94	0.94	10.65	2.05	12.06	12.22	12.14
CDW Corp.	0.95	1.29	1.12	10.65	2.05	13.98	13.66	13.82
Cerner Corp.	0.90	0.96	0.93	10.65	2.05	11.95	12.14	12.05
Chemed Corp.	0.85	0.96	0.91	10.65	2.05	11.74	11.98	11.86
Cooper Cos.	0.95	0.94	0.95	10.65	2.05	12.17	12.30	12.23
Dolby Labs.	0.95	0.95	0.95	10.65	2.05	12.17	12.30	12.23
Lauder (Estee)	0.90	0.96	0.93	10.65	2.05	11.95	12.14	12.05
ESCO Technologies	0.95	0.94	0.95	10.65	2.05	12.17	12.30	12.23
Exponent, Inc.	0.85	0.89	0.87	10.65	2.05	11.31	11.66	11.49
Forward Air	0.95	1.11	1.03	10.65	2.05	13.02	12.94	12.98
Gentex Corp.	0.95	0.99	0.97	10.65	2.05	12.38	12.46	12.42
Alphabet Inc.	0.90	0.88	0.89	10.65	2.05	11.53	11.82	11.67
Hershey Co.	0.85	0.77	0.81	10.65	2.05	10.68	11.18	10.93
Ingredion Inc.	0.90	0.94	0.92	10.65	2.05	11.85	12.06	11.95
Hunt (J.B.)	0.95	0.92	0.94	10.65	2.05	12.06	12.22	12.14
J&J Snack Foods	0.85	0.77	0.81	10.65	2.05	10.68	11.18	10.93
St. Joe Corp.	0.80	0.96	0.88	10.65	2.05	11.42	11.74	11.58
ManTech Int'l 'A'	0.85	1.10	0.98	10.65	2.05	12.49	12.54	12.51
McCormick & Co.	0.85	0.69	0.77	10.65	2.05	10.25	10.86	10.56
Altria Group	0.85	0.84	0.85	10.65	2.05	11.10	11.50	11.30
Motorola Solutions	0.85	0.95	0.90	10.65	2.05	11.63	11.90	11.77
Vail Resorts	0.90	1.16	1.03	10.65	2.05	13.02	12.94	12.98
NewMarket Corp.	0.85	0.59	0.72	10.65	2.05	9.72	10.46	10.09
Northrop Grumman	0.85	0.84	0.84	10.65	2.05	10.99	11.42	11.21
PerkinElmer Inc.	1.00	0.92	0.96	10.65	2.05	12.27	12.38	12.33
Pool Corp.	0.90	0.93	0.91	10.65	2.05	11.74	11.98	11.86
Rollins, Inc.	0.85	0.70	0.77	10.65	2.05	10.25	10.86	10.56
Selective Ins. Group	0.85	0.93	0.89	10.65	2.05	11.53	11.82	11.67
Sirius XM Holdings	0.95	1.13	1.04	10.65	2.05	13.12	13.02	13.07
Bio-Techne Corp.	0.85	0.81	0.83	10.65	2.05	10.89	11.34	11.11
Tetra Tech	0.90	1.01	0.95	10.65	2.05	12.17	12.30	12.23
Texas Instruments	0.85	0.90	0.88	10.65	2.05	11.42	11.74	11.58
AMERCO	0.90	1.03	0.97	10.65	2.05	12.38	12.46	12.42
VeriSign Inc.	0.95	0.84	0.90	10.65	2.05	11.63	11.90	11.77
West Pharmac. Svcs.	0.80	0.82	0.81	10.65	2.05	10.68	11.18	10.93
		Mean	0.90			11.68 %	11.93 %	11.80 %
		Median	0.91			11.74 %	11.98 %	11.86 %
		Average of Mean and Median	0.91			11.71 %	11.96 %	11.83 %

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

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 August 31, 2020 (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	$ 670.801		8	1.59%	
2.	Proxy Group of Fifteen Electric Companies	$ 14,143.763	21.1 x	2	0.50%	1.09%
			[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	$ 31,090.379	$ 1,061,355.011	-0.28%
	2	13,142.606	30,542.936	0.50%
	3	6,618.604	13,100.225	0.73%
	4	4,312.546	6,614.962	0.79%
	5	2,688.889	4,311.252	1.10%
	6	1,669.856	2,685.865	1.34%
	7	993.855	1,668.282	1.47%
	8	515.621	993.847	1.59%
	9	230.024	515.603	2.22%
Smallest	10	1.973	229.748	4.99%

*From 2020 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 1.09% in Column [4], Line No. 2 is derived as follows 1.09% = 1.59% - 0.50%.

Market Capitalization of Northern States Power Company
Proxy Group of Fifteen Electric Companies

Company	Exchange	[1] Common Stock Shares Outstanding at Fiscal Year End 2019 (millions)	[2] Book Value per Share at Fiscal Year End 2019 (1)	[3] Total Common Equity at Fiscal Year End 2019 (millions)	[4] Closing Stock Market Price on August 31, 2020	[5] Market-to-Book Ratio on August 31, 2020 (2)	[6] Market Capitalization on August 31, 2020 (3) (millions)
Northern States Power Company, a Minnesota Corporation		NA	NA	377.491 (4)	NA		
Based upon Proxy Group of Fifteen Electric Companies						177.7 (5)	$ 670.801 (6)
Proxy Group of Fifteen Electric Companies							
ALLETE, Inc.	NYSE	51.696	$ 43.173	$ 2,231.900	$ 53.960	125.0 %	$ 2,789.543
Alliant Energy Corporation	NASDAQ	245.023	21.243	5,205.100	54.150	254.9	13,267.985
Ameren Corporation	NYSE	246.232	32.729	8,059.000	79.110	241.7	19,479.391
Duke Energy Corporation	NYSE	733.322	63.849	46,822.000	80.340	125.8	58,915.087
Edison International	NYSE	361.985	36.750	13,303.000	52.480	142.8	18,996.980
Entergy Corporation	NYSE	199.727	51.188	10,223.675	99.140	193.7	19,800.909
Evergy, Inc.	NASDAQ	226.641	37.821	8,571.900	53.220	140.7	12,061.858
IDACORP, Inc.	NYSE	50.410	48.892	2,464.628	89.900	183.9	4,531.850
NorthWestern Corporation	NYSE	53.999	37.762	2,039.094	51.640	136.8	2,788.518
OGE Energy Corporation	NYSE	200.177	20.679	4,139.500	31.860	154.1	6,377.651
Otter Tail Corporation	NASDAQ	40.158	19.460	781.482	38.850	199.6	1,560.122
Pinnacle West Capital Corp.	NYSE	112.540	48.255	5,430.648	73.350	152.0	8,254.818
PNM Resources, Inc.	NYSE	79.654	21.075	1,678.698	43.680	207.3	3,479.270
Portland General Electric Co.	NYSE	89.387	28.986	2,591.000	38.150	131.6	3,410.119
Xcel Energy, Inc.	NASDAQ	524.539	25.239	13,239.000	69.475	275.3	36,442.347
Average		214.366	$ 35.807	$ 8,452.042	$ 60.620	177.7 %	$ 14,143.763

NA= Not Available

Notes: (1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 1 * Column 4.
(4) Projected rate base for 2021 multiplied by the requested common equity ratio.
(5) The market-to-book ratio of Northern States Power Company, a Minnesota Corporation on August 31, 2020 is assumed to be equal to the market-to-book ratio of Proxy Group of Fifteen Electric Companies on August 31, 2020 as appropriate.
(6) Column [3] multiplied by Column [5].

Source of Information: 2019 Annual Forms 10K
yahoo.finance.com

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 Fifteen Electric Companies	3.71 %	4.78 %	3.80 %	8.58 %	8.73 %	0.15 %

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