DOCKET NO. _____

APPLICATION OF SOUTHWESTERN PUBLIC SERVICE COMPANY FOR AUTHORITY TO CHANGE RATES	**§ § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

DIRECT TESTIMONY
of
DYLAN W. D'ASCENDIS

on behalf of

SOUTHWESTERN PUBLIC SERVICE COMPANY

(*Filename:* D'AscendisRRDirect.doc)

Table of Contents

GLOSSARY OF ACRONYMS AND DEFINED TERMS

Acronym/Defined Term	Meaning
AGA	American Gas Association
AGIF	American Gas Index Fund
ARCH	Autoregressive conditional heteroscedasticity
beta	Beta coefficient
Bloomberg	Bloomberg Professional Services
Blue Chip	Blue Chip Financial Forecasts
Bluefield	*Bluefield Water Works and Improvement Co. v. Public Service Comm'n of West Virginia*, 262 U.S. 679 (1923)
CAPM	Capital Asset Pricing Model
Commission	Public Utility Commission of Texas
DCF	Discounted Cash Flow
D&P	Duff & Phelps
D&P - 2020	D&P 2020 Valuation Handbook – U.S. Guide to Cost of Capital
DPS	Dividends per share
ECAPM	Empirical Capital Asset Pricing Model
EPS	Earnings Per Share
Fama & French	Eugene F. Fama and Kenneth R. French, *The Capital Asset Pricing Model: Theory and Evidence*
FERC	Federal Energy Regulatory Commission
GARCH	Generalized autoregressive conditional heteroscedasticity
Hope	*Federal Power Comm'n v. Hope Natural Gas Co*., 320 U.S. 591 (1944)

Acronym/Defined Term	Meaning
Moody's	Moody's Investors Service
Morin	Roger A. Morin, New Regulatory Finance
NACVA	National Association of Certified Valuation Analysts
Non-Price Regulated Proxy Group	A proxy group of publicly traded, domestic, non-price regulated competitive firms comparable in total risk to the Utility Proxy Group
OLS	Ordinary Least Squares
PRPM	Predictive Risk Premium Model
ROE	Return on common equity
RPM	Risk Premium Model
S&P	Standard and Poor's
SBBI	Stocks, Bonds, Bills, and Inflation Yearbook published by Duff & Phelps
SEC	United States Securities and Exchange Commission
SML	Security Market Line
SPS or Company	Southwestern Public Service Company, a New Mexico corporation
SURFA	Society of Utility and Regulatory Financial Analysts
SWEPCO	Southwestern Electric Public Company
Utility Proxy Group	Proxy group of publicly traded electric utility companies comparable in risk to SPS
Value Line	Value Line Investment Survey
XEL	Stock symbol for Xcel Energy Inc.
Xcel Energy or Parent	Xcel Energy Inc.

LIST OF ATTACHMENTS

Attachment	Description
DWD-RR-1	Summary of Return on Common Equity (*Filename:* DWD-RR-1 thru DWD-RR-9.xls)
DWD-RR-2	Financial Profile and Capital Structures of the Utility Proxy Group and SPS (*Filename:* DWD-RR-1 thru DWD-RR-9.xls)
DWD-RR-3	Application of the Discounted Cash Flow Model (*Filename:* DWD-RR-1 thru DWD-RR-9.xls)
DWD-RR-4	Application of the Risk Premium Model (*Filename:* DWD-RR-1 thru DWD-RR-9.xls)
DWD-RR-5	Application of the Capital Asset Pricing Model (*Filename:* DWD-RR-1 thru DWD-RR-9.xls)
DWD-RR-6	Basis of Selection for the Non-Price Regulated Companies Comparable in Total Risk to the Utility Proxy Group (*Filename:* DWD-RR-1 thru DWD-RR-9.xls)
DWD-RR-7	Application of Cost of Common Equity Models to the Non-Price Regulated Proxy Group (*Filename:* DWD-RR-1 thru DWD-RR-9.xls)
DWD-RR-8	Derivation of Business Risk Adjustment (*Filename:* DWD-RR-1 thru DWD-RR-9.xls)
DWD-RR-9	Derivation of Flotation Cost Adjustment (*Filename:* DWD-RR-1 thru DWD-RR-9.xls)

DIRECT TESTIMONY
OF
DYLAN W. D'ASCENDIS

I. WITNESS IDENTIFICATION AND QUALIFICATIONS

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 Public Utility Commission of Texas ("Commission") on behalf of Southwestern Public Service Company ("SPS" or the "Company"), a New Mexico corporation and wholly-owned electric utility subsidiary of Xcel Energy Inc. ("Xcel Energy" or the "Parent").

Q. Please summarize your professional experience and educational background.

A. I have offered expert testimony on behalf of investor-owned utilities before over 25 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 the NACVA in 2015.

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

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

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to present evidence on behalf of the Company and recommend the appropriate return on common equity ("ROE") 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 reasonability of the Company's requested capital structure and long and short-term debt cost rates, and (2) the appropriate ROE on its Texas jurisdictional rate base.

Q. Have you prepared schedules in support of your recommendation?

A. Yes. Attachments DWD-RR-1 through 9 were prepared by me or under my direction.

II. SUMMARY

Q. Please summarize your recommended ROE.

A. My recommended ROE of 10.35% is summarized on page 1 of Attachment DWD-RR-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 form of the 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, which is similar in total risk to the Utility 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 1: Summary of Common Equity Cost Rates[3]

Discounted Cash Flow Model	8.34%
Risk Premium Model	10.44%
Capital Asset Pricing Model	12.21%
Market Models Applied to Comparable Risk, Non-Price Regulated Companies	11.97%
Indicated Range of Common Equity Cost Rates Before Adjustments for Company-Specific Risk	9.54% - 10.74%
Size Risk Adjustment	0.15%
Credit Risk Adjustment	0.10%
Indicated Range of Common Equity Cost Rates after Adjustment	9.79% - 10.99%
Recommended Cost of Common Equity	10.35%

The indicated range of common equity cost rates applicable to the Utility Proxy Group is between 9.54% and 10.74% before any Company-specific adjustments.[4] I then adjusted the indicated common equity cost rate upward by 0.15% to reflect the Company's smaller relative size and by 0.10% to account for a riskier bond rating, as compared to the Utility Proxy Group.[5] These adjustments resulted in a Company-specific indicated range of common equity cost rates between 9.79% and 10.99%. Given the Utility Proxy Group and Company-specific ranges of common equity cost rates, my recommended ROE for the Company is 10.35%.

3 *See* Section VI for a detailed discussion regarding the application of my cost of common equity models.

4 The 9.54% low end of the range is calculated by taking the average model result (10.74%), and averaging that with the lowest model result (8.34%). The 10.74% high end of the range is the approximate average of all model results.

5 *See* Section VIII for a detailed discussion of my cost of common equity adjustments.

Q. Please summarize the Company's proposed capital structure.

A. The Company is proposing a capital structure that includes a 54.60% common equity ratio. That common equity ratio is consistent with the Company's historical equity ratios, the equity ratios maintained by the Utility Proxy Group and their operating subsidiary companies.

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 reasonableness of the proposed capital structure;
- Section VI – Describes the analyses on which my Cost of Common Equity recommendation is based;
- Section VII – Summarizes my common equity cost rate before adjustments to reflect Company-specific factors;
- Section VIII – Explains my adjustments to my common equity cost rate to reflect Company-specific factors; and
- Section IX – Presents my conclusions.

III. GENERAL PRINCIPLES AND REGULATORY GUIDELINES

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]

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

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

The provisions of the Public Utility Act and Texas Supreme Court precedent are consistent with these requirements. PURA § 36.051 provides:

> In establishing an electric utility's rates, the regulatory authority shall establish the utility's overall revenues at an amount that will permit the utility a reasonable opportunity to earn a reasonable return on the utility's invested capital used and useful in providing service to the public in excess of the utility's reasonable and necessary operating expenses.

In *State v. Pub. Util. Comm'n of Tex*., the Court emphasized that this provision "requires the Commission to set, as a *minimum* lawful rate, revenues at a level which will permit the utility 'a reasonable opportunity to earn a reasonable return . . . '"[7]

Lastly, the required return for a regulated public utility is established on a stand-alone basis, *i.e.,* for the utility operating company at issue in a rate case. Parent entities, like other investors, have capital constraints and must look at the

[7] 883 S.W.2d 190, 194–95 (Tex. 1994) (construing statutory predecessor to Section 36.051, emphasis in original).

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 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 Texas 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 weighted average cost of capital, 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 common equity must be estimated based on market data and various financial models. Because the cost of common 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.

Q. Is the authorized return set in regulatory proceedings guaranteed?

A. No, it is not. Consistent with the *Hope* and *Bluefield* standards, the rate-setting process should provide the utility a reasonable opportunity to recover its return of, and return on, its prudently incurred investments, but it does not guarantee that return. While a utility may have control over some factors that affect the ability to earn its authorized return (*e.g.*, management performance, operating and maintenance expenses, etc.), there are several factors beyond a utility's control that affect its ability to earn its authorized return. Those may include factors such as weather, the economy, and the prevalence and magnitude of regulatory lag.

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 ROE 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 ROE, assuming the firm is financed with no debt.

Examples of business risks faced generally 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 ROE, 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 ROE 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 ROE.

Q. Does SPS have unique business risks relative to the proxy group?

A. Yes. SPS's degree of customer concentration, which is highly skewed towards commercial and industrial customers, poses an incremental element of business risk because those customer classes generally are the least stable sources of throughput, exposing the Company to increased earnings and cash flow volatility relative to the proxy group.

Approximately 80.00% of SPS's 2019 retail electric sales (MWh), and 67.00% of its retail electric revenues, were derived from commercial and industrial customers,[8] a large number portion from oil and gas companies. Further, approximately 29.50% of SPS's total electric sales and 19.50% of its total electric revenues are attributable to sales for resale in the wholesale electric market.[9] SPS's retail sales volume to commercial and industrial customers as a percentage of total volume (80.00%) is the second highest of the proxy companies. In fact, SPS's

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

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

degree of customer concentration is approximately 15.00% higher than the proxy group average (65.00%).

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). Consequently, as the degree of financial leverage increases, the risk of financial distress (*i.e.,* financial risk) also increases. 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. 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.[10] Although specific business or financial risks may differ between

[10] 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.

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. SPS AND THE UTILITY PROXY GROUP

Q. Why is it necessary to develop a proxy group when estimating the ROE for the Company?

A. Because the Company is not publicly traded and does not have publicly traded equity securities, it is necessary to develop groups of publicly traded, comparable companies to serve as "proxies" for the Company. In addition to the analytical necessity of doing so, the use of proxy companies 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.[11]

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 that 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

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

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 which is comprised of 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 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. SPS is a vertically integrated electric utility that provides electric generation, transmission, and distribution service to approximately 400,000 retail electric customers in Texas and New Mexico.[12] The Company has long-term issuer ratings of Baa2 from Moody's Investors Service ("Moody's") and A- from Standard and Poor's ("S&P").[13] The Company is not publicly-traded as it is an operating subsidiary of Xcel Energy. Xcel Energy is publicly-traded under ticker symbol "XEL".

Page 1 of Attachment DWD-RR-2 contains comparative capitalization and financial statistics for the Company for the years 2015 to 2019.[14] During the five-year period ending 2019, the historically achieved average earnings rate on book common equity for the Company averaged 8.48%. The average common equity

12 *See,* Xcel Energy Inc., SEC Form 10-K at 8, 7 (Dec. 31, 2019).

13 Source: S&P Global Market Intelligence.

14 Source: SPS FERC Form 1. Reflects entire operations of the Company.

ratio based on total permanent capital (excluding short-term debt) was 53.92%, and the average dividend payout ratio was 79.50%.

Total debt to earnings before interest, taxes, depreciation, and amortization for the years 2015 to 2019 ranges between 3.54 times and 4.17 times, with an average of 3.85 times. Funds from operations to total debt range from 17.33% to 25.33%, with an average of 20.78%.

Q. Please explain how you chose the companies in the Utility Proxy Group.

A. Because the cost of common 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* (Standard Edition);

(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 coefficients ("beta");

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

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

The following 13 companies met these criteria:

Table 2: 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
IDACORP, Inc.	IDA
NorthWestern Corporation	NWE
OGE Energy Corporation	OGE
Otter Tail Corporation	OTTR
Pinnacle West Capital Corporation	PNW
Portland General Electric Co.	POR
Xcel Energy, Inc.	XEL

Q. Please summarize the Utility Proxy Group's historical capitalization and financial statistics.

A. Page 2 of Attachment DWD-RR-2 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 Utility Proxy Group averaged 8.92%, the average common equity ratio based on total permanent capital (excluding short-term debt) was 48.93%, and the average dividend payout ratio was 53.55%.

Total debt to earnings before interest, taxes, depreciation, and amortization for the years 2015 to 2019 ranges between 3.96 and 5.30 times, with an average of 4.52 times. Funds from operations to total debt range from 15.01% to 23.50%, with an average of 19.71%. Given those capitalization and financial statistics, I conclude the Utility Proxy Group is generally comparable to the Company.

V. CAPITAL STRUCTURE

Q. What is SPS's requested capital structure?

A. The Company's requested capital structure consists of 45.40% long-term debt and 54.60% common equity. SPS's requested capital structure is its actual capital structure at September 30, 2020, as testified to by Company witness Patricia L. Martin.

Q. Does SPS have a separate capital structure that is recognized by investors?

A. Yes. SPS is a separate corporate entity that has its own capital structure and issues its own debt. SPS's actual capital structure is reflected in registrations of its debt with the Securities Exchange Commission ("SEC").

Q. What are the typical sources of capital commonly considered in establishing a utility's capital structure?

A. Common equity and long-term debt are commonly considered in establishing a utility's capital structure because they are the typical sources of capital financing a utility's rate base.

Q. Please explain.

A. Long-lived assets are typically financed with long-lived securities, so that the overall term structure of the utility's long-term liabilities (both debt and equity) closely match the life of the assets being financed. As stated by Brigham and Houston:

> In practice, firms don't finance each specific asset with a type of capital that has a maturity equal to the asset's life. However, academic studies do show that most firms tend to finance short-term

assets from short-term sources and long-term assets from long-term sources.[15]

Whereas short-term debt has a maturity of one year or less, long-term debt may have maturities of 30 years or longer. Although there are practical financing constraints, such as the need to "stagger" long-term debt maturities, the general objective is to extend the average life of long-term debt. Still, long-term debt has a finite life, which is likely to be less than the life of the assets included in rate base. Common equity, on the other hand, is outstanding into perpetuity. Thus, common equity more accurately matches the life of the going concern of the utility, which is also assumed to operate in perpetuity. Consequently, it is both typical and important for utilities to have significant proportions of common equity in their capital structures.

Q. Why is it important that the Company's actual capital structure, consisting of 45.40% long-term debt and 54.60% common equity, be authorized in this proceeding?

A. In order to provide safe, reliable, and affordable service to its customers, SPS 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 with maintaining a healthy balance sheet, strong credit ratings, and a supportive regulatory environment, so that the Company has access to capital on reasonable terms in order to make necessary investments.

[15] Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management, Concise 4th Ed., Thomson South-Western, 2004, at 574.

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. As Ms. Martin explains, an appropriate capital structure is important not only to ensure long-term financial integrity, it also is critical to enabling access to capital during constrained markets, or when near-term liquidity is needed to fund extraordinary requirements. In that important respect, the capital structure, and the financial strength it engenders, must support both normal circumstances and periods of market uncertainty. 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 investments, 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.

Q. How does the Company's actual common equity ratio of 54.60% compare with the common equity ratios maintained by the Utility Proxy Group?

A. The Company's requested ratemaking common equity ratio of 54.60% is reasonable and consistent with the range of common equity ratios maintained by the Utility Proxy Group. As shown on pages 3 and 4 of Attachment DWD-RR-2, common equity ratios of the Utility Proxy Group companies range from 36.10% to 58.04% for fiscal year 2019.

I also considered *Value Line* projected capital structures for the utilities for 2023-2025. That analysis shows a range of projected common equity ratios between 36.50% and 59.00%.[16]

In addition to comparing the Company's actual common equity ratio with common equity ratios currently and expected to be maintained by the Utility Proxy Group, I also compared the Company's actual common equity ratio with the equity ratios maintained by the operating subsidiaries of the Utility Proxy Group companies. As shown on page 5 of Attachment DWD-RR-2, common equity ratios of the operating utility subsidiaries of the Utility Proxy Group range from 47.47% to 65.22% for fiscal year 2019.

Q. Is SPS's actual equity ratio of 54.60% appropriate for ratemaking purposes given the range of the Utility Proxy Group?

A. Yes, it is. The Company's actual equity ratio of 54.60% is appropriate for ratemaking purposes in the current proceeding because it is within the range of the common equity ratios currently maintained and expected to be maintained, by the Utility Proxy Group and their operating subsidiaries.

16 *See*, pages 2 through 14 of Attachment DWD-RR-3.

VI. 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 beta to determine the equity risk premium also reflects the market's assessment of market/systematic risk, as betas 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 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 common 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 Common 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 use 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 January 8, 2021, divided by the average closing market price for the 60 trading days ended January 8, 2021.[17]

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.

[17] *See,* Column 1, page 1 of Attachment DWD-RR-3.

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 Attachment DWD-RR-3 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 Attachment DWD-RR-3, the application of the Constant Growth DCF model to the Utility Proxy Group results in a wide range of indicated ROEs from 6.03% to 11.24%. The mean of those results is 8.45%, the median result is 8.23%, and the average of the two is 8.34%. 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.*, 8.34%) 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.

i. Predictive Risk Premium Model

Q. Please explain the PRPM.

A. The PRPM, published in the *Journal of Regulatory Economics,*[18] 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.[19] 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

[18] 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.

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

volatility can be used to predict future volatility, which then can be translated to a predicted equity risk premium.

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

The inputs to the model are the historical returns on the common shares of each Utility Proxy Group company minus the historical monthly yield on long-term U.S. Treasury securities through December 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[20] and a GARCH coefficient.[21] Multiplying the predicted monthly variance by the GARCH coefficient and then annualizing it[22] produces the predicted annual equity risk premium. I then added the forecasted 30-year U.S. Treasury bond yield of 2.25%[23] 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.*[24] The mean PRPM indicated common equity cost rate for the Utility Proxy Group is 10.50%,

---

20 Illustrated on Columns 1 and 2, page 2 of Attachment DWD-RR-4.

21 Illustrated on Column 4, page 2 of Attachment DWD-RR-4.

22 Annualized Return = (1 + Monthly Return) ^12 - 1

23 *See,* Column 6, page 2 of Attachment DWD-RR-4.

24 *Blue Chip Financial Forecasts ("Blue Chip")*, December 1, 2020 at page 14 and January 1, 2021 at page 2.

the median is 10.26%, and the average of the two is 10.38%. 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 10.38%.

Q. Please describe your selection of a risk-free rate of return.

A. As shown in Attachments DWD-RR-4 and DWD-RR-5, the risk-free rate adopted for applications of the RPM and CAPM is 2.25%. 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 second calendar quarter of 2022, 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 A2-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.[25]

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-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.[26]

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."[27] 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."[28]

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 SPS's utility plant is approximately 27 years based on the composite depreciation rate of the components

---

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

[26] Roger A. Morin, New Regulatory Finance, Public Utilities Reports, Inc., 2006, at 151. ("Morin")

[27] 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.

[28] Paper cited with permission of author.

of its utility plant.[29] Thus, the use of a 30-year Treasury bond yield is an appropriate risk-free rate as it reflects the life of the assets it finances.

ii. 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 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, 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 first calendar quarter of 2022, and *Blue Chip's* long-term projections for 2022 to 2026, and 2027 to 2031. As shown on line 1, page 3 of Attachment DWD-RR-4, the average expected yield on Moody's Aaa-rated corporate bonds is 3.00%.

[29] Average depreciation 3.77%. 1 / 3.77% = 26.53 years.

Because that 3.00% 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 0.56%, which represents a recent spread between Aaa-rated corporate bonds and A2-rated public utility bonds.[30] Adding that recent 0.56% spread to the expected Aaa-rated corporate bond yield of 3.00% results in an expected A2-rated public utility bond yield of 3.56%.

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 0.10%, 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.[31] Adding the 0.10% to the 3.56% prospective A2-rated public utility bond yield results in a 3.66% expected bond yield applicable to the Utility Proxy Group.

[30] As shown on line 2 and explained in note 2, page 3 of Attachment DWD-RR-4.

[31] As shown on line 4 and explained in note 3, page 3 of Attachment DWD-RR-4. 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.

Table 3: Summary of the Calculation of the Utility Proxy Group Projected Bond Yield[32]

Prospective Yield on Moody's Aaa-Rated Corporate Bonds (*Blue Chip)*	3.00%
Adjustment to Reflect Yield Spread Between Moody's Aaa-Rated Corporate Bonds and Moody's A2-Rated Utility Bonds	0.56%
Adjustment to Reflect the Utility Proxy Group's Average Moody's Bond Rating of A3	0.10%
Prospective Bond Yield Applicable to the Utility Proxy Group	3.66%

To develop the total market approach RPM estimate of the appropriate ROE, 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-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) beta. 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 Attachment DWD-RR-4. 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.

[32] As shown on page 3 of Attachment DWD-RR-4.

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")[33] less the average historical yield on Moody's Aaa/Aa2-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.

SBBI's long-term arithmetic mean monthly total return rate on large company common stocks was 11.82% and the long-term arithmetic mean monthly yield on Moody's Aaa/Aa2-rated corporate bonds was 6.05%.[34] As shown on line 1, page 8 of Attachment DWD-RR-4, 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.[35] 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

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

[34] As explained in note 1, page 9 of Attachment DWD-RR-4.

[35] *See,* SBBI - 2020, at 10-22.

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 to 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 9.37% shown on line 2, page 8 of Attachment DWD-RR-4, I used the same monthly annualized total returns on large company common stocks relative to the monthly annualized yields on Moody's Aaa/Aa2-rated corporate bonds as mentioned above. I modeled the relationship between interest rates and the market equity risk premium using the observed monthly market equity risk premium as the dependent variable, and the monthly yield on Moody's Aaa/Aa2-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/Aa2-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/Aa2-rated corporate

bonds during the period from January 1928 through December 2020.[36] 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 9.63%.[37]

Q. Please explain the derivation of a projected equity risk premium based on *Value Line* data for your RPM analysis.

A. As noted above, because both ratemaking and the cost of capital are prospective, a prospective market equity risk premium is needed. The derivation of the forecasted or prospective market equity risk premium can be found in note 4, page 9 of Attachment DWD-RR-4. 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 the three- to five-year median market price appreciation potential by *Value Line* for the 13 weeks ended January 8, 2021, plus an average of the median estimated dividend yield for the common stocks of the 1,700 firms covered in *Value Line* (Standard Edition).[38]

The average median expected price appreciation is 40%, which translates to an 8.78% annual appreciation, and, when added to the average of *Value Line's* median expected dividend yields of 2.11%, equates to a forecasted annual total return rate on the market of 10.89%. The forecasted Moody's Aaa-rated corporate bond yield of 3.00% is deducted from the total market return of 10.89%, resulting

[36] Data from January 1928 to December 2019 is from SBBI - 2020. Data from January 2020 to December 2020 is from Bloomberg.

[37] Shown on line 3, page 8 of Attachment DWD-RR-4.

[38] As explained in detail in note 1, page 2 of Attachment DWD-RR-4.

in an equity risk premium of 7.89%, as shown on line 4, page 8 of Attachment DWD-RR-4.

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 13.99%. Subtracting the prospective yield on Moody's Aaa-rated corporate bonds of 3.00% results in a 10.99% 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 the S&P 500 is 15.36%. Subtracting the prospective yield on Moody's Aaa-rated corporate bonds of 3.00% results in a 12.36% projected equity risk premium.

Q. What is your conclusion of a beta-derived equity risk premium for use in your RPM analysis?

A. I gave equal weight to all six equity risk premiums based on each source – historical, *Value Line*, and Bloomberg – in arriving at a 9.34% equity risk premium.

Table 4: Summary of the Calculation of the Equity Risk Premium Using Total Market Returns[39]

Historical Spread Between Total Returns of Large Stocks and Aaa and Aa2-Rated Corporate Bond Yields (1928 – 2019)	5.78%
Regression Analysis on Historical Data	9.37%
PRPM Analysis on Historical Data	9.63%
Prospective Equity Risk Premium using Total Market Returns from *Value Line* Summary & Index less Projected Aaa Corporate Bond Yields	7.89%
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	10.99%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from Bloomberg Professional Services for the S&P 500 less Projected Aaa Corporate Bond Yields	12.36%
Average	9.34%

After calculating the average market equity risk premium of 9.34%, I adjusted it by beta to account for the risk of the Utility Proxy Group. As discussed below, beta 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 Attachment DWD-RR-5, the average of the mean and median beta for the Utility Proxy Group is 0.97. Multiplying the 0.97 average beta by the market equity risk premium of 9.34% results in a beta-adjusted equity risk premium for the Utility Proxy Group of 9.06%.

[39] As shown on page 8 of Attachment DWD-RR-4.

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 A2-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 A2-rated public utility bond yields of 6.53% from 1928 to 2019 to arrive at an equity risk premium of 4.21%.[40] 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 December 2020 to arrive at a PRPM-derived equity risk premium 5.60% for the S&P Utility Index.

I then derived expected total returns on the S&P Utilities Index of 10.34% and 7.74% using data from *Value Line* and Bloomberg, respectively, and subtracted the prospective Moody's A2-rated public utility bond yield of 3.56%[41], which resulted in equity risk premiums of 6.78% and 4.18%, respectively. As with the market equity risk premiums, I averaged each risk premium based on each source (*i.e.*, historical, *Value Line*, and Bloomberg) to arrive at my utility-specific equity risk premium of 5.52%.

[40] As shown on line 1, page 12 of Attachment DWD-RR-4.

[41] Derived on line 3, page 3 of Attachment DWD-RR-4.

Table 5: Summary of the Calculation of the Equity Risk Premium Using S&P Utility Index Holding Returns[42]

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	5.60%
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	6.78%
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	4.18%
Average	5.52%

c. Authorized Return-Derived Equity Risk Premium

Q. How do you derive an equity risk premium of 5.92% based on authorized ROEs for electric utilities?

A. The equity risk premium of 5.92% shown on line 3, page 7 of Attachment DWD-RR-4 is the result of a regression analysis based on regulatory awarded ROEs related to the yields on Moody's A2-rated public utility bonds. That analysis is shown on page 13 of Attachment DWD-RR-4. Page 13 of Attachment DWD-RR-4 contains the graphical results of a regression analysis of 1,178 rate cases for electric utilities which were fully litigated during the period from January 1, 1980 through January 8, 2021. It shows the implicit equity risk premium relative to the yields on A2-rated public utility bonds immediately prior to the issuance of each regulatory decision. That is, the analysis considers the relationship between

[42] As shown on page 12 of Attachment DWD-RR-4.

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.[43] 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 page 13 of Attachment DWD-RR-4.

Q. What is your conclusion of an equity risk premium for use in your total market approach RPM analysis?

A. The equity risk premium I apply to the Utility Proxy Group is 6.83%, which is the average of the beta-adjusted equity risk premium for the Utility Proxy Group, the S&P Utilities Index, and the authorized return utility equity risk premiums of 9.06%, 5.52%, and 5.92%, respectively.[44]

Q. What is the indicated RPM common equity cost rate based on the total market approach?

A. As shown on line 7, page 3 of Attachment DWD-RR-4 and shown on Table 6, below, I calculated a common equity cost rate of 10.49% for the Utility Proxy Group based on the total market approach RPM.

---

[43] *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.

[44] As shown on page 7 of Attachment DWD-RR-4.

Table 6: Summary of the Total Market Return Risk Premium Model[45]

Prospective Moody's A3-Rated Utility Bond Applicable to the Utility Proxy Group	3.66%
Prospective Equity Risk Premium	6.83%
Indicated Cost of Common Equity	10.49%

Q. What are the results of your application of the PRPM and the total market approach RPM?

A. As shown on page 1 of Attachment DWD-RR-4, the indicated RPM-derived common equity cost rate is 10.44%, which gives equal weight to the PRPM (10.38%) and the adjusted-market approach results (10.49%).

C. The Capital Asset Pricing Model

Q. Please explain the theoretical basis of the CAPM.

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

[45] As shown on page 3 of Attachment DWD-RR-4.

is adjusted proportionately to reflect the systematic risk of the individual security relative to the total market as measured by beta. 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 (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 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 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.[46]

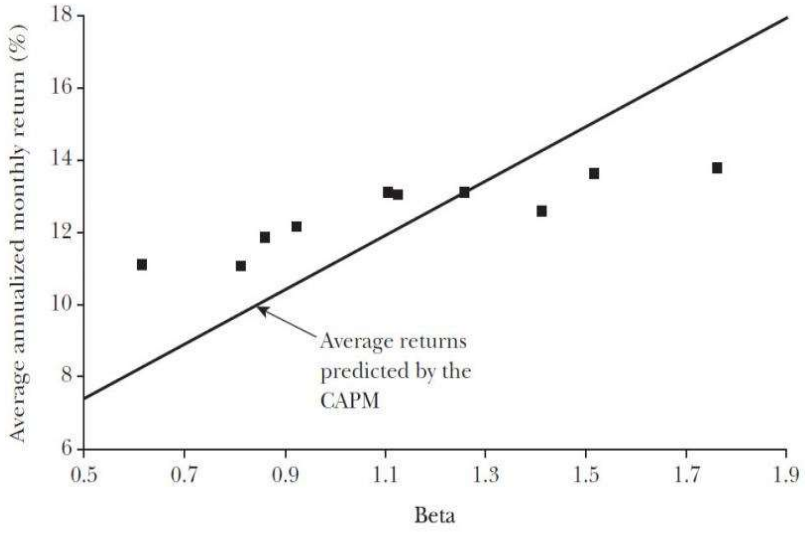
In their work on the CAPM, Fama and French clearly state regarding Figure 2, below, that "[t]he returns on the low beta portfolios are too high, and the returns on the high beta portfolios are too low."[47]

[46] Morin, at 175.

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

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

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



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

> With few exceptions, the empirical studies agree that … low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted.[48]
>
> * * *
>
> 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:

[48] Morin, at 175.

$$K = R_F + 0.25(R_M - R_F) + 0.75\ \beta(R_M - R_F)$$[49]

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).[50]

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.[51]

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 betas did you use in your CAPM analysis?

A. For the beta in my CAPM analysis, I considered two sources: *Value Line* and Bloomberg Professional Services. While both of those services adjust their

[49] Morin, at 190.

[50] Fama & French, at 32.

[51] *Ibid.,* at 33.

calculated (or "raw") beta to reflect the tendency of beta to regress to the market mean of 1.00, *Value Line* calculates betas over a five-year period, while Bloomberg calculates them 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 2.25%. 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 second calendar quarter of 2022, 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 on page 2 of Attachment DWD-RR-5. 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%.[52] I applied a linear OLS regression to the monthly annualized historical returns on the S&P 500

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

relative to historical yields on long-term U.S. Government securities from SBBI - 2020. That regression analysis yielded a market equity risk premium of 10.04%. The PRPM market equity risk premium is 10.74%, and is derived using the PRPM relative to the yields on long-term U.S. Treasury securities from January 1926 through December 2020.

The *Value Line*-derived forecasted total market equity risk premium is derived by deducting the forecasted risk-free rate of 2.25%, discussed above, from the *Value Line* projected total annual market return of 10.89%, resulting in a forecasted total market equity risk premium of 8.64%. The S&P 500 projected market equity risk premium using *Value Line* data is derived by subtracting the projected risk-free rate of 2.25% from the projected total return of the S&P 500 of 13.99%. The resulting market equity risk premium is 11.74%.

The S&P 500 projected market equity risk premium using Bloomberg data is derived by subtracting the projected risk-free rate of 2.25% from the projected total return of the S&P 500 of 15.36%. The resulting market equity risk premium is 13.11%. These six measures, when averaged, result in an average total market equity risk premium of 10.21%.

Table 7: Summary of the Calculation of the Market Risk Premium for Use in the CAPM[53]

Historical Spread Between Total Returns of Large Stocks and Long-Term Government Bond Yields (1926 – 2019)	7.01%
Regression Analysis on Historical Data	10.04%
PRPM Analysis on Historical Data	10.74%
Prospective Equity Risk Premium using Total Market Returns from *Value Line* Summary & Index less Projected 30-Year Treasury Bond Yields	8.64%
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	11.74%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from Bloomberg Professional Services for the S&P 500 less Projected 30-Year Treasury Bond Yields	13.11%
Average	10.21%

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 Attachment DWD-RR-5, the mean result of my CAPM/ECAPM analyses is 12.31%, the median is 12.11%, and the average of the two is 12.21%. 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 12.21%.

[53] As shown on page 2 of Attachment DWD-RR-5.

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 and related statistics derived from *Value Line* regression analyses of weekly market prices over the most recent 260 weeks (*i.e.*, five years). These selection criteria resulted in a proxy group of 48 domestic, non-price regulated firms comparable in total risk to the Utility Proxy Group. Total risk is the sum of non-diversifiable market risk and diversifiable company-specific risks. The criteria used in selecting the domestic, non-price regulated firms was:

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

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

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

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

As discussed above, betas 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 betas and similar residual standard errors resulting from the same regression analyses have similar total investment risk.

Q. Have you prepared a schedule which shows the data from which you selected the 48 domestic, non-price regulated companies that are comparable in total risk to the Utility Proxy Group?

A. Yes, the basis of my selection and both proxy groups' regression statistics are shown in Attachment DWD-RR-6.

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 Attachment DWD-RR-7 applies the Constant Growth model to the Non-Price Regulated Proxy Group. As shown, the indicated common equity cost rate is 11.92%.

Pages 3 through 5 of Attachment DWD-RR-7 contain the data and calculations that support the 12.45% RPM common equity cost rate. As shown on line 1, page 3 of Attachment DWD-RR-7, the consensus prospective yield on Moody's Baa2-rated corporate bonds for the six quarters ending in the second quarter of 2022, and for the years 2022 to 2026 and 2027 to 2031, is 4.03%.[54] Since the Non-Price Regulated Proxy Group has an average Moody's long-term issuer rating of Baa1, a downward adjustment of 0.17% 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 3.86%.

When the beta-adjusted risk premium of 8.59%[55] relative to the Non-Price Regulated Proxy Group is added to the prospective Baa1-rated corporate bond yield of 3.86%, the indicated RPM common equity cost rate is 12.45%.

Page 6 of Attachment DWD-RR-7 contains the inputs and calculations that support my indicated CAPM/ECAPM common equity cost rate of 11.70%.

[54] *Blue Chip*, December 1, 2020, at page 14 and January 1, 2021 at page 2.

[55] Derived on page 5 of Attachment DWD-RR-7.

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 Attachment DWD-RR-7, the results of the common equity models applied to the Non-Price Regulated Proxy Group – which is comparable in total risk to the Utility Proxy Group – are as follows: 11.92% (DCF), 12.45% (RPM), and 11.70% (CAPM). The average of the mean and median of these models is 11.97%, which I used as the indicated common equity cost rates for the Non-Price Regulated Proxy Group.

VII. 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 9.54% and 10.74%. 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 9.54% and 10.74% 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.,* 9.54%) was calculated by averaging the average of all model results (10.74%) with the lowest model result (8.34%), 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 ROE.

VIII. 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 Texas 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 Texas operations, it is necessary to compare the Company's Texas-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)[56]

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.[57]

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.[58] Eugene Brigham, a well-known authority, states:

---

[56] Duff & Phelps Valuation Handbook – U.S. Guide to Cost of Capital, Wiley 2020, at 4-1.

[57] Fama & French, at 25-43.

[58] 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)[59]

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

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

Table 8: Size as Measured by Market Capitalization for SPS's Electric Operations and the Utility Proxy Group

	Market Capitalization* ($ Millions)	Times Greater than the Company
SPS TX Jurisdictional	$3,334.553	
Utility Proxy Group	$15,710.344	4.7x
*From page 1 of Attachment DWD-RR-8.		

The Company's estimated market capitalization for its Texas operations was $3,334.553 million as of December 31, 2020, compared with the market capitalization of the average company in the Utility Proxy Group of $15,710.344 million as of January 8, 2021. The average company in the Utility Proxy Group has a market capitalization 4.7 times the size of the Company's estimated Texas-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 New York Stock Exchange, American Stock Exchange, and NASDAQ listed companies ranked by deciles for the 1926 to 2019 period.[60] The average size premium for the Utility Proxy Group with a market capitalization of $15,710.344 million falls in the 2nd decile, while the Company's estimated market capitalization of $3,334.553 million places it in the 5th decile. The size premium spread between the 2nd decile and the 5th decile is 0.60%.[61] Even though a 0.60% upward size adjustment is indicated, I applied a size premium of

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

[61] *Ibid.,* See also, Attachment DWD-RR-8.

0.15% 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 Xcel Energy not more appropriate to use when determining the size adjustment?

A. The return derived in this proceeding will not apply to Xcel Energy's operations as a whole, but only to the Company's Texas operations. Xcel Energy is the sum of its constituent parts, including those constituent parts' ROEs. Potential investors in Xcel Energy 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 Xcel Energy's return is commensurate with the realities of the Company's composite operations in each of the states in which it operates.

B. Credit Risk Adjustment

Q. Please discuss your proposed credit risk adjustment.

A. SPS's long-term issuer ratings are Baa2 and A[62] from Moody's Investors Services and S&P, respectively, which are riskier than the average long-term issuer ratings for the Utility Proxy Group of A3 and BBB+, respectively. As Ms. Martin notes in her direct testimony, SPS has a Stand-Alone Credit Profile of BBB+, which is equivalent to a Moody's rating of Baa1. Using SPS's equivalent Moody's Stand-Alone Credit Profile of Baa1, an upward credit risk adjustment is necessary to reflect the lower credit rating, *i.e.,* Baa1, of the Company relative to the A3 average Moody's bond rating of the Utility Proxy Group.[63]

[62] Ms. Martin notes SPS's Stand Alone Credit Profile rating from S&P is BBB+.

[63] As shown on page 5 of Attachment DWD-RR-4.

An indication of the magnitude of the necessary downward adjustment to reflect the higher credit risk inherent in a Baa1 bond rating is one-third of a recent three-month average spread between Moody's Baa2 and A2-rated public utility bond yields of 0.30%, shown on page 4 of Attachment DWD-RR-4, or 0.10%.[64] This adjustment is conservative because, as noted earlier, equity investors demand higher returns than debt investors for companies with greater financial leverage.

C. Flotation Costs

Q. What are flotation costs?

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

Q. Has the Commission accepted a flotation cost adjustment in recent cases?

A. No, it has not. In its order in a Southwestern Electric Public Company ("SWEPCO") rate case (Docket No. 40443), the Commission stated:

> Because it is unknown whether SWEPCO's parent company will procure the capital used to make equity infusions through retained earnings of the parent company, debt issuances of the parent company or a stock issuance, a flotation adjustment to the ROE would not be appropriate as its not known and measurable.[65]

---

[64] 0.10% = 0.30% * (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.

[65] *Application of Southwestern Electric Power Company for Authority to change Rates and Reconcile Fuel Costs*, PUC Docket No. 40443, Order, Public Utility Commission of Texas, October 10, 2013, at 10.

Q. Do you agree with the Commission's findings in Docket No. 40443?

A. I respectfully disagree with the Commission's reasoning for excluding a flotation cost adjustment. The recovery of flotation costs is an historical, not forward-looking analysis. As Morin notes, "The flotation cost adjustment cannot be strictly forward-looking unless all past flotation costs associated with past issues have been recovered."[66] Morin further states, "even if no further stock issues are contemplated, the flotation cost adjustment is still permanently required to keep shareholders whole."[67]

Further, a flotation cost adjustment 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 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.[68]

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

[66] Morin, at p. 335.

[67] Morin, at p. 329.

[68] Morin, at p. 321.

example, Brigham and Daves confirm this and provide the methodology utilized to calculate the flotation adjustment.[69] In addition, as noted above, Morin confirms the need for such an adjustment even when no new equity issuance is imminent.[70] Consequently, it is proper to include a flotation cost adjustment when using cost of common equity models to estimate the common equity cost rate.

Q. How did you calculate the flotation cost allowance?

A. I modified the DCF calculation to provide a dividend yield that would reimburse investors for issuance costs in accordance with the method cited in literature by Brigham and Daves, as well as by Morin. The flotation cost adjustment recognizes the actual costs of issuing equity that were incurred by Xcel Energy. Based on the issuance costs shown on page 1 of Attachment DWD-RR-9, an adjustment of 0.15% is required to reflect the flotation costs applicable to the Utility Proxy Group.

Q. Did you include a 15-basis point adjustment to your recommend range to reflect flotation costs?

A. No, I did not. Although I believe a flotation cost adjustment is warranted in this proceeding, I have not reflected it in my recommended range, because I recognize the Commission has typically not made such an adjustment in prior cases. Given that, I believe my recommendation is a conservative estimate of the Company's required return.

---

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

[70] Morin, at pp. 327-30.

Q. What is the indicated cost of common equity after your Company-specific adjustments?

A. Applying the 0.15% size adjustment and the 0.10% credit risk adjustment to the indicated range of common equity cost rates between 9.54% and 10.74% results in a Company-specific range of common equity rates between 9.79% and 10.99%. In consideration of both of these indicated ranges, I recommend an ROE of 10.35% for SPS in this proceeding.

IX. CONCLUSION

Q. What is your recommended ROE for the Company?

A. Given the discussion above and the results from the analyses, I recommend that an ROE of 10.35% is appropriate for the Company at this time.

Q. In your opinion, is your proposed ROE of 10.35% fair and reasonable to SPS and its customers?

A. Yes, it is.

Q. In your opinion, is SPS's proposed capital structure fair and reasonable?

A. Yes, it is.

Q. Does this conclude your Direct Testimony?

A. Yes, it does.

AFFIDAVIT

STATE OF NEW JERSEY)
)
COUNTY OF BURLINGTON)

Dylan W. D'Ascendis, first being sworn on his oath, states:

I am the witness identified in the preceding testimony. I have read the direct testimony and the accompanying attachments and am familiar with their contents. Based upon my personal knowledge, the facts stated in the testimony are true. In addition, in my judgment and based upon my professional experience, the opinions and conclusions stated in the testimony are true, valid, and accurate.

DYLAN W. D'ASCENDIS

SUBSCRIBED AND SWORN TO before me this 21 day of January, 2021 Dylan W. D'Ascendis.

Margaret A Clancy
Notary Public of the State of New Jersey

Margaret A Clancy
Notary Public of New Jersey
My Commission Expires 6/9/2024

My Commission Expires: 6/9/2024

Southwestern Public Service Company
Brief Summary of Common Equity Cost Rate

Line No.	Principal Methods	Proxy Group of Thirteen Electric Companies
1.	Discounted Cash Flow Model (DCF) (1)	8.34%
2.	Risk Premium Model (RPM) (2)	10.44%
3.	Capital Asset Pricing Model (CAPM) (3)	12.21%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	11.97%
5.	Indicated Range of Common Equity Cost Rates before Adjustment for Company-Specific Risk (5)	9.54% - 10.74%
6.	Size Risk Adjustment (6)	0.15%
7.	Credit Risk Adjustment (7)	0.10%
9.	Indicated Range of Common Equity Cost Rates after Adjustment	9.79% - 10.99%
10.	Recommended Common Equity Cost Rate	10.35%

Notes:
(1) From page 1 of Schedule 3.
(2) From page 1 of Schedule 4.
(3) From page 1 of Schedule 5.
(4) From page 1 of Schedule 7.
(5) The low end of the indicated range is calculated by using the average of the DCF results (8.34%) and average model result (10.74%). The high end of the indicated range is the average model result (10.74%).
(6) 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.
(7) Company-specific risk adjustment to reflect SPS's greater credit risk compared to the Utility Proxy Group as detailed in Mr. D'Ascendis' direct testimony.

Southwestern Public Service Company
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	$ 5,327.381	$ 4,683.085	$ 3,978.618	$ 3,582.061	$ 3,358.554	
SHORT-TERM DEBT	-	42.000	-	50.000	15.000	
TOTAL-CAPITAL EMPLOYED	$ 5,327.381	$ 4,725.085	$ 3,978.618	$ 3,632.061	$ 3,373.554	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	4.27 %	4.03 %	4.70 %	5.31 %	5.50 %	
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	45.86 %	45.83 %	46.45 %	46.07 %	46.17 %	46.08 %
PREFERRED STOCK	-	-	-	-	-	-
COMMON EQUITY	54.14	54.17	53.55	53.93	53.83	53.92
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	45.86 %	46.32 %	46.45 %	46.82 %	46.41 %	46.37 %
PREFERRED STOCK	-	-	-	-	-	-
COMMON EQUITY	54.14	53.68	53.55	53.18	53.59	53.63
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
DIVIDEND PAYOUT RATIO	126.89 %	69.93 %	65.73 %	67.96 %	66.99 %	79.50 %
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	9.71 %	9.14 %	7.84 %	8.14 %	7.56 %	8.48 %
TOTAL DEBT / EBITDA (3)	4.03 x	4.17 x	3.80 x	3.54 x	3.70 x	3.85 x
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	17.33 %	18.34 %	25.33 %	25.33 %	17.58 %	20.78 %
TOTAL DEBT / TOTAL CAPITAL	45.86 %	46.32 %	46.45 %	46.82 %	46.41 %	46.37 %

Notes:
(1) All capitalization and financial statistics 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 audited financial statements

Proxy Group of Thirteen 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	$20,390.889	$18,583.106	$17,571.167	$16,749.598	$15,648.484	
SHORT-TERM DEBT	$556.677	$634.118	$649.864	$475.539	$497.484	
TOTAL CAPITAL EMPLOYED	$20,947.566	$19,217.224	$18,221.031	$17,225.137	$16,145.968	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	4.46 %	4.64 %	4.62 %	4.83 %	4.63 %	
PREFERRED STOCK	5.65	5.38	5.46	5.63	5.60	
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	51.19 %	50.79 %	49.83 %	49.65 %	49.24 %	50.14 %
PREFERRED STOCK	0.75	0.90	0.95	0.99	1.01	0.93
COMMON EQUITY	48.06	48.31	49.22	49.36	49.75	48.93
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	51.90 %	51.68 %	51.60 %	51.01 %	50.41 %	51.32 %
PREFERRED STOCK	0.74	0.87	0.89	0.95	0.99	0.88
COMMON EQUITY	47.36	47.45	47.52	48.05	48.61	47.80
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	5.07 %	5.11 %	4.76 %	4.59 %	5.01 %	4.91 %
MARKET / AVERAGE BOOK RATIO	205.45	198.40	206.63	168.79	163.94	188.64
DIVIDEND YIELD	3.19	3.52	3.29	3.55	3.66	3.44
DIVIDEND PAYOUT RATIO	61.96	44.61	75.17	52.82	33.22	53.55
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	10.26 %	8.86 %	9.14 %	8.04 %	8.29 %	8.92 %
TOTAL DEBT / EBITDA (3)	4.30 x	4.88 x	3.96 x	5.30 x	4.15 x	4.52 x
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	15.01 %	20.77 %	19.97 %	19.29 %	23.50 %	19.71 %
TOTAL DEBT / TOTAL CAPITAL	51.90 %	51.68 %	51.60 %	51.01 %	50.41 %	51.32 %

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 Thirteen 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	-	-	-	-	-	-
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						
Long-Term Debt	55.39 %	55.45 %	55.61 %	53.85 %	49.87 %	54.03 %
Preferred Stock	-	-	-	-	-	-
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 %
IDACORP, Inc.						
Long-Term Debt	42.70 %	43.63 %	43.68 %	44.77 %	45.62 %	44.08 %
Preferred Stock	-	-	-	-	-	-
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 Thirteen 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	-	-	-	-	-	-
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	-	-	-	-	-	-
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	-	-	-	-	-	-
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 Corporation						
Long-Term Debt	50.91 %	49.59 %	48.68 %	46.33 %	45.45 %	48.19 %
Preferred Stock	-	-	-	-	-	-
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 %
Portland General Electric Company						
Long-Term Debt	50.06 %	49.72 %	50.10 %	50.06 %	49.39 %	49.87 %
Preferred Stock	-	-	-	-	-	-
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	-	-	-	-	-	-
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 Thirteen Electric Companies						
Long-Term Debt	51.19 %	50.79 %	49.83 %	49.65 %	49.24 %	50.14 %
Preferred Stock	0.75	0.90	0.95	0.99	1.01	0.92
Common Equity	48.06	48.31	49.22	49.36	49.75	48.94
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information
Annual Forms 10-K

Southwestern Public Service Company
Operating Subsidiary Company Capital Structures of the
Proxy Group of Thirteen Electric Companies

Company Name	Parent Company Ticker	2019 Common Equity	2019 Long-Term Debt	2019 Total 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%
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%
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	52.50%	47.50%	100.00%
	Median	52.00%	48.00%	100.00%

Source: S&P Global Market Intelligence

Southwestern Public Service Company
Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for the
Proxy Group of Thirteen Electric Companies

Proxy Group of Thirteen 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.	4.29 %	4.50 %	NA %	5.50 %	7.00 %	5.67 %	4.41 %	10.08 %
Alliant Energy Corporation	2.85	5.50	5.90	5.82	5.90	5.78	2.93	8.71
Ameren Corporation	2.59	6.00	5.20	5.99	3.50	5.17	2.66	7.83
Duke Energy	4.18	5.00	3.60	4.90	2.38	3.97	4.26	8.23
Edison International	4.33	NMF	3.10	4.16	(0.50)	3.63	4.41	8.04
Entergy Corporation	3.63	3.00	5.40	4.74	5.35	4.62	3.71	8.33
IDACORP, Inc.	3.10	3.50	2.60	2.88	2.60	2.89	3.14	6.03
NorthWestern Corporation	4.26	2.50	3.40	4.00	2.70	3.15	4.33	7.48
OGE Energy Corporation	4.97	3.00	3.60	3.51	2.10	3.05	5.05	8.10
Otter Tail Corporation	3.59	6.50	NA	7.05	9.00	7.52	3.72	11.24
Pinnacle West Capital Corporation	4.03	4.50	3.60	3.80	3.72	3.90	4.11	8.01
Portland General Electric Company	3.94	4.00	5.50	5.12	5.50	5.03	4.04	9.07
Xcel Energy, Inc.	2.49	6.00	6.10	6.11	6.20	6.10	2.57	8.67
							Average	8.45 %
							Median	8.23 %
							Average of Mean and Median	8.34 %

NMF= Not Meaningful Figure

Notes:

(1) Indicated dividend at 01/08/2021 divided by the average closing price of the last 60 trading days ending 01/08/2021 for each company.
(2) From pages 2 through 14 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., 4.29% x (1+(1/2 x 5.67%)) = 4.41%.
(5) Column 6 + column 7.

Source of Information:

Value Line Investment Survey
www.zacks.com Downloaded on 01/08/2021
www.yahoo.com Downloaded on 01/08/2021
Bloomberg Professional Services

ALLETE NYSE-ALE

RECENT PRICE 56.24 | P/E RATIO 16.4 (Trailing: 16.7 Median: 18.0) | RELATIVE P/E RATIO 0.78 | DIV'D YLD 4.6% | VALUE LINE

TIMELINESS 3 Raised 12/11/20
SAFETY 2 New 10/1/04
TECHNICAL 4 Raised 11/27/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

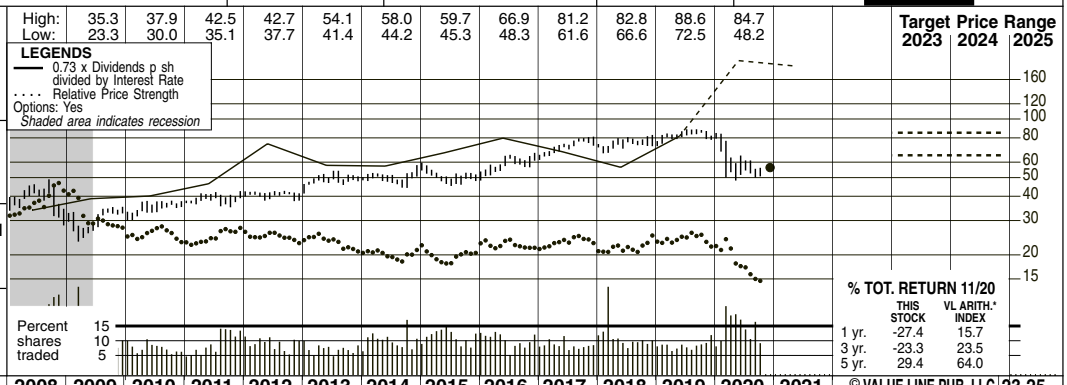
Low-High	Midpoint (% to Mid)
$44-$107	$76 (35%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+50%)	*14%*
Low	65	(+15%)	*8%*

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	158	124	141
to Sell	120	154	136
Hld's(000)	38235	38410	37540



% TOT. RETURN 11/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-27.4	15.7
3 yr.	-23.3	23.5
5 yr.	29.4	64.0

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
25.30	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	*22.20*	*23.60*	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	*7.25*	*7.75*	"Cash Flow" per sh	*9.25*
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	*3.20*	*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*	*2.56*	Div'd Decl'd per sh [B] ■ †	*2.80*
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*	*9.45*	Cap'l Spending per sh	*4.75*
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	*45.95*	*46.80*	Book Value per sh [C]	*51.25*
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	*52.00*	*52.50*	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	*18.0*
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	*1.00*
.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	*3.7%*
907.0	928.2	961.2	1018.4	1136.8	1486.4	1339.7	1419.3	1498.6	1240.5	*1155*	*1240*	Revenues ($mill)	*1350*
75.3	93.8	97.1	104.7	124.8	163.4	155.3	159.2	174.1	172.4	*165*	*185*	Net Profit ($mill)	*230*
37.2%	27.6%	28.1%	21.5%	22.6%	19.4%	11.3%	14.8%	14.8%	NMF	*NMF*	*NMF*	Income Tax Rate	*NMF*
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%	*41.5%*	*41.0%*	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%	*58.5%*	*59.0%*	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	*4080*	*4150*	Total Capital ($mill)	*4725*
1805.6	1982.7	2347.6	2576.5	3286.4	3669.1	3741.2	3822.4	3904.4	4377.0	*4935*	*5205*	Net Plant ($mill)	*5350*
5.4%	6.0%	5.6%	5.3%	5.2%	5.8%	5.8%	5.5%	5.8%	5.6%	*5.0%*	*5.5%*	Return on Total Cap'l	*6.0%*
7.7%	8.7%	8.1%	7.8%	7.8%	9.0%	8.2%	7.7%	8.1%	7.7%	*7.0%*	*7.5%*	Return on Shr. Equity	*8.5%*
7.7%	8.7%	8.1%	7.8%	7.8%	9.0%	8.2%	7.7%	8.1%	7.7%	*7.0%*	*7.5%*	Return on Com Equity [E]	*8.5%*
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	*3.0%*
81%	66%	71%	72%	67%	60%	66%	68%	66%	70%	*77%*	*73%*	All Div'ds to Net Prof	*65%*

CAPITAL STRUCTURE as of 9/30/20
Total Debt $2012.5 mill. **Due in 5 Yrs** $712.6 mill.
LT Debt $1608.0 mill. **LT Interest** $65.6 mill.
(LT interest earned: 3.4x)

Leases, Uncapitalized Annual rentals $6.6 mill.

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

Pfd Stock None

Common Stock 51,974,885 shs.

MARKET CAP: $2.9 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%	*4.5%*
Earnings	2.5%	4.0%	*4.5%*
Dividends	3.0%	3.5%	*4.0%*
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	243.2	293.9	*306.3*	*1155*
2021	*325*	*285*	*305*	*325*	*1240*

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	.39	.78	*.75*	*3.20*
2021	*1.20*	*.70*	*.75*	*.85*	*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	.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 is facing a challenging operating environment. The recession and the coronavirus problems have hurt the company's primary utility subsidiary, Minnesota Power, more than most electric companies because the utility has a smaller residential sector and a larger industrial sector. One of its industrial customers just restarted its facility this month, but another customer's plant remains shut. ALLETE Clean Energy (ACE), which invests in wind projects, is experiencing increased competition and pricing pressure. Profits are likely to decline in 2020 due in part to a $0.16-a-share charge the company took in the second quarter for the refund of previously collected revenues. We *include* this in our earnings presentation even though management is excluding it from its guidance of $3.25-$3.45 a share. Considering all of these factors, the stock price has declined 31% in 2020, making this one of the worst-performing equities in this industry.

We expect much higher earnings in 2021. The second-quarter comparison will be easy due to the revenue refund in 2020. Most of Minnesota Power's taconite customers have submitted demand nominations (telling the utility how much electricity they expect to need) for full power for the first four months of 2021. ACE should benefit from a 303-megawatt project in Oklahoma that should be completed by yearend 2020 at a cost of $450 million.

Rate cases are likely upcoming in 2021. Filings were postponed from 2020 due to the effects of the weak economy. Minnesota Power expects to apply in November, and Superior Water, Light & Power will probably file sometime next year. These applications should raise ALLETE's earning power in 2022.

We expect a dividend increase in the first quarter of 2021. This is the usual timing of a hike. We estimate a boost of $0.09 a share (3.6%) in the annual disbursement. This would be smaller than in 2020 because the payout ratio is above ALLETE's targeted range of 60%-65%.

The equity's dividend yield is about one percentage point above the utility average. Total return potential is above average for the next 18 months and decent for the 3- to 5-year period.

Paul E. Debbas, CFA *December 11, 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 Feb. **(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	85

ALLIANT ENERGY NDQ-LNT

RECENT PRICE 52.60 | P/E RATIO 22.5 (Trailing: 19.8 Median: 17.0) | RELATIVE P/E RATIO 1.08 | DIV'D YLD 2.9% | VALUE LINE

TIMELINESS 3 Lowered 7/3/20
SAFETY 2 Raised 9/28/07
TECHNICAL 1 Raised 12/11/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

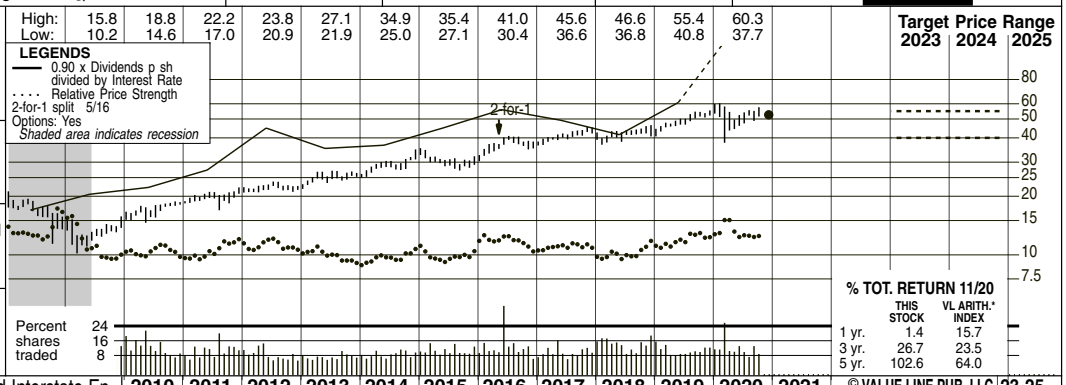
Low-High	Midpoint (% to Mid)
$43-$91	$67 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+5%)	4%
Low	40	(-25%)	-3%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	272	236	227
to Sell	209	272	258
Hld's(000)	188011	182284	186056



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 9/30/20
Total Debt $7003.0 mill. **Due in 5 Yrs** $1500.0 mill.
LT Debt $6574.0 mill. **LT Interest** $240.0 mill.
(LT interest earned: 2.9x)

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 249,760,663 shs.

MARKET CAP: $13.1 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%	*1.0%*
"Cash Flow"	4.5%	3.5%	*4.5%*
Earnings	5.0%	5.0%	*5.5%*
Dividends	7.0%	7.0%	*7.0%*
Book Value	4.0%	5.0%	*6.5%*

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	763.1	920.0	***1051.2***	***3650***
2021	***1000***	***890***	***970***	***940***	***3800***

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	.54	.94	***.25***	***2.45***
2021	***.62***	***.53***	***1.00***	***.45***	***2.60***

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	.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	***14.60***	***14.90***	Revenues per sh	***15.65***
	2.60	2.75	2.95	3.34	3.44	3.45	3.45	3.10	4.32	4.59	***4.75***	***4.95***	"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***	***2.60***	Earnings per sh A	***3.00***
	.79	.85	.90	.94	1.02	1.10	1.18	1.26	1.34	1.42	***1.52***	***1.61***	Div'd Decl'd per sh B ■ †	***1.96***
	3.91	3.03	5.22	3.32	3.78	4.25	5.26	6.34	6.34	6.28	***5.50***	***5.05***	Cap'l Spending per sh	***5.15***
	13.05	13.57	14.12	14.79	15.54	16.41	16.96	17.21	19.43	21.24	***23.60***	***24.35***	Book Value per sh C	***28.45***
	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	***4.1%***
	3416.1	3665.3	3094.5	3276.8	3350.3	3253.6	3320.0	3382.2	3534.5	3647.7	***3650***	***3800***	Revenues ($mill)	***4150***
	303.9	304.4	337.8	382.1	385.5	380.7	373.8	455.9	512.1	557.2	***610***	***655***	Net Profit ($mill)	***790***
	30.1%	19.0%	21.5%	12.4%	10.1%	15.3%	13.4%	12.5%	8.4%	10.8%	***NMF***	***NMF***	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	***10500***	***11000***	Total Capital ($mill)	***12500***
	6730.6	7037.1	7838.0	7147.3	6442.0	8970.2	9809.9	10798	12031	13527	***14000***	***15000***	Net Plant ($mill)	***18000***
	6.6%	6.4%	6.3%	7.0%	6.3%	6.3%	5.6%	6.8%	6.3%	4.1%	***6.0%***	***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%***	***10.5%***	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%***	***10.5%***	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%***	***4.0%***	Retained to Com Eq	***3.5%***
	64%	67%	64%	57%	61%	65%	71%	63%	61%	61%	***62%***	***63%***	All Div'ds to Net Prof	***65%***

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.

Alliant Energy raised its 2020 earnings outlook. The utility now expects share net to be between $2.40 and $2.46, versus its previous guidance range of $2.34-$2.48. The midpoint of the forecast was increased by $0.02 a share, primarily due to higher earnings from temperature impacts on retail electric and gas sales during the first nine months of the year.

The company provided 2021 earnings guidance for the first time. Leadership expects share net to be between $2.50 and $2.64, representing growth of 2%-8% from our 2020 estimate of $2.45. The projection assumes, among other things, a stable economy and continued negative impact from the COVID-19 health crisis. In addition, due to production tax credits from wind projects being placed into service, Alliant expects to have a consolidated effective tax rate of negative 14% in 2021.

The Iowa Service Area was hit by a Derecho in late August. The wind storm caused considerable damage to the company's electric distribution system, resulting in over 250,000 customers losing power. Repair and restoration efforts are currently ongoing, and LNT's estimate of the total cost of the weather event stands at approximately $140 million. Although this will mostly impact 2020 figures (earnings guidance incorporated expected Derecho-related costs), leadership is anticipating a modest sales headwind in the affected areas through the first half of 2021.

The board of directors raised the dividend in November. This has been the pattern in recent years. The increase was $0.0225 a share (6%) quarterly, slightly less than last year's expansion. Alliant is targeting a payout ratio of 60%-70%.

Alliant continues to bet big on renewables. In 2020, the company will generate approximately 34% of its energy from renewables, with much of that coming from wind power. Coal-fired generation currently stands at 25%, though management intends to reduce that number to the low single digits by 2030. Natural gas, at 41% of the energy mix, is expected to stay roughly the same over the next five years.

This stock does not stand out. The dividend yield is below average for an electric utility, and capital appreciation potential out to 2023-2025 is flat to negative.

Daniel Henigson, CFA December 11, 2020

(A) Diluted EPS. Excl. nonrecur. gains (losses): '10, (8¢); '11, (1¢); '12, (8¢). Next earnings rpt. due mid-February. **(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	75
Earnings Predictability	90

AMEREN NYSE-AEE

RECENT PRICE 77.78 | P/E RATIO 22.7 (Trailing: 22.7 Median: 17.0) | RELATIVE P/E RATIO 1.09 | DIV'D YLD 2.7% | VALUE LINE

TIMELINESS 2 Lowered 11/20/20
SAFETY 2 Raised 6/20/14
TECHNICAL 2 Raised 12/11/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$63-$127	$95 (20%)

2023-25 PROJECTIONS

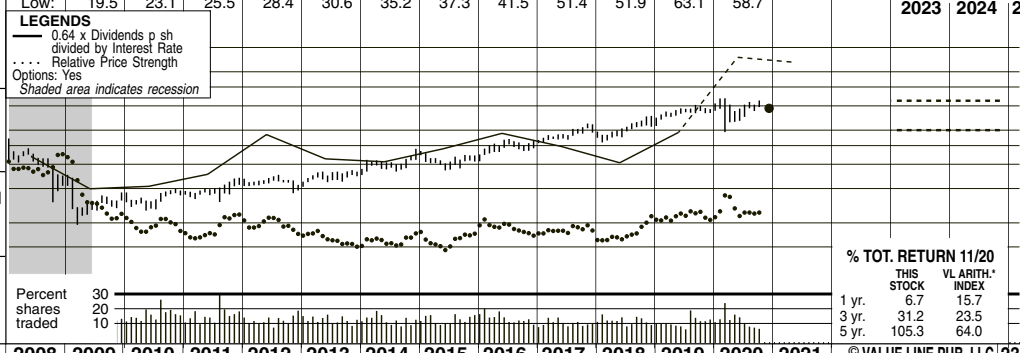
	Price	Gain	Ann'l Total Return
High	85	(+10%)	5%
Low	60	(-25%)	-3%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	266	242	220
to Sell	265	273	301
Hld's(000)	186367	187833	196379

	High:	35.3	29.9	34.1	35.3	37.3	48.1	46.8	54.1	64.9	70.9	80.9	87.7
	Low:	19.5	23.1	25.5	28.4	30.6	35.2	37.3	41.5	51.4	51.9	63.1	58.7

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



% TOT. RETURN 11/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	6.7	15.7
3 yr.	31.2	23.5
5 yr.	105.3	64.0

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	*22.65*	*23.65*	Revenues per sh	*25.50*
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	*8.15*	*8.80*	"Cash Flow" per sh	*10.50*
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*	*3.70*	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	*2.00*	*2.09*	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*	*11.65*	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*	*37.75*	Book Value per sh [C]	*44.50*
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*	*258.00*	Common Shs Outst'g [D]	*270.00*
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	*16.0*
.86	.89	1.05	.92	.85	.62	.62	.75	.85	.93	.88	.88	.96	1.04	.99	1.18			Relative P/E Ratio	*.90*
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	*3.4%*
7638.0	7531.0	6828.0	5838.0	6053.0	6098.0	6076.0	6177.0	6291.0	5910.0	*5750*	*6100*	Revenues ($mill)	*6900*
669.0	602.0	589.0	518.0	593.0	585.0	659.0	683.0	821.0	834.0	*870*	*965*	Net Profit ($mill)	*1220*
36.8%	37.3%	36.9%	37.5%	38.9%	38.3%	36.7%	38.2%	22.4%	17.9%	*15.5%*	*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%	*54.5%*	*53.0%*	Long-Term Debt Ratio	*51.0%*
50.9%	53.7%	49.4%	53.7%	51.7%	49.7%	51.3%	49.8%	48.8%	47.1%	*44.5%*	*46.5%*	Common Equity Ratio	*48.5%*
15185	14738	13384	12190	12975	13968	13840	14420	15632	17116	*20325*	*20975*	Total Capital ($mill)	*24800*
17853	18127	16096	16205	17424	18799	20113	21466	22810	24376	*27200*	*28900*	Net Plant ($mill)	*33300*
6.0%	5.6%	6.0%	5.6%	5.8%	5.3%	6.0%	6.0%	6.4%	6.0%	*5.5%*	*5.5%*	Return on Total Cap'l	*6.0%*
8.5%	7.5%	8.7%	7.7%	8.7%	8.3%	9.1%	9.3%	10.6%	10.2%	*9.5%*	*10.0%*	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%*	*10.0%*	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%*	*56%*	All Div'ds to Net Prof	*54%*

CAPITAL STRUCTURE as of 9/30/20
Total Debt $10801 mill. **Due in 5 Yrs** $2317 mill.
LT Debt $10172 mill. **LT Interest** $456 mill.
(LT interest earned: 3.3x)
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 247,206,978 shs. **as of 10/30/20**
MARKET CAP: $19 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%	*6.0%*
Earnings	1.0%	6.5%	*6.0%*
Dividends	-2.0%	3.0%	*5.0%*
Book Value	-.5%	2.5%	*6.0%*

Calendar	QUARTERLY REVENUES ($ mill.) 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	1398	1628	*1284*	*5750*
2021	*1600*	*1450*	*1700*	*1350*	*6100*

Calendar	EARNINGS PER SHARE [A] 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	.98	1.47	*.41*	*3.45*
2021	*.65*	*.90*	*1.70*	*.45*	*3.70*

Calendar	QUARTERLY DIVIDENDS PAID [B] ■ 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	.495	.515	

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 trimmed our 2020 earnings estimate for Ameren by $0.05 a share, to $3.45. Third-quarter profits were slightly below our expectation. Even so, earnings should still wind up above the 2019 tally, despite the negative effects of the recession on kilowatt-hour sales in Missouri, and coronavirus-related expenses. (Ameren Illinois operates under a regulatory mechanism that decouples revenues and volume.) Among the positive factors are an electric rate hike that took effect in Missouri on April 1st and investments in the electric transmission business. Our revised estimate is within Ameren's targeted range of $3.40-$3.55 a share, which was adjusted from $3.40-$3.60 when third-period results were reported in November.

A rate case is pending in Illinois. Ameren is seeking a gas increase of $97 million (including $46 million that would otherwise be recovered through riders on customers' bills), based on a 10.5% return on equity and a common-equity ratio of 54.1%. The staff of the Illinois Commerce Commission recommended a $69 million increase, based on a 9.32% ROE and a 50.4% common-equity ratio, and other intervenors proposed a hike that was slightly less favorable than the staff recommendation. An order is due by January, with new tariffs taking effect in February. This, along with a better economy, should produce higher profits in 2021.

Ameren is building a wind project. The company will add 700 megawatts of capacity at a cost of $1.2 billion. Most of this will be completed by yearend, but a portion of the spending ($200 million) will slip into the first quarter of 2021.

The board of directors raised the dividend in the fourth quarter. The increase was two cents a share (4.0%) quarterly, the same as last year. Ameren's goal for the payout ratio is 55%-70%, and this figure remains near the lower end.

This timely stock has been one of the top performers among utilities in 2020. The price has risen slightly in what has been a bad year for most electric utility issues, as investors like Ameren's stability. The dividend yield is a percentage point below the utility mean. Total return potential has appeal for the 18-month span, but is low for the 2023-2025 period.

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

(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 mid-Feb. **(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.

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

DUKE ENERGY NYSE-DUK

RECENT PRICE 93.82 | P/E RATIO 17.9 (Trailing: 18.7 Median: 18.0) | RELATIVE P/E RATIO 0.94 | DIV'D YLD 4.2% | VALUE LINE

TIMELINESS — Suspended 11/13/20
SAFETY 2 New 6/1/07
TECHNICAL — Suspended 11/13/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$62-$138	$100 (5%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	120	(+30%)	10%
Low	90	(-5%)	3%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	806	682	699
to Sell	557	723	666
Hld's(000)	476731	473369	471851

	53.8	55.8	66.4	71.1	75.5	87.3	90.0	87.8	91.8	91.4	97.4	103.8
High:	35.2	46.4	50.6	59.6	64.2	67.1	65.5	70.2	76.1	72.0	82.5	62.1

LEGENDS
0.54 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
1-for-3 Rev split 7/12
Options: Yes
Shaded area indicates recession

1-for-3 Reverse

Target Price Range 2023 2024 2025

320 200 160 120 100 80 60 40 18

Percent shares traded 15 10 5

% TOT. RETURN 10/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	1.1	0.9
3 yr.	17.7	8.2
5 yr.	58.6	39.8

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	*31.55*	*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	*12.20*	*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	*5.20*	*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	*61.75*	*63.35*	Book Value per sh C	*69.00*
- -	- -	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	*17.5*
- -	- -	- -	.85	1.04	.89	.81	.87	1.11	.98	.94	.92	1.12	1.00	1.05	.94			Relative P/E Ratio	*.95*
- -	- -	- -	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	*4.0%*
						14272	14529	19624	24598	23925	23459	22743	23565	24521	25079	*24100*	*24750*	Revenues ($mill)	*27000*
						1765.0	1839.0	2136.0	2813.0	2934.0	2854.0	2560.0	2963.0	2928.0	3755.0	*3940*	*4180*	Net Profit ($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%	*8.0%*	*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%	*53.0%*	*53.5%*	Long-Term Debt Ratio	*54.0%*
						55.7%	54.9%	52.9%	52.0%	52.3%	51.4%	47.4%	46.0%	46.2%	44.1%	*45.0%*	*44.5%*	Common Equity Ratio	*44.5%*
						40457	41451	77307	79482	78088	77222	86609	90774	94940	101807	*105100*	*109175*	Total Capital ($mill)	*122000*
						40344	42661	68558	69490	70046	75709	82520	86391	91694	102127	*108475*	*114050*	Net Plant ($mill)	*128400*
						5.5%	5.6%	3.6%	4.6%	4.8%	4.8%	4.0%	4.3%	4.2%	4.8%	*5.0%*	*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%	*8.0%*	*8.0%*	Return on Shr. Equity	*8.5%*
						7.8%	8.1%	5.2%	6.8%	7.2%	7.2%	6.2%	7.1%	6.7%	8.3%	*8.0%*	*8.5%*	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%	*75%*	*74%*	All Div'ds to Net Prof	*71%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $64684 mill. **Due in 5 Yrs** $22390 mill.
LT Debt $56143 mill. **LT Interest** $2190 mill.
Incl. $969 mill. capitalized leases.
(LT interest earned: 2.7x)
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 735,432,137 shs. **as of 7/31/20**
MARKET CAP: $69 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%

Calendar	QUARTERLY REVENUES ($ mill.) 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	5421	*6780*	*5950*	*24100*
2021	*6200*	*5650*	*6850*	*6050*	*24750*

Calendar	EARNINGS PER SHARE A 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	1.08	*1.88*	*1.00*	*5.20*
2021	*1.25*	*1.10*	*1.95*	*1.00*	*5.30*

Calendar	QUARTERLY DIVIDENDS PAID B ■ 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	.9275	.9275	3.64
2019	.9275	.9275	.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.

Is Duke Energy a takeover candidate? The stock price rose 7% on September 30th, after *The Wall Street Journal* reported that NextEra Energy approached Duke about a possible combination. Not surprisingly, Duke did not issue a comment about this. Even if NextEra makes a formal offer, there is no assurance that Duke will accept the proposal, and even if a deal is struck, there is no assurance that this will win regulatory approval. The price of Duke stock has strengthened further since late September, and has been trading in the low-$90 range recently (compared with the low-$80 range prior to the *Journal*'s report). The stock's Timeliness rank is suspended due to the takeover speculation.

The company took a huge nonrecurring charge for the second quarter. This was $1.6 billion ($2.21 a share) after taxes, and was for the write-off of Duke's interest in a pipeline project that was canceled due to delays and cost overruns stemming from litigation from environmental opponents. Duke expects to record additional charges of under $100 million within the next 12 months.

We estimate modest earnings increases in 2020 and 2021. Despite the effects of the recession on kilowatt-hour sales, management expects to offset this by cutting expenses by $350 million-$450 million. Rate relief is a positive factor. Duke was granted an increase in Indiana earlier this year, and has reached a settlement, subject to regulatory approval, in North Carolina (see below). Our 2020 profit estimate is within the company's targeted range of $5.05-$5.45 a share. Duke is guiding analysts toward the lower half.

Duke's utilities in North Carolina have reached settlements of their general rate cases. The company and the staff of the state commission agreed to rate hikes totaling $70 million, based on a return of 9.6% and a common-equity ratio of 52%. Interim rates (subject to refund) took effect in the third quarter. When the North Carolina commission will rule on the settlement is unknown.

Duke stock has an above-average dividend yield for a utility. Prospects for the 18-month span are attractive, but 3- to 5-year total return potential is subpar.

Paul E. Debbas, CFA *November 13, 2020*

(A) Dil. EPS. Excl. nonrec. losses: '12, 70¢; '13, 24¢; '14, 67¢; '17, 15¢; '18, 41¢; '20, $2.21; losses on disc. ops.: '14, 80¢; '16, 60¢; '18 EPS don't sum due to rounding. Next egs. report due mid-Feb. (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. Rate 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 '20 in IN: 9.7%; earn. 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	40
Earnings Predictability	90

EDISON INTERNAT'L NYSE-EIX

RECENT PRICE **56.27** | P/E RATIO **37.5** (Trailing: 17.9 Median: 14.0) | RELATIVE P/E RATIO **1.70** | DIV'D YLD **4.7%** | VALUE LINE

TIMELINESS **3** Raised 8/30/19
SAFETY **3** Lowered 11/23/18
TECHNICAL **4** Lowered 10/23/20
BETA .90 (1.00 = Market)

18-Month Target Price Range

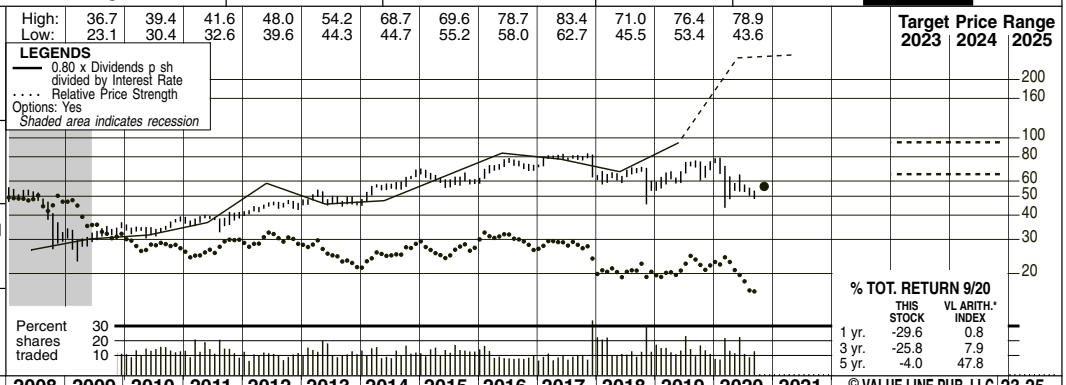
Low-High	Midpoint (% to Mid)
$43-$109	$76 (35%)

2023-25 PROJECTIONS

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

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	328	274	294
to Sell	243	304	264
Hld's(000)	325429	318333	329959



	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:	36.7	39.4	41.6	48.0	54.2	68.7	69.6	78.7	83.4	71.0	76.4	78.9								
Low:	23.1	30.4	32.6	39.6	44.3	44.7	55.2	58.0	62.7	45.5	53.4	43.6								
Revenues per sh	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	*33.00*	*34.55*	Revenues per sh	*40.25*
"Cash Flow" per sh	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	*7.50*	*10.90*	"Cash Flow" per sh	*12.75*
Earnings per sh [A]	.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	*1.25*	*4.30*	Earnings per sh [A]	*5.25*
Div'd Decl'd per sh [B] ■	.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*
Cap'l Spending per sh	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	*13.20*	*14.25*	Cap'l Spending per sh	*14.25*
Book Value per sh [C]	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	*36.20*	*37.80*	Book Value per sh [C]	*43.75*
Common Shs Outst'g [D]	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	*379.00*	*379.00*	Common Shs Outst'g [D]	*379.00*
Avg Ann'l P/E Ratio	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*
Relative P/E Ratio	1.99	.62	.70	.85	.75	.65	.66	.74	.62	.71	.68	.75	.94	.87	- -	.89			Relative P/E Ratio	*.85*
Avg Ann'l Div'd Yield	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%*
Revenues ($mill)	12409	12760	11862	12581	13413	11524	11869	12320	12657	12347	*12500*	*13100*	Revenues ($mill)	*15300*
Net Profit ($mill)	1153.0	1112.0	1594.0	1344.0	1539.0	1480.0	1422.0	1603.0	d290.0	1477.0	*585*	*1730*	Net Profit ($mill)	*2070*
Income Tax Rate	32.1%	25.7%	14.3%	25.2%	22.4%	6.6%	11.1%	5.0%	- -	NMF	*NMF*	*Nil*	Income Tax Rate	*Nil*
AFUDC % to Net Profit	16.9%	14.8%	8.5%	7.8%	5.8%	8.0%	6.8%	7.2%	- -	11.1%	*29.0%*	*10.0%*	AFUDC % to Net Profit	*8.0%*
Long-Term Debt Ratio	51.8%	55.3%	45.2%	45.7%	44.1%	45.0%	41.8%	45.6%	53.6%	53.5%	*56.0%*	*57.0%*	Long-Term Debt Ratio	*60.0%*
Common Equity Ratio	44.3%	40.6%	46.2%	46.2%	47.2%	46.7%	49.2%	45.8%	38.3%	39.9%	*39.0%*	*38.0%*	Common Equity Ratio	*36.5%*
Total Capital ($mill)	23861	24773	20422	21516	23216	24352	24362	25506	27284	33360	*34975*	*37525*	Total Capital ($mill)	*45700*
Net Plant ($mill)	24778	32116	30273	30455	32981	35085	37000	39050	41348	44285	*46900*	*49800*	Net Plant ($mill)	*57700*
Return on Total Cap'l	6.3%	6.0%	8.9%	7.3%	7.7%	7.1%	6.9%	7.3%	.1%	5.6%	*3.0%*	*6.0%*	Return on Total Cap'l	*6.0%*
Return on Shr. Equity	10.0%	10.0%	14.2%	11.5%	11.9%	11.1%	10.0%	11.6%	NMF	9.5%	*4.0%*	*11.0%*	Return on Shr. Equity	*11.5%*
Return on Com Equity [E]	10.4%	10.5%	15.9%	12.5%	13.0%	12.0%	10.8%	12.7%	NMF	10.2%	*3.5%*	*11.5%*	Return on Com Equity [E]	*12.0%*
Retained to Com Eq	6.5%	6.3%	11.4%	8.1%	8.8%	7.2%	5.6%	6.6%	NMF	4.1%	*NMF*	*4.5%*	Retained to Com Eq	*5.0%*
All Div'ds to Net Prof	40%	43%	32%	40%	37%	44%	53%	52%	NMF	63%	*NMF*	*64%*	All Div'ds to Net Prof	*60%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $20742 mill. **Due in 5 Yrs** $4847 mill.
LT Debt $19238 mill. **LT Interest** $904 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 378,220,989 shs. **as of 7/23/20**
MARKET CAP: $21 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%	*1.5%*
"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%	*4.0%*

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	2987	*3800*	*2923*	*12500*
2021	*2900*	*3100*	*4000*	*3100*	*13100*

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	.85	*d.90*	*.80*	*1.25*
2021	*.75*	*1.20*	*1.50*	*.85*	*4.30*

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	.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 will take a big charge for the third quarter. The company's utility subsidiary, Southern California Edison, has faced huge liabilities stemming from wildfires in its service area in the past few years. This prompted the company to take a sizable charge in the fourth quarter of 2018 and a smaller one in the same period of 2019. Based on settlements reached with plaintiffs for wildfires in 2017 and 2018 (and a mudslide in 2018), SCE's best estimate of its total expected losses is $6.2 billion, up $1.3 billion from the previous figure. Accordingly, the company plans to take an aftertax charge of $878 million when it reports earnings in late October. We will *include* this in our earnings presentation, even though Edison International excludes this from its 2020 earnings guidance of $4.37-$4.62 a share. The company also excludes the amortization of wildfire insurance fund expenses ($60 million quarterly after taxes), which we include. Hence, our 2020 earnings estimate is well below the company's guidance. Note that California's revenue decoupling mechanism protects SCE from the effects of a decline in volume.

The utility is awaiting an order in its general rate case. SCE is seeking increases of $1.1 billion (11.3%) in 2021, $434 million in 2022, and $500 million in 2023. Even if a decision comes after the start of 2021, the increase will be retroactive to January 1st.

Earnings should wind up much higher in 2021. We assume no additional wildfire-related liability charges, although SCE will continue to book amortization costs for the wildfire insurance fund. Also, SCE will benefit from rate relief.

We expect the board to raise the dividend in December, effective with the January payment. We estimate a hike of $0.025 a share (3.9%) in the quarterly disbursement. The directors consider adjusted profits when making their decision.

This stock has an above-average dividend yield, even for a utility. The price has fallen 25% this year, probably due to concerns about wildfires. The equity has appeal for 18-month total return potential, but prospects for 2023-2025 are just average. Conservative utility accounts should look elsewhere.

Paul E. Debbas, CFA *October 23, 2020*

Company's Financial Strength	B+
Stock's Price Stability	80
Price Growth Persistence	70
Earnings Predictability	5

(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 Oct. **(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.

ENTERGY CORP. NYSE-ETR

RECENT PRICE 108.85 | P/E RATIO 18.4 (Trailing: 15.8 Median: 13.0) | RELATIVE P/E RATIO 0.88 | DIV'D YLD 3.5% | VALUE LINE

TIMELINESS 3 Raised 10/26/18
SAFETY 2 Raised 12/13/19
TECHNICAL 3 Raised 12/11/20
BETA .95 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$82-$181	$132 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	140	(+30%)	*10%*
Low	105	(-5%)	*3%*

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	348	281	283
to Sell	242	349	315
Hld's(000)	176392	172217	173722

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
High:	86.6	84.3	74.5	74.5	72.6	92.0	90.3	82.1	87.9	90.8	122.1	135.5						
Low:	59.9	68.7	57.6	61.6	60.2	60.4	61.3	65.4	69.6	71.9	83.2	75.2						

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

Target Price Range 2023 2024 2025

% TOT. RETURN 11/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-3.8	15.7
3 yr.	40.3	23.5
5 yr.	99.5	64.0

	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	*50.50*	*50.50*	Revenues per sh	*50.50*
	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	*17.10*	*18.05*	"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	*5.65*	*5.95*	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	*20.60*	*18.70*	Cap'l Spending per sh	*19.00*
	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	*53.55*	*56.30*	Book Value per sh C	*64.50*
	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	*201.00*	*204.00*	Common Shs Outst'g D	*210.00*
	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	*17.5*
	.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	*3.7%*
							11488	11229	10302	11391	12495	11513	10846	11074	11009	10879	*10150*	*10300*	Revenues ($mill)	*10600*
							1270.3	1367.4	1091.9	904.5	1060.0	1061.2	1249.8	950.7	1092.1	1258.2	*1155*	*1225*	Net Profit ($mill)	*1480*
							32.7%	17.3%	13.0%	26.7%	37.8%	2.2%	11.3%	1.8%	1.8%	NMF	*14.0%*	*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%	*18.0%*	*14.0%*	AFUDC % to Net Profit	*12.0%*
							56.3%	52.2%	55.8%	55.1%	54.9%	57.8%	63.6%	63.6%	63.2%	62.0%	*64.5%*	*64.0%*	Long-Term Debt Ratio	*60.5%*
							42.1%	46.4%	42.9%	43.6%	43.8%	40.8%	35.5%	35.5%	35.9%	37.1%	*35.0%*	*35.0%*	Common Equity Ratio	*38.5%*
							20166	19324	21432	22109	22842	22714	22777	22528	24602	27557	*30900*	*32725*	Total Capital ($mill)	*35100*
							23848	25609	27299	27882	28723	27824	27921	29664	31974	35183	*37075*	*38475*	Net Plant ($mill)	*42400*
							7.7%	8.5%	6.4%	5.4%	6.0%	6.0%	6.9%	5.7%	5.8%	5.9%	*5.0%*	*5.0%*	Return on Total Cap'l	*5.5%*
							14.4%	14.8%	11.5%	9.1%	10.3%	11.1%	15.1%	11.6%	12.0%	12.0%	*10.5%*	*10.5%*	Return on Shr. Equity	*10.5%*
							14.7%	15.0%	11.6%	9.2%	10.4%	11.2%	15.2%	11.7%	12.2%	12.1%	*10.5%*	*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%	*3.5%*	*3.5%*	Retained to Com Eq	*4.0%*
							49%	45%	56%	68%	58%	58%	50%	68%	61%	58%	*66%*	*65%*	All Div'ds to Net Prof	*66%*

CAPITAL STRUCTURE as of 9/30/20
Total Debt $22060 mill. **Due in 5 Yrs** $8573.8 mill.
LT Debt $19613 mill. **LT Interest** $831.0 mill.
Incl. $209.2 mill. of securitization bonds.
(LT interest earned: 2.2x)
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 200,232,522 shs. **as of 10/30/20**
MARKET CAP: $22 billion (Large Cap)

ELECTRIC OPERATING STATISTICS

	2017	2018	2019
% Change Retail Sales (KWH)	+.2	+4.1	-1.4
Avg. Indust. Use (MWH)	1034	946	1070
Avg. Indust. Revs. per KWH(¢)	5.41	5.16	5.24
Capacity at Peak (Mw)	24279	23121	23887
Peak Load, Summer (Mw)	21671	21587	21598
Annual Load Factor (%)	62	65	64
% Change Customers (yr-end)	+.6	+.6	+.8
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%*

QUARTERLY REVENUES ($ mill.)

Calendar	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	2413	2904	*2406*	*10150*
2021	*2600*	*2500*	*2900*	*2300*	*10300*

EARNINGS PER SHARE A

Calendar	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	1.79	2.59	*.68*	*5.65*
2021	*1.15*	*1.50*	*2.60*	*.70*	*5.95*

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	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	.93	.95	

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 four nuclear units (two 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.

We raised our 2020 share-earnings estimate for Entergy from $5.00 to $5.65. Third-quarter results were better than we expected because Entergy's nonregulated subsidiary turned a small profit. This business has been hurt by unfavorable conditions in the power markets, so Entergy has been selling or shutting its nuclear plants. Two units are still operating, but are scheduled for closing in 2021 and 2022. Management has cut expenses effectively to offset the effects of the weak economy and the coronavirus. Note that we *include* the results of the nonutility business, even though Entergy excludes it from its definition of operating earnings.

The service area was hit by hurricanes in August and October. The worst of these caused an estimated $1.5 billion-$1.7 billion of damage. Two other hurricanes raised the total to $2.2 billion-$2.5 billion. Entergy is deferring these costs for future recovery. The company might eventually recoup these costs through the issuance of bonds securitized by payments on customers' bills. However Entergy recovers the hurricane-related costs, the method of recovery will require regulatory approval.

Some regulatory matters are pending. Entergy Arkansas is seeking a $73 million rate hike under the state's Formula Rate Plan (FRP). The utility also wants to renew the FRP. Entergy Louisiana wants to review that state's FRP, as well. Entergy Texas filed for increases totaling $38.4 million under regulatory mechanisms for the recovery of transmission and distribution costs. Rate relief and a stronger economy should enable earnings to increase in 2021. However, there is a potentially negative matter before federal regulators. State regulators allege that the federally granted allowed return on equity on certain assets is too high.

The board of directors raised the dividend in the fourth quarter. The increase was two cents a share (2.2%) quarterly, the same as in recent years. Entergy has stated that it expects dividend growth to accelerate in late 2021.

The dividend yield is about average for a utility. Total return potential is attractive for the 18-month period, but low for the next 3 to 5 years.

Paul E. Debbas, CFA *December 11, 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 Feb. **(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	35
Earnings Predictability	65

IDACORP, INC. NYSE-IDA

RECENT PRICE 88.40 | P/E RATIO 18.6 (Trailing: 19.0 Median: 16.0) | RELATIVE P/E RATIO 0.85 | DIV'D YLD 3.2% | VALUE LINE

TIMELINESS 2 Raised 10/23/20
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)
$68-$144 $106 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	120	(+35%)	11%
Low	90	(Nil)	4%

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	172	167	154
to Sell	157	174	166
Hld's(000)	39667	39043	39111

	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:	32.8	37.8	42.7	45.7	54.7	70.1	70.5	83.4	100.0	102.4	114.0	113.6								
Low:	20.9	30.0	33.9	38.2	43.1	50.2	55.4	65.0	77.5	79.6	89.3	69.1								
Revenues per sh	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	*25.25*	*26.25*	Revenues per sh	*29.25*
"Cash Flow" per sh	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	*8.15*	*8.40*	"Cash Flow" per sh	*9.75*
Earnings per sh A	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	*4.65*	*4.80*	Earnings per sh A	*5.50*
Div'd Decl'd per sh B ■ †	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	*2.72*	*2.89*	Div'd Decl'd per sh B ■ †	*3.50*
Cap'l Spending per sh	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*
Book Value per sh C	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	*50.70*	*52.50*	Book Value per sh C	*58.50*
Common Shs Outst'g D	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	*50.45*
Avg Ann'l P/E Ratio	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*
Relative P/E Ratio	.82	.89	.82	.97	.84	.68	.75	.72	.79	.75	.77	.82	1.00	1.04	1.11	1.19			Relative P/E Ratio	*1.05*
Avg Ann'l Div'd Yield	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	*3.4%*
Revenues ($mill)							1036.0	1026.8	1080.7	1246.2	1282.5	1270.3	1262.0	1349.5	1370.8	1346.4	*1275*	*1325*	Revenues ($mill)	*1475*
Net Profit ($mill)							142.5	166.9	168.9	182.4	193.5	194.7	198.3	212.4	226.8	232.9	*235*	*240*	Net Profit ($mill)	*285*
Income Tax Rate							--	--	13.4%	28.3%	8.0%	19.0%	15.5%	18.6%	7.1%	9.5%	*12.0%*	*12.0%*	Income Tax Rate	*10.0%*
AFUDC % to Net Profit							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%*
Long-Term Debt Ratio							49.3%	45.6%	45.5%	46.6%	45.3%	45.6%	44.8%	43.7%	43.6%	41.3%	*44.5%*	*44.5%*	Long-Term Debt Ratio	*45.0%*
Common Equity Ratio							50.7%	54.4%	54.5%	53.4%	54.7%	54.4%	55.2%	56.3%	56.4%	58.7%	*55.5%*	*55.5%*	Common Equity Ratio	*55.0%*
Total Capital ($mill)							3020.4	3045.2	3225.4	3465.9	3567.6	3783.3	3898.5	3997.5	4205.1	4201.3	*4605*	*4770*	Total Capital ($mill)	*5350*
Net Plant ($mill)							3161.4	3406.6	3536.0	3665.0	3833.5	3992.4	4172.0	4283.9	4395.7	4531.5	*4695*	*4865*	Net Plant ($mill)	*5325*
Return on Total Cap'l							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%*
Return on Shr. Equity							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%*
Return on Com Equity E							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%*
Retained to Com Eq							5.5%	6.5%	5.7%	5.6%	5.4%	4.8%	4.3%	4.4%	4.4%	4.2%	*4.0%*	*3.5%*	Retained to Com Eq	*3.5%*
All Div'ds to Net Prof							41%	36%	41%	43%	46%	50%	53%	53%	54%	56%	*59%*	*60%*	All Div'ds to Net Prof	*62%*

% TOT. RETURN 9/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-27.6	0.8
3 yr.	-2.3	7.9
5 yr.	40.3	47.8

CAPITAL STRUCTURE as of 6/30/20
Total Debt $2175.5 mill. **Due in 5 Yrs** $299.8 mill.
LT Debt $2000.5 mill. **LT Interest** $83.4 mill.
(LT interest earned: 3.7x)

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

Pfd Stock None

Common Stock 50,461,132 shs.
as of 7/24/20

MARKET CAP: $4.5 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%	*1.5%*
"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%	*4.0%*

QUARTERLY REVENUES($ mill.)

Calendar	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	318.8	*385*	*280.2*	*1275*
2021	*305*	*330*	*400*	*290*	*1325*

EARNINGS PER SHARE A

Calendar	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	1.19	*1.95*	*.77*	*4.65*
2021	*.85*	*1.15*	*2.00*	*.80*	*4.80*

QUARTERLY DIVIDENDS PAID B ■ †

Calendar	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	.67	.71	

BUSINESS: IDACORP, Inc. is a holding company for Idaho Power Company, a regulated electric utility that serves 580,000 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.

We have raised our 2020 earnings estimate for IDACORP by $0.10 a share, to $4.65. The company's utility subsidiary, Idaho Power, benefited from hot and dry weather in the second and third quarters. (Dry weather boosts kilowatt-hour sales because this increases irrigation load.) The utility has controlled operating and maintenance expenses well, and has received permission from the Idaho regulators to defer for future recovery costs associated with the coronavirus. Third-period results were scheduled to be reported shortly after this report came out in print. Our revised estimate is at the upper end of IDACORP's guidance of $4.45-$4.65 a share.

The utility's service area has held up well, all things considered. Idaho has not been untouched by the national recession, but continues to benefit as people relocate from other states. The customer count rose 2.6% for the 12-month period that ended on June 30th. Also, Idaho Power has a lot of foodservice customers, which are recession-resistant. Furthermore, the service territory might well attract data centers, given the utility's low rates and the state government's abolition of a sales tax on data centers.

We estimate modest earnings improvement in 2021. The economy of Idaho Power's service area ought to be better. On the other hand, we assume normal weather patterns. Our estimate of $4.80 a share would produce a 3% growth rate.

The board of directors raised the dividend, effective with the payment in the current quarter. The quarterly increase was $0.04 a share (6.0%). IDACORP's goal is annual dividend growth of at least 5% and a payout ratio in a range of 60%-70%. This figure is now near the low end of this range.

Idaho Power may use accumulated deferred investment tax credits to stabilize its income, if needed. The utility may use up to $25 million annually if its return on equity falls below 9.4%. This will not be necessary in 2020.

The price of this timely stock has declined 17% in 2020. This is in line with many utility issues. The dividend yield is slightly below the utility average. Total return potential is more attractive for the 18-month span than the 2023-2025 period.

Paul E. Debbas, CFA *October 23, 2020*

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

(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 Oct. **(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 '12: 10% (imputed); earned on avg. com. eq., '19: 9.6%. Regulatory Climate: Above Average.

NORTHWESTERN NDQ-NWE

RECENT PRICE **52.69** | P/E RATIO **15.3** (Trailing: 17.4 Median: 17.0) | RELATIVE P/E RATIO **0.70** | DIV'D YLD **4.7%** | **VALUE LINE**

TIMELINESS 4 Lowered 10/23/20
SAFETY 2 Raised 7/27/18
TECHNICAL 3 Raised 10/23/20
BETA .90 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$43-$99	$71 (35%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+60%)	*16%*
Low	65	(+25%)	*10%*

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	127	127	143
to Sell	133	144	137
Hld's(000)	49394	48390	48127

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
High:	26.8	30.6	36.6	38.0	47.2	58.7	59.7	63.8	64.5	65.7	76.7	80.5						
Low:	18.5	23.8	27.4	33.0	35.1	42.6	48.4	52.2	55.7	50.0	57.3	45.1						

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

Target Price Range 2023 | 2024 | 2025

% TOT. RETURN 9/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-32.5	0.8
3 yr.	-4.5	7.9
5 yr.	8.3	47.8

	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	*24.05*	*24.55*	Revenues per sh	*27.25*
	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	*7.05*	*7.35*	"Cash Flow" per sh	*8.50*
	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]	*4.00*
	- -	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]	*46.00*
	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	*19.0*
	- -	.91	1.40	1.15	.84	.77	.82	.79	1.00	.95	.85	.93	.90	.90	.91	1.06			Relative P/E Ratio	*1.05*
	- -	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	*3.7%*
							1110.7	1117.3	1070.3	1154.5	1204.9	1214.3	1257.2	1305.7	1198.1	1257.9	*1215*	*1265*	Revenues ($mill)	*1450*
							77.4	92.6	83.7	94.0	120.7	138.4	164.2	162.7	171.1	179.3	*170*	*180*	Net Profit ($mill)	*215*
							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	*49.5%*
							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	*50.5%*
							1916.4	1797.1	2020.7	2215.7	3168.0	3408.6	3493.9	3614.5	4064.6	4289.8	*4120*	*4520*	Total Capital ($mill)	*4850*
							2118.0	2213.3	2435.6	2690.1	3758.0	4059.5	4214.9	4358.3	4521.3	4700.9	*4910*	*5115*	Net Plant ($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	*5.5%*
							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 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	*2.5%*
							63%	56%	65%	61%	54%	65%	58%	62%	64%	64%	*72%*	*71%*	All Div'ds to Net Prof	*69%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $2276.5 mill. **Due in 5 Yrs** $548.1 mill.
LT Debt $2173.9 mill. **LT Interest** $79.7 mill.
Incl. $16.2 mill. capitalized leases.
(LT interest earned: 2.7x)

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

Pfd Stock None

Common Stock 50,576,049 shs.
as of 7/24/20

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%	*1.5%*
"Cash Flow"	5.0%	5.5%	*3.5%*
Earnings	7.0%	6.0%	*2.5%*
Dividends	5.5%	7.5%	*4.0%*
Book Value	6.0%	7.0%	*3.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	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	269.4	*290*	*320.3*	*1215*
2021	*355*	*285*	*295*	*330*	*1265*

EARNINGS PER SHARE [A]

Calendar	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	.43	*.66*	*1.21*	*3.30*
2021	*1.15*	*.50*	*.65*	*1.20*	*3.50*

QUARTERLY DIVIDENDS PAID [B] ■ †

Calendar	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	.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.

NorthWestern's earnings are likely to decline in 2020. First-quarter profits fell well below the previous year's tally (and management's expectation) due to some unusual costs and mild winter weather patterns. The effects of the recession on commercial and industrial kilowatt-hour sales and coronavirus-related expenses are other factors; in fact, the company reduced its guidance by $0.15 a share upon reporting first-quarter results in late April. Our 2020 earnings estimate remains at the low end of NorthWestern's targeted range of $3.30-$3.45.

We expect an earnings recovery in 2021. The economy should be in much-better shape, especially since NorthWestern's service area wasn't hit as hard as many other areas by the coronavirus. Also, we assume normal weather conditions in the first quarter. We are sticking with our estimate of $3.50 a share. This would produce a profit increase of 6%.

The utility is adding generating capacity. NorthWestern is spending $80 million to build a 60-megawatt gas-fired facility in South Dakota. This is expected to be completed by the end of 2021. The company has agreed to pay 50 cents to a utility for a 92.5 megawatt stake (12.5%) in a coal-fired unit in Montana. NorthWestern would sell 45 mw of power back to that utility and use the remaining capacity to serve its customers. Finally, by early 2021 the company expects to select the winning project(s) for 280 mw of peaking and intermediate capacity in Montana that would be available in early 2023. NorthWestern does not want to have too much exposure to the vagaries of the purchased-power markets. Currently, the utility has more exposure to purchased power than other companies in the region.

NorthWestern stock is untimely, but has an attractive dividend yield. This is about one percentage point above the utility average. The equity has underperformed most utility issues in 2020, having fallen 26%, as the market was disappointed with the cut in earnings guidance. Total return potential is attractive for the next 18 months and respectable for the 3- to 5-year period. We project a continuation of steady dividend growth through mid-decade.

Paul E. Debbas, CFA *October 23, 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 mid-Feb. **(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	70
Earnings Predictability	85

OGE ENERGY CORP. NYSE-OGE

RECENT PRICE 32.39 | P/E RATIO 15.7 (Trailing: 15.9 Median: 17.0) | RELATIVE P/E RATIO 0.75 | DIV'D YLD 5.0% | VALUE LINE

TIMELINESS 3 Lowered 3/6/20
SAFETY 2 Lowered 12/18/15
TECHNICAL 4 Raised 11/20/20
BETA 1.10 (1.00 = Market)

18-Month Target Price Range

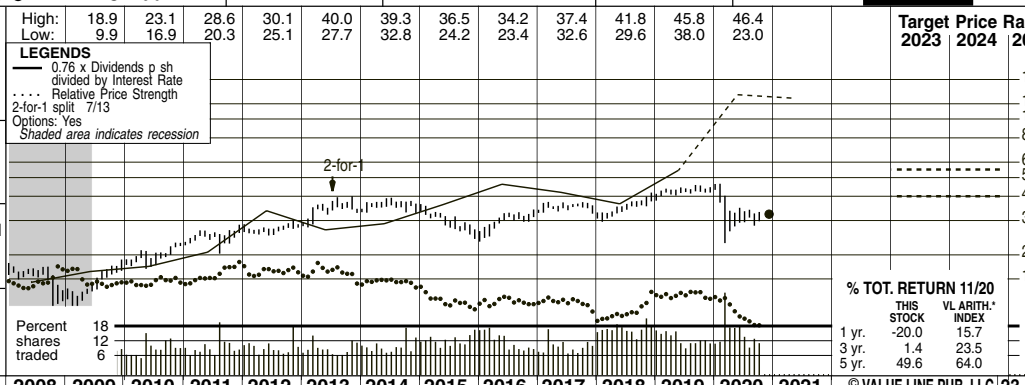
Low-High	Midpoint (% to Mid)
$23-$62	$43 (30%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+70%)	*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



Target Price Range 2023 2024 2025

% TOT. RETURN 11/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-20.0	15.7
3 yr.	1.4	23.5
5 yr.	49.6	64.0

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*	*4.40*	"Cash Flow" per sh	*5.25*
.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	*2.05*	*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	*1.58*	*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	*18.15*	*18.80*	Book Value per sh C	*20.75*
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 ($mill)	*2750*
295.3	342.9	355.0	387.6	395.8	337.6	338.2	384.3	425.5	449.6	*415*	*450*	Net Profit ($mill)	*520*
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	*7130*	*7250*	Total Capital ($mill)	*8100*
6464.4	7474.0	8344.8	6672.8	6979.9	7322.4	7696.2	8339.9	8643.8	9044.6	*9225*	*9525*	Net Plant ($mill)	*10275*
7.8%	7.8%	7.7%	8.6%	7.8%	6.9%	7.0%	7.0%	7.3%	7.1%	*7.0%*	*7.5%*	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	*12.5%*
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 Com Equity E	*12.5%*
6.7%	7.7%	7.2%	7.3%	6.5%	4.0%	3.3%	3.5%	3.8%	3.6%	*2.5%*	*3.5%*	Retained to Com Eq	*3.0%*
48%	43%	44%	43%	47%	61%	67%	64%	64%	67%	*76%*	*73%*	All Div'ds to Net Prof	*75%*

CAPITAL STRUCTURE as of 9/30/20
Total Debt $3493.9 mill. **Due in 5 Yrs** $79.4 mill.
LT Debt $3493.9 mill. **LT Interest** $150.2 mill.
(LT interest earned: 3.9x)

Leases, Uncapitalized Annual rentals $6.2 mill.

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

Pfd Stock None

Common Stock 200,020,017 shs.

MARKET CAP: $6.5 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%	*6.0%*
Earnings	5.0%	2.0%	*3.0%*
Dividends	7.0%	10.0%	*6.0%*
Book Value	7.0%	5.5%	*.5%*

Calendar	QUARTERLY REVENUES ($ mill.) 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	702.1	*463.9*	*2100*
2021	*500*	*550*	*750*	*500*	*2300*

Calendar	EARNINGS PER SHARE A 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	1.04	*.27*	*2.05*
2021	*.25*	*.55*	*1.20*	*.25*	*2.25*

Calendar	QUARTERLY DIVIDENDS PAID B ■ 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	.4025	

BUSINESS: OGE Energy Corp. is a holding company for Oklahoma Gas and Electric Company (OG&E), which supplies electricity to 865,000 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.

OGE Energy's stock price continues to be held back by the poor performance of the units of Enable Midstream Partners. OGE has a 25.5% stake in Enable, a midstream gas master limited partnership that has been hurt by difficult conditions in the gas and oil industry. This has affected not only OGE's quotation, but its equity income and cash from distributions after Enable's board cut the payout. So far this year, the price of OGE stock has fallen 27%, far worse than most utility issues.

We have cut our 2020 earnings estimate by $0.05 a share. Unusually cool summer weather conditions hurt the third-quarter earnings comparison. Our revised estimate of $2.05 a share is near the upper end of management's targeted range of $2.00-$2.06.

We continue to expect improved earnings in 2021. We assume normal weather patterns in our estimate. The economy will likely be in better shape, too, although we note that the utility's service territory has fared better than the national economy in 2020. Revenues from a grid-enhancement plan will help, too.

The Oklahoma Corporation Commission approved a grid-enhancement plan. Oklahoma Gas and Electric plans to spend $810 million through 2024. The utility will receive $7 million in revenues for this plan in 2021 and 2022, and file a rate case by the end of the first quarter of 2022.

The utility filed for an increase in Arkansas under the state's formula rate plan. OG&E is seeking $7 million, which would take effect at the start of April. The company has reached settlements in previous formula rate requests.

The board of directors raised the dividend, effective with the October payment. The increase was $0.06 a share (3.9%) annually, smaller than in recent years. We believe this deceleration reflects the situation with Enable. We project better dividend growth by 2023-2025.

This stock offers an attractive dividend yield. The yield is more than one percentage point above the utility average. In addition, total return potential is superior for both the 18-month span and the 3- to 5-year period.

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

Company's Financial Strength	A
Stock's Price Stability	80
Price Growth Persistence	35
Earnings Predictability	85

(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 late Feb. **(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.

OTTER TAIL CORP. NDQ-OTTR

RECENT PRICE **39.82** | P/E RATIO **16.4** (Trailing: 16.6 Median: 22.0) | RELATIVE P/E RATIO **0.78** | DIV'D YLD **3.9%** | **VALUE LINE**

TIMELINESS 3 Raised 11/13/20
SAFETY 2 Raised 6/17/16
TECHNICAL 3 Raised 12/11/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$31-$69	$50 (25%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(+50%)	*14%*
Low	45	(+15%)	*7%*

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	85	78	75
to Sell	69	84	82
Hld's(000)	18484	18228	18869

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
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

Percent shares traded: 9, 6, 3

Target Price Range 2023 | 2024 | 2025: 160, 120, 100, 80, 60, 50, 40, 30, 20, 15

% TOT. RETURN 11/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-16.7	15.7
3 yr.	-10.2	23.5
5 yr.	75.0	64.0

© VALUE LINE PUB. LLC 23-25

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
	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	***21.20***	***22.85***	Revenues per sh
	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	***4.25***	***4.55***	"Cash Flow" per sh
	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	***2.30***	***2.45***	Earnings per sh [A]
	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] ■
	1.72	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	***9.15***	***3.75***	Cap'l Spending per sh
	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	***20.85***	***21.70***	Book Value per sh [C]
	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]
	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
	.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
	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
							1119.1	1077.9	859.2	893.3	799.3	779.8	803.5	849.4	916.4	919.5	***880***	***950***	Revenues ($mill)
							13.6	16.4	39.0	50.2	56.9	58.6	62.0	73.9	82.3	86.8	***95.0***	***105***	Net Profit ($mill)
							- -	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
							.6%	3.8%	1.7%	5.6%	3.9%	3.5%	2.2%	2.3%	4.1%	4.9%	***8.0%***	***4.0%***	AFUDC % to Net Profit
							40.2%	44.6%	44.0%	42.1%	46.5%	42.4%	43.0%	41.3%	44.7%	46.9%	***42.0%***	***45.0%***	Long-Term Debt Ratio
							58.4%	54.0%	54.4%	57.9%	53.5%	57.6%	57.0%	58.7%	55.3%	53.1%	***58.0%***	***55.0%***	Common Equity Ratio
							1083.3	1058.9	959.2	924.4	1071.3	1051.0	1175.4	1187.3	1318.9	1471.1	***1490***	***1640***	Total Capital ($mill)
							1108.7	1077.5	1049.5	1167.0	1268.5	1387.8	1477.2	1539.6	1581.1	1753.8	***2050***	***2120***	Net Plant ($mill)
							2.7%	3.2%	5.7%	6.8%	6.7%	6.8%	6.5%	7.3%	7.3%	7.0%	***7.5%***	***7.5%***	Return on Total Cap'l
							2.1%	2.8%	7.3%	9.4%	9.9%	9.7%	9.3%	10.6%	11.3%	11.1%	***11.0%***	***11.5%***	Return on Shr. Equity [E]
							2.0%	2.7%	7.3%	9.3%	9.9%	9.7%	9.3%	10.6%	11.3%	11.1%	***11.0%***	***11.5%***	Return on Com Equity
							NMF	NMF	NMF	1.2%	2.2%	2.0%	2.1%	3.3%	4.0%	4.0%	***4.0%***	***4.0%***	Retained to Com Eq
							NMF	NMF	113%	87%	78%	79%	78%	69%	65%	64%	***64%***	***63%***	All Div'ds to Net Prof

CAPITAL STRUCTURE as of 9/30/20
Total Debt $813.1 mill. **Due in 5 Yrs** $197.7 mill.
LT Debt $764.3 mill. **LT Interest** $35.1 mill.
(LT interest earned: 4.3x)

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

Pfd Stock None

Common Stock 41,064,051 shs.
as of 10/31/20

MARKET CAP: $1.6 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%	*5.0%*
Earnings	5.5%	9.0%	*6.5%*
Dividends	1.5%	2.5%	*5.0%*
Book Value	- -	4.5%	*5.0%*

QUARTERLY REVENUES ($ mill.)

Calendar	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	192.8	235.8	***216.7***	***880***
2021	***250***	***235***	***245***	***220***	***950***

EARNINGS PER SHARE [A]

Calendar	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	.42	.87	***.41***	***2.30***
2021	***.68***	***.47***	***.80***	***.50***	***2.45***

QUARTERLY DIVIDENDS PAID [B] ■

Calendar	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	.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 (27% of '19 operating 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, MN 56538-0496. Tel.: 866-410-8780. Internet: www.ottertail.com.

Otter Tail Corporation raised its 2020 earnings guidance for the second-consecutive quarter. The company's nonutility operations are faring better than management expected three months earlier. Accordingly, upon reporting third-quarter profits in early November, Otter Tail raised its targeted range for share net from $2.10-$2.30 to $2.26-$2.36. The company now expects its Manufacturing division to earn $0.23-$0.25 a share, versus $0.15-$0.23 previously and $0.32 in 2019, and its Plastics segment to contribute $0.64-$0.66, versus $0.50-$0.54 previously and $0.51 in 2019. The latter operation is seeing strong demand and pricing for PVC pipe. The revised earnings guidance is near the $2.22-$2.37 range Otter Tail issued in mid-February, before the coronavirus problems emerged. We raised our 2020 share-earnings estimate by $0.15, to $2.30, and boosted our 2021 estimate by the same amount, to $2.45, thanks to the nonutility operations' improved prospects.

Otter Tail Power filed a rate case in Minnesota. This was the utility's first application there since 2016. Otter Tail requested a hike of $14.5 million (6.8%), based on a return on equity of 10.2% and a common-equity ratio of 52.5%. The utility is requesting an interim tariff increase of $13.6 million that would take effect at the start of 2021. Otter Tail also wants a regulatory mechanism that would decouple revenues and volume. An order is expected in late 2021.

Two large construction projects are scheduled for completion soon. A 150-megawatt wind project, the largest in Otter Tail Power's history, is slated for commercial operation by yearend at an expected cost of $260 million. A 245-mw gas-fired plant is scheduled for commercial operation in the first quarter of 2021 at an expected cost of $152.5 million. Separately, the utility has submitted 12 potential projects with the Minnesota commission for a total capital investment of $153 million-$173 million.

This stock's dividend yield is slightly above the utility average. Despite Otter Tail's improved prospects, the stock price is down 22% in 2020. Total return potential is appealing for the next 18 months, but unexciting for the 2023-2025 period.

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

(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 mid-Feb. **(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.

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

PINNACLE WEST NYSE-PNW

RECENT PRICE 81.56 | P/E RATIO 16.9 (Trailing: 15.3 Median: 16.0) | RELATIVE P/E RATIO 0.77 | DIV'D YLD 4.1% | VALUE LINE

TIMELINESS 1 Raised 10/23/20
SAFETY 1 Raised 5/3/13
TECHNICAL 5 Lowered 10/23/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$61-$135	$98 (20%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	120	(+45%)	*13%*
Low	95	(+15%)	*8%*

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	221	207	229
to Sell	251	277	245
Hld's(000)	98387	95773	95025

	2004	2005	2006	2007	2008	2009
High:	38.0	42.7	48.9	54.7	61.9	71.1
Low:	22.3	32.3	37.3	45.9	51.5	51.2

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
High:	73.3	82.8	92.5	92.6	99.8	105.5						
Low:	56.0	62.5	75.8	73.4	81.6	60.1						

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

Target Price Range 2023 2024 2025

% TOT. RETURN 9/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-21.0	0.8
3 yr.	-3.1	7.9
5 yr.	36.9	47.8

	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	*31.05*	*32.30*	Revenues per sh	*34.75*
	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	*11.50*	*11.85*	"Cash Flow" per sh	*13.50*
	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	*4.95*	*5.15*	Earnings per sh [A]	*6.00*
	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	*12.20*	*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	*49.95*	*51.55*	Book Value per sh [C]	*58.25*
	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	*112.65*	*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	*18.0*
	.83	1.02	.74	.79	.97	.91	.80	.92	.91	.86	.84	.81	.98	.97	.96	1.03			Relative P/E Ratio	*1.00*
	4.5%	4.5%	4.7%	4.8%	6.2%	6.8%	5.4%	4.8%	5.3%	4.0%	4.1%	3.9%	3.5%	3.2%	3.5%	3.3%			Avg Ann'l Div'd Yield	*3.7%*
							3263.6	3241.4	3301.8	3454.6	3491.6	3495.4	3498.7	3565.3	3691.2	3471.2	*3500*	*3650*	Revenues ($mill)	*4100*
							330.4	328.2	387.4	406.1	397.6	437.3	442.0	497.8	511.0	538.3	*560*	*580*	Net Profit ($mill)	*720*
							31.9%	34.0%	36.2%	34.4%	34.2%	34.3%	33.9%	32.5%	20.2%	20.2%	*13.0%*	*13.0%*	Income Tax Rate	*13.0%*
							11.7%	12.8%	9.7%	10.0%	11.6%	11.8%	14.1%	13.9%	15.2%	9.3%	*8.0%*	*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%*	*55.5%*	Long-Term Debt Ratio	*55.0%*
							54.7%	55.9%	55.4%	60.0%	59.0%	57.0%	54.4%	51.1%	53.0%	52.9%	*47.0%*	*44.5%*	Common Equity Ratio	*45.0%*
							6729.1	6840.9	7171.9	6990.9	7398.7	8046.3	8825.4	9796.4	9861.1	10263	*11950*	*13150*	Total Capital ($mill)	*15325*
							9578.8	9962.3	10396	10889	11194	11809	12714	13445	14030	14523	*15175*	*16125*	Net Plant ($mill)	*18175*
							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	*6.0%*
							9.0%	8.6%	9.8%	9.7%	9.1%	9.5%	9.2%	9.9%	9.8%	9.9%	*10.0%*	*10.0%*	Return on Shr. Equity	*10.5%*
							9.0%	8.6%	9.8%	9.7%	9.1%	9.5%	9.2%	9.9%	9.8%	9.9%	*10.0%*	*10.0%*	Return on Com Equity [E]	*10.5%*
							3.1%	2.8%	4.1%	4.1%	3.5%	3.9%	3.5%	4.2%	3.9%	3.8%	*3.5%*	*3.5%*	Retained to Com Eq	*3.5%*
							66%	68%	58%	58%	62%	59%	62%	58%	60%	61%	*65%*	*66%*	All Div'ds to Net Prof	*65%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $6214.1 mill. **Due in 5 Yrs** $1807.0 mill.
LT Debt $5922.2 mill. **LT Interest** $217.1 mill.
Incl. $13.4 mill. Palo Verde sale leaseback lessor notes.
(LT interest earned: 3.4x)
Leases, Uncapitalized Annual rentals $14.7 mill.
Pension Assets-12/19 $3318.4 mill.
Oblig $3613.1 mill.
Pfd Stock None

Common Stock 112,556,967 shs.
as of 7/30/20
MARKET CAP: $9.2 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%	*1.5%*
"Cash Flow"	2.5%	6.0%	*4.0%*
Earnings	6.5%	5.0%	*4.5%*
Dividends	3.0%	3.5%	*5.5%*
Book Value	3.0%	4.0%	*4.0%*

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	929.6	*1200*	*708.5*	*3500*
2021	*750*	*900*	*1250*	*750*	*3650*

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	1.71	*2.90*	*.07*	*4.95*
2021	*.15*	*1.50*	*3.15*	*.35*	*5.15*

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	.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.

Pinnacle West's utility subsidiary has a rate case pending. Arizona Public Service is seeking an increase of $183.6 million (5.6%), based on a return on equity of 10.15% and a common-equity ratio of 54.7%. The staff of the Arizona Corporation Commission proposed a hike of $68.6 million (2.1%), based on an ROE of 9.4% and the same common-equity ratio. APS is seeking recovery of an environmental upgrade to a coal-fired plant, new gas-fired generating units, and a regulatory mechanism to recover increases in certain costs, such as property taxes. An order is expected in mid-2021. Note that APS filed the case in October of 2019, but the proceedings have been delayed. Originally, a decision might have come as early as December of 2020.

We raised our 2020 and 2021 earnings estimates. June-quarter profits soared above the typical level due to favorable weather patterns. Despite this, Pinnacle West did not change its earnings guidance of $4.75-$4.95 a share because the seasonally strong third quarter was not yet complete and there was added uncertainty related to the coronavirus. The hotter-than-normal weather continued into July and August. All told, we boosted our 2020 estimate by $0.20 a share, to $4.95. It's possible that the company will pull some planned expenses from 2021 into 2020 thanks to the headroom resulting from favorable weather conditions. This prompted us to raise our 2021 profit estimate by $0.10 a share, to $5.15.

We think the board of directors raised the dividend shortly after our report went to press. October is the usual timing of dividend hikes for Pinnacle West. We estimate an increase of $0.18 a share (5.8%) in the annual disbursement. The company's goal for yearly dividend growth is 6%.

This stock has our top ranks for Timeliness and Safety. Finances are strong, and the company has a Financial Strength rating of A+. The dividend yield is somewhat above the utility average. This makes the stock suitable for conservative, income-oriented investors. Total return prospects are attractive for the 18-month span, but not as appealing for the 3- to 5-year period.

Paul E. Debbas, CFA *October 23, 2020*

(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 late Oct. **(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.

Company's Financial Strength	A+
Stock's Price Stability	90
Price Growth Persistence	80
Earnings Predictability	100

PORTLAND GENERAL NYSE-POR

RECENT PRICE **38.09** | P/E RATIO **27.4** (Trailing: 14.5 Median: 17.0) | RELATIVE P/E RATIO **1.25** | DIV'D YLD **4.3%** | **VALUE LINE**

TIMELINESS 2 Raised 10/23/20
SAFETY 3 Lowered 10/23/20
TECHNICAL 4 Lowered 10/23/20
BETA .85 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$33-$77	$55 (45%)

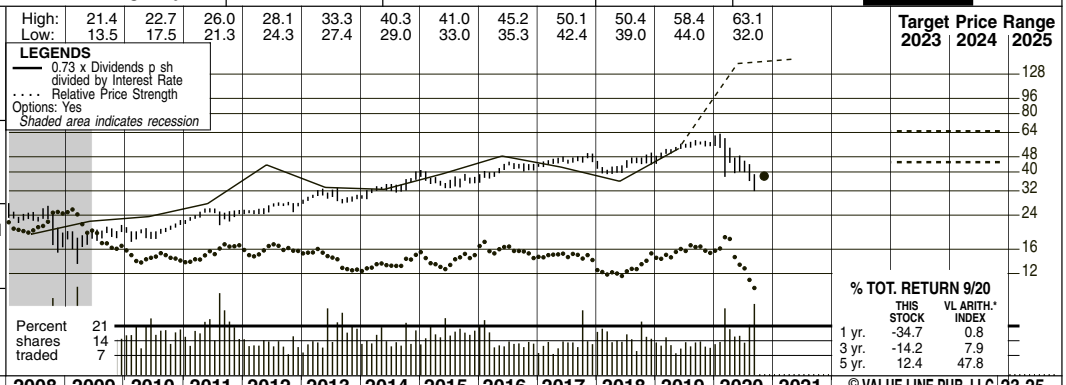
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	65	(+70%)	*17%*
Low	45	(+20%)	*9%*

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	160	132	157
to Sell	159	197	158
Hld's(000)	86645	86455	90761

	2004	2005[F]	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
High:	21.4	22.7	26.0	28.1	33.3	40.3	41.0	45.2	50.1	50.4	58.4	63.1								Target Price Range 2023 2024 2025
Low:	13.5	17.5	21.3	24.3	27.4	29.0	33.0	35.3	42.4	39.0	44.0	32.0								
Revenues per sh	- -	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	*24.00*	*24.55*		*27.25*
"Cash Flow" per sh	- -	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	*6.15*	*7.35*		*8.75*
Earnings per sh [A]	- -	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	*1.45*	*2.50*		*3.00*
Div'd Decl'd per sh [B] ■ †	- -	- -	.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	*1.59*	*1.68*		*2.00*
Cap'l Spending per sh	- -	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*		*6.00*
Book Value per sh [C]	- -	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	*28.80*	*29.65*		*32.25*
Common Shs Outst'g [D]	- -	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*		*90.00*
Avg Ann'l P/E Ratio	- -	- -	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*			*18.0*
Relative P/E Ratio	- -	- -	1.26	.63	.98	.96	.76	.78	.89	.95	.81	.89	1.00	1.01	.99	1.19				*1.00*
Avg Ann'l Div'd Yield	- -	- -	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%				*3.7%*
Revenues ($mill)		1783.0	1813.0	1805.0	1810.0	1900.0	1898.0	1923.0	2009.0	1991.0	2123.0	*2150*	*2200*							*2450*
Net Profit ($mill)		125.0	147.0	141.0	137.0	175.0	172.0	193.0	204.0	212.0	214.0	*130*	*225*							*260*
Income Tax Rate		30.5%	28.3%	31.4%	23.2%	26.0%	20.7%	20.6%	25.3%	7.4%	11.2%	*11.0%*	*11.0%*							*11.0%*
AFUDC % to Net Profit		17.6%	5.4%	7.1%	14.6%	33.7%	19.8%	16.6%	8.8%	8.0%	7.0%	*15.0%*	*7.0%*							*6.0%*
Long-Term Debt Ratio		53.0%	49.6%	47.1%	51.3%	52.7%	47.8%	48.4%	50.1%	46.5%	51.3%	*53.5%*	*55.0%*							*54.5%*
Common Equity Ratio		47.0%	50.4%	52.9%	48.7%	47.3%	52.2%	51.6%	49.9%	53.5%	48.7%	*46.5%*	*45.0%*							*45.5%*
Total Capital ($mill)		3390.0	3298.0	3264.0	3735.0	4037.0	4329.0	4544.0	4842.0	4684.0	5323.0	*5535*	*5910*							*6375*
Net Plant ($mill)		4133.0	4285.0	4392.0	4880.0	5679.0	6012.0	6434.0	6741.0	6887.0	7161.0	*7500*	*7645*							*7775*
Return on Total Cap'l		5.4%	6.2%	5.9%	5.1%	5.8%	5.4%	5.6%	5.5%	5.8%	5.1%	*3.5%*	*5.0%*							*5.5%*
Return on Shr. Equity		7.9%	8.8%	8.2%	7.5%	9.2%	7.6%	8.2%	8.4%	8.5%	8.3%	*5.0%*	*8.5%*							*9.0%*
Return on Com Equity [E]		7.9%	8.8%	8.2%	7.5%	9.2%	7.6%	8.2%	8.4%	8.5%	8.3%	*5.0%*	*8.5%*							*9.0%*
Retained to Com Eq		3.0%	4.1%	3.5%	2.9%	4.6%	3.3%	3.5%	3.6%	3.5%	3.1%	*NMF*	*3.0%*							*3.0%*
All Div'ds to Net Prof		62%	54%	57%	61%	50%	56%	57%	58%	59%	63%	*NMF*	*66%*							*69%*



% TOT. RETURN 9/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-34.7	0.8
3 yr.	-14.2	7.9
5 yr.	12.4	47.8

CAPITAL STRUCTURE as of 6/30/20
Total Debt $2966 mill. **Due in 5 Yrs** $466 mill.
LT Debt $2676 mill. **LT Interest** $130 mill.
Incl. $135 mill. capitalized leases.
(LT interest earned: 3.1x)
Leases, Uncapitalized Annual rentals $8 mill.
Pension Assets-12/19 $695 mill.
Oblig $905 mill.

Pfd Stock None

Common Stock 89,508,545 shs.
as of 7/27/20

MARKET CAP: $3.4 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%	*5.0%*
Earnings	3.5%	4.0%	*4.0%*
Dividends	4.0%	5.5%	*6.0%*
Book Value	3.0%	3.5%	*2.5%*

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	469	*553*	*555*	*2150*
2021	*580*	*475*	*570*	*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	.43	*d.60*	*.71*	*1.45*
2021	*.85*	*.45*	*.45*	*.75*	*2.50*

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	.4075	

BUSINESS: Portland General Electric Company (PGE) provides electricity to 901,000 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 experienced a large energy-trading loss in the third quarter. The announcement happened on August 24th after the stock market closed. This amounted to $128 million before taxes. The utility will not seek recovery of the loss from ratepayers. PGE put two employees on administrative leave, and a special committee of the board of directors is looking into this matter. As a result of this loss, PGE now estimates it will earn $1.40-$1.60 a share this year. (Management had cut its guidance from $2.20-$2.50 to $1.30-$1.60 when a loss of up to $155 million appeared possible.) Operating and maintenance expenses (including incentive compensation) have been reduced by $20 million to offset a small portion of the trading loss. Our 2020 earnings estimate is $1.45 a share.

The stock lost roughly 10% of its value after the disclosure of the trading loss. Wall Street is concerned not just about the loss, but about the indication of deficiencies in PGE's risk management. The price has not recovered much since then, and is down 32% year to date.

We expect earnings to return to a normal level in 2021. We assume no trading losses. In addition, the economy should be better, and PGE will likely record lower bad-debt expense, as this increased when disconnections were suspended and late fees waived in 2020.

In July, the board raised the annual dividend $0.09 a share (5.8%), effective in October. PGE expects the trading loss will not affect the company's dividend policy. The company's goals for the disbursement are a growth rate of 5%-7% yearly and a payout ratio of 60%-70%.

Two key capital projects are on schedule and on budget. PGE has a $160 million investment for a one-third stake in a joint venture in a wind project that should be completed by yearend. The utility is spending $200 million on an integrated operations center that is scheduled for completion by the end of 2021. PGE is using debt financing for these projects.

This timely stock has a dividend yield that is slightly above the utility mean. Total return potential is attractive for the 18-month span and decent for the 3- to 5-year period.

Paul E. Debbas, CFA *October 23, 2020*

(A) Diluted EPS. Excl. nonrecurring losses: '13, 42¢; '17, 19¢. Next earnings report due late Oct. **(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	90
Earnings Predictability	90

XCEL ENERGY NDQ-XEL

RECENT PRICE 73.62 | P/E RATIO 25.9 (Trailing: 27.6 Median: 16.0) | RELATIVE P/E RATIO 1.18 | DIV'D YLD 2.4% | VALUE LINE

TIMELINESS 3 Lowered 9/20/19
SAFETY 1 Raised 5/1/15
TECHNICAL 3 Lowered 10/23/20
BETA .80 (1.00 = Market)

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$53-$107	$80 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	70	(-5%)	*2%*
Low	55	(-25%)	*-4%*

Institutional Decisions

	4Q2019	1Q2020	2Q2020
to Buy	395	365	343
to Sell	320	378	366
Hld's(000)	409339	407479	412864

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
High:	21.9	24.4	27.8	29.9	31.8	37.6	38.3	45.4	52.2	54.1	66.1	74.4						
Low:	16.0	19.8	21.2	25.8	26.8	27.3	31.8	35.2	40.0	41.5	47.7	46.6						

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

Target Price Range 2023 2024 2025

% TOT. RETURN 9/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	9.2	0.8
3 yr.	59.1	7.9
5 yr.	127.0	47.8

	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	*20.80*	*22.15*	Revenues per sh	*24.75*
	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	*6.55*	*7.00*	"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*	*28.50*	Book Value per sh [C]	*32.50*
	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	*18.0*
	.72	.82	.80	.89	.82	.85	.90	.89	.94	.84	.81	.83	.97	1.02	1.02	1.19			Relative P/E Ratio	*1.00*
	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	*3.4%*
							10311	10655	10128	10915	11686	11024	11107	11404	11537	11529	*11200*	*12000*	Revenues ($mill)	*13500*
							727.0	841.4	905.2	948.2	1021.3	1063.6	1123.4	1171.0	1261.0	1372.0	*1460*	*1570*	Net Profit ($mill)	*1885*
							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%*	*9.0%*	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	*57.0%*
							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	*43.0%*
							17452	17331	19018	20477	21714	23092	25216	25975	28025	30646	*34175*	*35925*	Total Capital ($mill)	*41200*
							20663	22353	23809	26122	28757	31206	32842	34329	36944	39483	*41025*	*42600*	Net Plant ($mill)	*48400*
							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	*62%*

CAPITAL STRUCTURE as of 6/30/20
Total Debt $21974 mill. **Due in 5 Yrs** $4635 mill.
LT Debt $19463 mill. **LT Interest** $797 mill.
Incl. $77 mill. capitalized leases.
(LT interest earned: 2.8x)

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

Pfd Stock None

Common Stock 525,342,304 shs.
as of 7/28/20
MARKET CAP: $39 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%	*2.0%*
"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%	*5.5%*

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	2586	*3003*	*2800*	*11200*
2021	*3100*	*2700*	*3150*	*3050*	*12000*

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	.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.

We expect a continuation of Xcel Energy's steady earnings growth in 2020 and 2021. The company will benefit from electric rate increases its Southwestern Public Service subsidiary received in Texas and New Mexico. In addition, Public Service of Colorado is awaiting a ruling (probably in the current quarter) on a settlement that would see it book a gas tariff hike of $76.9 million, based on a return on equity of 9.2% and a common-equity ratio of 55.6%, as of November of 2020. Although the company's utilities have been affected by the recession, Xcel has been able to offset weakness in kilowatt-hour sales thanks to expense reductions and regulatory mechanisms in certain jurisdictions that decouple revenues and volume. Our 2020 earnings estimate of $2.75 a share is within the company's targeted range of $2.73-$2.83. We estimate 5% growth, to $2.90 a share, in 2021. Xcel was scheduled to report earnings in late October, shortly after our report came out, and was expected to release a new five-year capital spending and financing plan and provide earnings guidance for 2021.

The company isn't as active as usual in the regulatory arena. P.S. of Colorado is seeking regulatory mechanisms to recover wildfire mitigation and grid modification plans, and expects a decision in the second quarter of 2021. Northern States Power should soon ask the Minnesota commission to either raise rates or continue regulatory mechanisms that provide some rate relief annually. We think the latter is the more likely outcome.
Finances are solid. Xcel consistently earns a healthy ROE and has a good fixed-charge coverage. The company's Financial Strength rating is A+.
Xcel Energy stock has been one of the top performers in the electric utility industry in 2020. The quotation has risen 16% in what has been a bad year for most utility equities. Wall Street likes the company's consistent profit growth, and some investors find Xcel's position in renewable energy appealing. However, the stock is now expensively priced. The dividend yield is well below the industry mean, and the recent price is above our 2023-2025 Target Price Range.

Paul E. Debbas, CFA *October 23, 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 Oct. **(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	80
Earnings Predictability	100

Southwestern Public Service Company
Summary of Risk Premium Models for the
Proxy Group of Thirteen Electric Companies

	Proxy Group of Thirteen Electric Companies	
Predictive Risk Premium Model (PRPM) (1)	10.38	%
Risk Premium Using an Adjusted Total Market Approach (2)	10.49	%
Average	10.44	%

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

Southwestern Public Service Company
Indicated ROE
Derived by the Predictive Risk Premium Model (1)

Proxy Group of Thirteen 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.	0.29%	0.43%	0.29%	2.1297	7.56%	2.25%	9.81%
Alliant Energy Corporation	0.27%	0.35%	0.27%	2.6007	8.66%	2.25%	10.91%
Ameren Corporation	0.23%	0.26%	0.23%	1.9587	5.49%	2.25%	7.74%
Duke Energy	0.31%	0.31%	0.31%	1.8030	6.96%	2.25%	9.21%
Edison International	0.43%	0.67%	0.43%	1.4910	8.01%	2.25%	10.26%
Entergy Corporation	0.40%	0.52%	0.40%	2.2100	11.15%	2.25%	13.40%
IDACORP, Inc.	0.29%	0.41%	0.29%	2.1864	7.77%	2.25%	10.02%
NorthWestern Corporation	0.34%	0.62%	0.34%	2.4402	10.41%	2.25%	12.66%
OGE Energy Corporation	0.31%	0.34%	0.31%	2.1406	8.22%	2.25%	10.47%
Otter Tail Corporation	0.37%	0.31%	0.37%	1.6103	7.45%	2.25%	9.70%
Pinnacle West Capital Corporation	0.60%	0.54%	0.60%	1.2483	9.34%	2.25%	11.59%
Portland General Electric Company	0.27%	0.47%	0.27%	1.9795	6.67%	2.25%	8.92%
Xcel Energy, Inc.	0.27%	0.21%	0.27%	2.8114	9.60%	2.25%	11.85%
						Average	10.50%
						Median	10.26%
						Average of Mean and Median	10.38%

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

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

Line No.		Proxy Group of Thirteen Electric Companies	
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	3.00	%
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A2 Rated Public Utility Bonds	0.56	(2)
3.	Adjusted Prospective Yield on A2 Rated Public Utility Bonds	3.56	%
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	0.10	(3)
5.	Adjusted Prospective Bond Yield	3.66	%
6.	Equity Risk Premium (4)	6.83	
7.	Risk Premium Derived Common Equity Cost Rate	10.49	%

Notes:
(1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 10 and 11 of this Schedule).
(2) The average yield spread of A2 rated public utility bonds over Aaa rated corporate bonds of 0.56% 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 0.10% upward adjustment is derived by taking 1/3 of the spread between A2 and Baa2 Public Utility Bonds (1/3 * 0.30% = 0.10%) as derived from page 4 of this Schedule.
(4) From page 7 of this Schedule.

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

Selected Bond Yields

	[1] Aaa Rated Corporate Bond	[2] A2 Rated Public Utility Bond	[3] Baa2 Rated Public Utility Bond
Dec-2020	2.26 %	2.77 %	3.05 %
Nov-2020	2.30	2.85	3.17
Oct-2020	2.35	2.95	3.27
Average	2.30 %	2.86 %	3.16 %

Selected Bond Spreads

A2 Rated Public Utility Bonds Over Aaa Rated Corporate Bonds: 0.56 % (1)

Baa2 Rated Public Utility Bonds Over A2 Rated Public Utility Bonds: 0.30 % (2)

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

Source of Information:
Bloomberg Professional Service

Southwestern Public Service Company
Comparison of Long-Term Issuer Ratings for
Proxy Group of Thirteen Electric Companies

	Moody's		Standard & Poor's	
	Long-Term Issuer Rating		Long-Term Issuer Rating	
	January 2021		January 2021	
Proxy Group of Thirteen 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	A3	7.0	A-	7.0
Edison International	Baa2	9.0	BBB	9.0
Entergy Corporation	Baa1/Baa2	8.5	BBB+	8.0
IDACORP, Inc.	A3	7.0	BBB	9.0
NorthWestern Corporation	Baa2	9.0	BBB	9.0
OGE Energy Corporation	A3	7.0	A-	7.0
Otter Tail Corporation	A3	7.0	BBB+	8.0
Pinnacle West Capital Corporation	A2	6.0	A-	7.0
Portland General Electric Company	A3	7.0	BBB+	8.0
Xcel Energy, Inc.	A3	7.0	A-	7.0
Average	A3	7.4	BBB+	7.8

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-

Southwestern Public Service Company
Judgment of Equity Risk Premium for
Proxy Group of Thirteen Electric Companies

Line No.		Proxy Group of Thirteen Electric Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1)	9.06 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A2 rated bonds (2)	5.52
3.	Predicted Equity Risk Premium Based on Regression Analysis of 1,178 Fully-Litigated Electric Utility Rate Cases	5.92
4.	Average equity risk premium	6.83 %

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

Southwestern Public Service Company
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Thirteen Electric Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Thirteen Electric Companies
	Ibbotson-Based Equity Risk Premiums:	
1.	Ibbotson Equity Risk Premium (1)	5.78 %
2.	Regression on Ibbotson Risk Premium Data (2)	9.37
3.	Ibbotson Equity Risk Premium based on PRPM (3)	9.63
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	7.89
5.	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	10.99
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	12.36
7.	Conclusion of Equity Risk Premium	9.34 %
8.	Adjusted Beta (7)	0.97
9.	Forecasted Equity Risk Premium	9.06 %

Notes provided on page 9 of this Schedule.

Southwestern Public Service Company
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Thirteen 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 Aa2 corporate bonds from 1928-2019.

(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 Aa2 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 Aa2 corporate monthly bond yields, from January 1928 through December 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 3.00% (from page 3 of this Schedule) from the projected 3-5 year total annual market return of 10.89% (described fully in note 1 on page 2 of Schedule 5).

(5) Using data from Value Line for the S&P 500, an expected total return of 13.99% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 3.00% results in an expected equity risk premium of 10.99%.

(6) Using data from the Bloomberg Professional Service for the S&P 500, an expected total return of 15.36% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 3.00% results in an expected equity risk premium of 12.36%.

(7) Average of mean and median beta from Schedule 5.

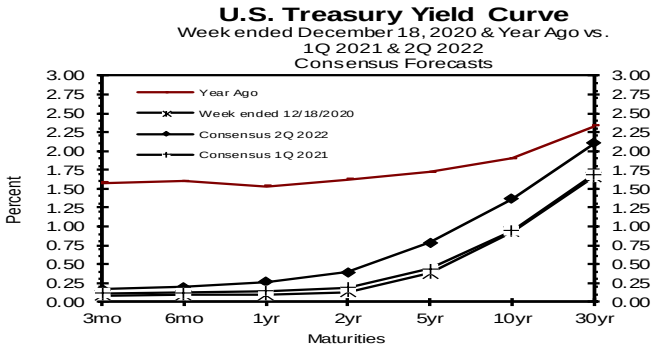
Sources of Information:

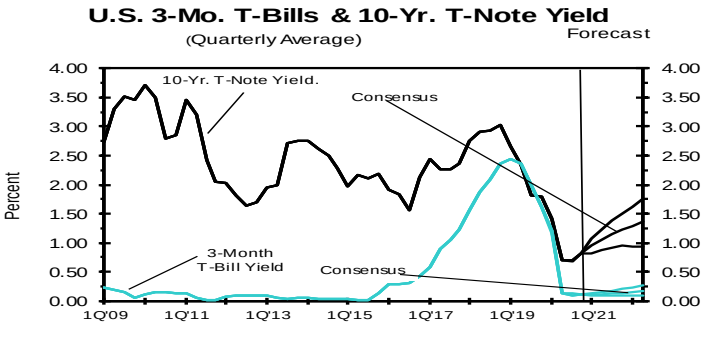
Stocks, Bonds, Bills, and Inflation - 2020 SBBI Yearbook, John Wiley & Sons, Inc.
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, December 1, 2020 and January 1, 2021
Bloomberg Professional Service

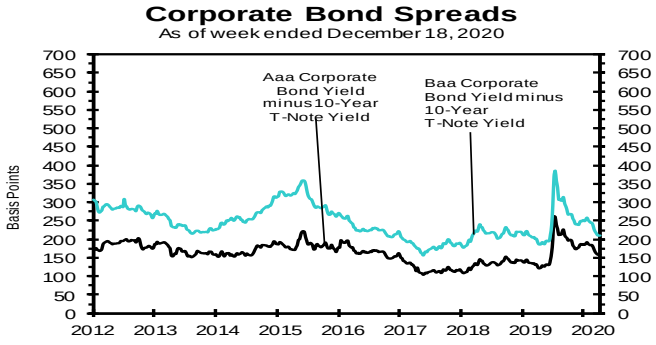
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

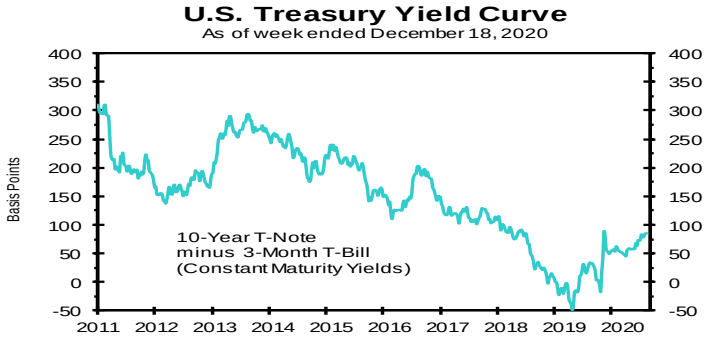
	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*	1Q	2Q	3Q	4Q	1Q	2Q
Interest Rates	Dec 18	Dec 11	Dec 4	Nov 27	Nov	Oct	Sep	4Q 2020*	2021	2021	2021	2021	2022	2022
Federal Funds Rate	0.09	0.09	0.08	0.08	0.09	0.09	0.09	0.09	**0.1**	**0.1**	**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.	0.23	0.22	0.23	0.22	0.22	0.22	0.24	0.22	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**	**0.3**
Commercial Paper, 1-mo.	0.10	0.09	0.09	0.07	0.09	0.09	0.09	0.09	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**
Treasury bill, 3-mo.	0.08	0.08	0.09	0.09	0.09	0.10	0.11	0.09	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**
Treasury bill, 6-mo.	0.09	0.09	0.10	0.09	0.10	0.11	0.12	0.11	**0.1**	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**
Treasury bill, 1 yr.	0.09	0.10	0.11	0.11	0.12	0.13	0.13	0.12	**0.1**	**0.2**	**0.2**	**0.2**	**0.2**	**0.3**
Treasury note, 2 yr.	0.13	0.14	0.16	0.16	0.17	0.15	0.13	0.15	**0.2**	**0.2**	**0.3**	**0.3**	**0.4**	**0.4**
Treasury note, 5 yr.	0.38	0.39	0.40	0.39	0.39	0.34	0.27	0.36	**0.4**	**0.5**	**0.6**	**0.6**	**0.7**	**0.8**
Treasury note, 10 yr.	0.93	0.93	0.92	0.87	0.87	0.79	0.68	0.84	**0.9**	**1.0**	**1.1**	**1.2**	**1.3**	**1.4**
Treasury note, 30 yr.	1.66	1.67	1.67	1.59	1.62	1.57	1.42	1.60	**1.7**	**1.8**	**1.9**	**2.0**	**2.1**	**2.1**
Corporate Aaa bond	2.53	2.51	2.51	2.49	2.58	2.65	2.56	2.59	**2.5**	**2.5**	**2.6**	**2.7**	**2.8**	**2.8**
Corporate Baa bond	3.03	3.03	3.03	3.03	3.13	3.27	3.20	3.16	**3.5**	**3.6**	**3.7**	**3.8**	**3.8**	**3.8**
State & Local bonds	2.69	2.72	2.75	2.75	2.82	2.93	2.92	2.84	**2.6**	**2.6**	**2.7**	**2.8**	**2.9**	**2.9**
Home mortgage rate	2.67	2.71	2.71	2.72	2.77	2.83	2.89	2.78	**2.8**	**2.9**	**3.0**	**3.1**	**3.2**	**3.2**
	History								Consensus Forecasts-Quarterly					
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
Key Assumptions	2019	2019	2019	2019	2020	2020	2020	2020**	2021	2021	2021	2021	2022	2022
Fed's AFE $ Index	109.4	110.3	110.5	110.3	111.3	112.3	107.2	105.4	**104.0**	**103.5**	**103.5**	**103.4**	**103.0**	**103.1**
Real GDP	2.9	1.5	2.6	2.4	-5.0	-31.4	33.4	4.3	**1.8**	**4.3**	**4.6**	**3.9**	**3.0**	**2.9**
GDP Price Index	1.2	2.5	1.5	1.4	1.4	-1.8	3.5	1.6	**1.8**	**1.8**	**1.8**	**1.8**	**1.9**	**1.9**
Consumer Price Index	0.9	3.0	1.8	2.4	1.2	-3.5	5.2	2.0	**2.0**	**1.8**	**2.0**	**2.0**	**2.0**	**2.0**
PCE Price Index	0.6	2.5	1.4	1.5	1.3	-1.6	3.7	1.6	**1.8**	**1.7**	**1.8**	**1.9**	**1.9**	**1.9**

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). *Interest rate data for 4Q 2020 based on historical data through the week ended December 18. **Data for 4Q 2020 for the Fed's AFE $ Index based on data through the week ended December 18. Figures for 4Q 2020 Real GDP, GDP Chained Price Index and CPI and PCE Price Index are consensus forecasts based on a special question asked of the panelists this month.









Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2022 through 2026 and averages for the five-year periods 2022-2026 and 2027-2031. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

		Average For The Year					Five-Year Averages	
		2022	2023	2024	2025	2026	2022-2026	2027-2031
1. Federal Funds Rate	**CONSENSUS**	**0.1**	**0.3**	**0.7**	**1.2**	**1.5**	**0.8**	**1.8**
	Top 10 Average	0.2	0.7	1.4	2.0	2.4	1.3	2.5
	Bottom 10 Average	0.1	0.1	0.2	0.4	0.6	0.3	1.2
2. Prime Rate	**CONSENSUS**	**3.3**	**3.5**	**3.9**	**4.3**	**4.6**	**3.9**	**4.9**
	Top 10 Average	3.4	3.7	4.4	5.0	5.4	4.4	5.4
	Bottom 10 Average	3.2	3.2	3.3	3.5	3.8	3.4	4.5
3. LIBOR, 3-Mo.	**CONSENSUS**	**0.4**	**0.6**	**1.1**	**1.5**	**1.8**	**1.1**	**2.2**
	Top 10 Average	0.5	1.0	1.7	2.2	2.6	1.6	2.7
	Bottom 10 Average	0.3	0.3	0.5	0.8	1.1	0.6	1.6
4. Commercial Paper, 1-Mo	**CONSENSUS**	**0.3**	**0.7**	**1.2**	**1.6**	**1.9**	**1.1**	**2.1**
	Top 10 Average	0.4	0.9	1.6	2.1	2.4	1.5	2.5
	Bottom 10 Average	0.2	0.4	0.8	1.2	1.5	0.8	1.7
5. Treasury Bill Yield, 3-Mo	**CONSENSUS**	**0.2**	**0.4**	**0.8**	**1.2**	**1.5**	**0.8**	**1.9**
	Top 10 Average	0.3	0.7	1.5	2.0	2.4	1.4	2.5
	Bottom 10 Average	0.1	0.1	0.2	0.5	0.7	0.3	1.3
6. Treasury Bill Yield, 6-Mo	**CONSENSUS**	**0.2**	**0.5**	**0.9**	**1.3**	**1.6**	**0.9**	**2.0**
	Top 10 Average	0.3	0.8	1.6	2.1	2.5	1.5	2.6
	Bottom 10 Average	0.1	0.2	0.3	0.5	0.8	0.4	1.4
7. Treasury Bill Yield, 1-Yr	**CONSENSUS**	**0.3**	**0.6**	**1.0**	**1.4**	**1.8**	**1.0**	**2.1**
	Top 10 Average	0.5	1.0	1.7	2.3	2.6	1.6	2.7
	Bottom 10 Average	0.2	0.3	0.4	0.7	0.9	0.5	1.6
8. Treasury Note Yield, 2-Yr	**CONSENSUS**	**0.4**	**0.8**	**1.2**	**1.6**	**1.9**	**1.2**	**2.3**
	Top 10 Average	0.7	1.2	1.9	2.4	2.8	1.8	2.9
	Bottom 10 Average	0.2	0.3	0.6	0.8	1.1	0.6	1.7
9. Treasury Note Yield, 5-Yr	**CONSENSUS**	**0.8**	**1.2**	**1.6**	**2.0**	**2.3**	**1.5**	**2.5**
	Top 10 Average	1.1	1.6	2.3	2.8	3.1	2.1	3.1
	Bottom 10 Average	0.5	0.7	1.0	1.2	1.4	1.0	1.9
10. Treasury Note Yield, 10-Yr	**CONSENSUS**	**1.3**	**1.7**	**2.0**	**2.4**	**2.6**	**2.0**	**2.8**
	Top 10 Average	1.7	2.2	2.7	3.1	3.4	2.6	3.5
	Bottom 10 Average	0.9	1.2	1.4	1.7	1.8	1.4	2.2
11. Treasury Bond Yield, 30-Yr	**CONSENSUS**	**2.1**	**2.4**	**2.8**	**3.1**	**3.4**	**2.8**	**3.6**
	Top 10 Average	2.5	3.0	3.5	4.0	4.2	3.4	4.3
	Bottom 10 Average	1.6	1.9	2.2	2.4	2.6	2.1	2.9
12. Corporate Aaa Bond Yield	**CONSENSUS**	**2.8**	**3.2**	**3.6**	**4.0**	**4.2**	**3.6**	**4.5**
	Top 10 Average	3.1	3.6	4.2	4.6	4.9	4.1	5.0
	Bottom 10 Average	2.4	2.8	3.0	3.3	3.6	3.0	3.9
13. Corporate Baa Bond Yield	**CONSENSUS**	**3.9**	**4.3**	**4.7**	**5.0**	**5.2**	**4.6**	**5.4**
	Top 10 Average	4.3	4.7	5.2	5.6	5.9	5.1	6.0
	Bottom 10 Average	3.5	3.9	4.1	4.3	4.5	4.1	4.9
14. State & Local Bonds Yield	**CONSENSUS**	**2.8**	**3.1**	**3.4**	**3.6**	**3.8**	**3.3**	**3.9**
	Top 10 Average	3.1	3.5	3.8	4.1	4.3	3.8	4.3
	Bottom 10 Average	2.5	2.8	2.9	3.2	3.4	2.9	3.6
15. Home Mortgage Rate	**CONSENSUS**	**3.2**	**3.5**	**3.9**	**4.2**	**4.5**	**3.9**	**4.7**
	Top 10 Average	3.5	3.9	4.4	4.9	5.2	4.4	5.2
	Bottom 10 Average	2.9	3.2	3.4	3.6	3.8	3.4	4.2
A. Fed's AFE Nominal $ Index	**CONSENSUS**	**107.2**	**107.0**	**106.5**	**106.4**	**106.6**	**106.7**	**106.7**
	Top 10 Average	109.0	108.9	108.8	108.9	109.5	109.0	110.2
	Bottom 10 Average	105.4	105.2	104.4	103.8	103.7	104.5	103.0
		Year-Over-Year, % Change					Five-Year Averages	
		2022	2023	2024	2025	2026	2022-2026	2027-2031
B. Real GDP	**CONSENSUS**	**3.2**	**2.5**	**2.3**	**2.2**	**2.1**	**2.4**	**2.1**
	Top 10 Average	3.8	3.0	2.6	2.5	2.4	2.9	2.4
	Bottom 10 Average	2.6	2.1	1.9	1.9	1.8	2.1	1.8
C. GDP Chained Price Index	**CONSENSUS**	**1.9**	**2.0**	**2.1**	**2.1**	**2.1**	**2.0**	**2.1**
	Top 10 Average	2.2	2.3	2.3	2.3	2.3	2.3	2.3
	Bottom 10 Average	1.7	1.8	1.9	1.9	1.9	1.8	1.9
D. Consumer Price Index	**CONSENSUS**	**2.1**	**2.2**	**2.2**	**2.1**	**2.2**	**2.1**	**2.2**
	Top 10 Average	2.4	2.4	2.4	2.4	2.4	2.4	2.4
	Bottom 10 Average	1.8	1.9	1.9	1.9	1.9	1.9	1.9
E. PCE Price Index	**CONSENSUS**	**1.9**	**2.0**	**2.1**	**2.1**	**2.1**	**2.0**	**2.1**
	Top 10 Average	2.2	2.2	2.2	2.2	2.3	2.2	2.4
	Bottom 10 Average	1.7	1.8	1.9	1.9	1.9	1.8	1.9

Southwestern Public Service Company
Derivation of Mean Equity Risk Premium Based Studies
Using Holding Period Returns and
Projected Market Appreciation of the S&P Utility Index

Line No.		Implied Equity Risk Premium
	Equity Risk Premium based on S&P Utility Index Holding Period Returns (1):	
1.	Historical Equity Risk Premium	4.21 %
2.	Regression of Historical Equity Risk Premium (2)	6.83
3.	Forecasted Equity Risk Premium Based on PRPM (3)	5.60
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Value Line Data) (4)	6.78
5.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg Data) (5)	4.18
6.	Average Equity Risk Premium (6)	5.52 %

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 A2 rated public utility bond yields from 1928 - 2019 referenced in note 1 above.

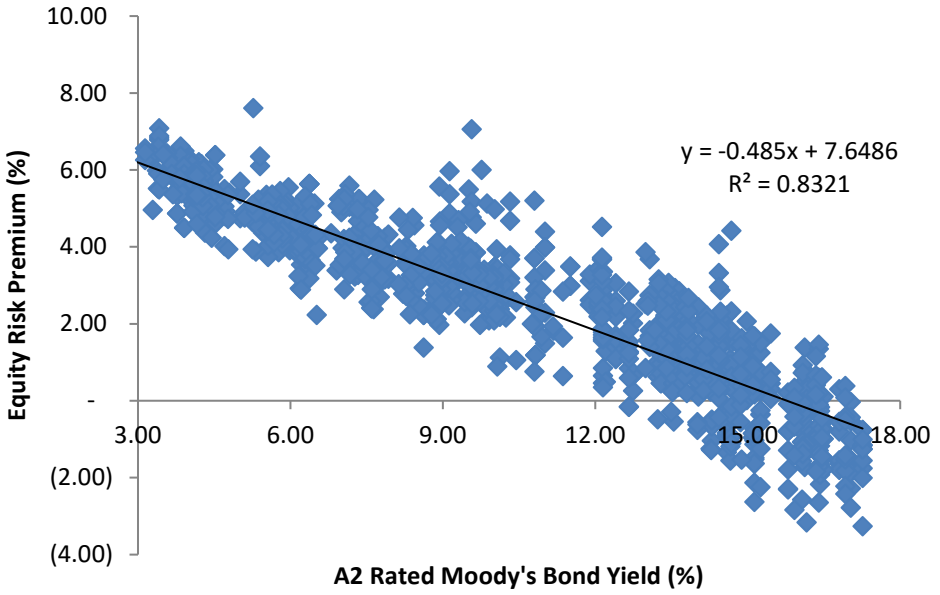
(3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A2 rated public utility bonds from January 1928 - December 2020.

(4) Using data from Value Line for the S&P Utilities Index, an expected return of 10.34% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A2 rated public utility bond yield of 3.56%, calculated on line 3 of page 3 of this Schedule results in an equity risk premium of 6.78%. (10.34% - 3.56% = 6.78%)

(5) Using data from Bloomberg Professional Service for the S&P Utilities Index, an expected return of 7.74% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A2 rated public utility bond yield of 3.56%, calculated on line 3 of page 3 of this Schedule results in an equity risk premium of 4.18%. (7.74% - 3.56% = 4.18%)

(6) Average of lines 1 through 5.

Southwestern Public Service Company
Prediction of Equity Risk Premiums Relative to
Moody's A2 Rated Utility Bond Yields



Constant	Slope	Prospective A2 Rated Utility Bond (1)	Prospective Equity Risk Premium
7.648641 %	-0.48502	3.56 %	5.92 %

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

Source of Information: Regulatory Research Associates

Southwestern Public Service Company
Indicated Common Equity Cost Rate Through Use
of the Traditional Capital Asset Pricing Model (CAPM) and Empirical Capital Asset Pricing Model (ECAPM)

Proxy Group of Thirteen 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	1.06	0.96	10.21 %	2.25 %	12.06 %	12.16 %	12.11 %
Alliant Energy Corporation	0.85	1.02	0.94	10.21	2.25	11.85	12.00	11.93
Ameren Corporation	0.85	0.95	0.90	10.21	2.25	11.44	11.70	11.57
Duke Energy	0.85	0.99	0.92	10.21	2.25	11.65	11.85	11.75
Edison International	0.90	1.10	1.00	10.21	2.25	12.46	12.46	12.46
Entergy Corporation	0.95	1.17	1.06	10.21	2.25	13.08	12.92	13.00
IDACORP, Inc.	0.80	1.05	0.93	10.21	2.25	11.75	11.93	11.84
NorthWestern Corporation	0.90	1.27	1.08	10.21	2.25	13.28	13.08	13.18
OGE Energy Corporation	1.10	1.25	1.18	10.21	2.25	14.30	13.84	14.07
Otter Tail Corporation	0.85	1.06	0.95	10.21	2.25	11.95	12.08	12.02
Pinnacle West Capital Corporation	0.85	1.13	0.99	10.21	2.25	12.36	12.39	12.37
Portland General Electric Company	0.85	1.06	0.96	10.21	2.25	12.06	12.16	12.11
Xcel Energy, Inc.	0.80	0.99	0.90	10.21	2.25	11.44	11.70	11.57
Mean			0.98			12.28 %	12.33 %	12.31 %
Median			0.96			12.06 %	12.16 %	12.11 %
Average of Mean and Median			0.97			12.17 %	12.25 %	12.21 %

Notes on page 2 of this Schedule.

Southwestern Public Service Company
Notes to Accompany the Application of the CAPM and ECAPM

Notes:

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

Historical Data MRP Estimates:

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

Arithmetic Mean Monthly Returns for Large Stocks 1926-2020:	12.10	%
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) 10.04 %

Measure 3: Application of the PRPM to Ibbotson Historical Data:
(January 1926 - December 2020) 10.74 %

Value Line MRP Estimates:

Measure 4: Value Line Projected MRP (Thirteen weeks ending January 08, 2021)

Total projected return on the market 3-5 years hence*:	10.89	%
Projected Risk-Free Rate (see note 2):	2.25	
MRP based on Value Line Summary & Index:	8.64	%

*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:	13.99	%
Projected Risk-Free Rate (see note 2):	2.25	
MRP based on Value Line data	11.74	%

Measure 6: Bloomberg Projected MRP

Total return on the Market based on the S&P 500:	15.36	%
Projected Risk-Free Rate (see note 2):	2.25	
MRP based on Bloomberg data	13.11	%
Average of Value Line, Ibbotson, and Bloomberg MRP:	10.21	%

(2) For reasons explained in the direct testimony, the appropriate risk-free rate for cost of capital purposes is the average forecast of 30 year Treasury Bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts. (See pages 10 and 11 of Schedule 4.) The projection of the risk-free rate is illustrated below:

First Quarter 2021	1.70	%
Second Quarter 2021	1.80	
Third Quarter 2021	1.90	
Fourth Quarter 2021	2.00	
First Quarter 2022	2.10	
Second Quarter 2022	2.10	
2022-2026	2.80	
2027-2031	3.60	
	2.25	%

(3) Average of Column 6 and Column 7.

Sources of Information:
Value Line Summary and Index
Blue Chip Financial Forecasts, December 1, 2020 and January 1, 2021
Stocks, Bonds, Bills, and Inflation - 2020 SBBI Yearbook, John Wiley & Sons, Inc.
Bloomberg Professional Services

Southwestern Public Service Company
Basis of Selection of the Group of Non-Price Regulated Companies
Comparable in Total Risk to the Utility Proxy Group

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

The Non-Price Regulated Proxy Group was then selected based on the unadjusted beta range of 0.65 – 0.93 and residual standard error of the regression range of 2.4869 – 2.9661 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 Utility Proxy Group's residual standard error of the regression is 0.1198. 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

$$\text{Thus, } 0.1198 = \frac{2.7265}{\sqrt{518}} = \frac{2.7265}{22.7596}$$

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

Southwestern Public Service Company
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

Proxy Group of Thirteen 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	0.75	2.7231	0.0685
Alliant Energy Corporation	0.85	0.73	2.7326	0.0687
Ameren Corporation	0.85	0.70	2.6062	0.0655
Duke Energy	0.85	0.77	2.8284	0.0711
Edison International	0.95	0.88	3.2843	0.0826
Entergy Corporation	0.95	0.89	2.6240	0.0660
IDACORP, Inc.	0.80	0.68	2.5421	0.0639
NorthWestern Corporation	0.95	0.85	2.7335	0.0687
OGE Energy Corporation	1.10	1.08	2.6719	0.0672
Otter Tail Corporation	0.85	0.76	2.4857	0.0625
Pinnacle West Capital Corporation	0.90	0.80	2.7203	0.0684
Portland General Electric Company	0.85	0.75	2.8187	0.0709
Xcel Energy, Inc.	0.80	0.66	2.6743	0.0672
Average	0.89	0.79	2.7265	0.0686

Beta Range (+/- 2 std. Devs. of Beta)	0.65	0.93
2 std. Devs. of Beta	0.14	
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.4869	2.9661
Std. dev. of the Res. Std. Err.	0.1198	
2 std. devs. of the Res. Std. Err.	0.2396	

Source of Information: Valueline Proprietary Database, January 2021

Southwestern Public Service Company
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Thirteen Electric Companies

Proxy Group of Forty-Eight Non-Price Regulated Companies	[1] VL Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
Abbot Laboratories	0.95	0.91	2.7460	0.0690
Analog Devices	0.95	0.86	2.6778	0.0673
Assurant Inc.	0.95	0.85	2.9139	0.0733
ANSYS, Inc.	0.85	0.76	2.8279	0.0711
Smith (A.O.)	0.90	0.83	2.7524	0.0692
Becton, Dickinson	0.80	0.67	2.8794	0.0724
Brown-Forman 'B'	0.85	0.76	2.6920	0.0677
Broadridge Fin'l	0.85	0.72	2.7392	0.0689
Cerner Corp.	0.95	0.87	2.7913	0.0702
Chemed Corp.	0.85	0.75	2.5303	0.0636
Cooper Cos.	0.95	0.92	2.7038	0.0680
Cisco Systems, Inc.	0.95	0.85	2.4987	0.0628
CSW Industrials	0.85	0.76	2.7444	0.0690
Quest Diagnostics	0.90	0.80	2.6677	0.0671
Dolby Labs.	0.95	0.87	2.6659	0.0670
Estee Lauder	0.90	0.83	2.7514	0.0692
Exponent, Inc.	0.85	0.76	2.9154	0.0733
Gentex Corporation	0.95	0.91	2.7484	0.0691
Alphabet Inc.	0.85	0.75	2.5514	0.0641
Hershey Co.	0.85	0.72	2.7087	0.0681
Ingredion Inc.	0.90	0.78	2.9266	0.0736
Hunt (J.B.)	0.95	0.88	2.8114	0.0707
J & J Snack Foods Corp.	0.90	0.82	2.8400	0.0714
Jack Henry & Associates, Inc.	0.85	0.70	2.7540	0.0692
McCormick and Co.	0.85	0.70	2.7595	0.0694
Altria Group	0.90	0.79	2.8916	0.0727
MSCI Inc.	0.95	0.86	2.9256	0.0735
Motorola Solutions, Inc.	0.90	0.82	2.8041	0.0705
Maxim Integrated	0.95	0.85	2.9413	0.0739
NewMarket Corp.	0.80	0.66	2.5362	0.0638
Northrop Grumman	0.85	0.71	2.8969	0.0728
Omnicom Group Inc.	1.00	0.93	2.5166	0.0633
PerkinElmer, Inc.	0.95	0.92	2.6809	0.0674
Pool Corp.	0.90	0.82	2.9389	0.0739
Rollins, Inc.	0.85	0.76	2.8807	0.0724
Starbucks Corporation	0.95	0.92	2.6496	0.0666
The Sherwin-Williams Company	0.95	0.91	2.5559	0.0643
Selective Ins. Group	0.85	0.74	2.9102	0.0732
Synopsys, Inc.	0.95	0.92	2.5128	0.0632
Sensient Technologies Corporation	0.90	0.82	2.5687	0.0646
Tetra Tech	0.90	0.83	2.9490	0.0741
Texas Instruments	0.85	0.76	2.5625	0.0644
AMERCO	0.95	0.87	2.6739	0.0672
UniFirst Corporation	0.95	0.92	2.4960	0.0628
Verisign	0.95	0.85	2.6197	0.0659
Waters Corp.	0.95	0.87	2.7355	0.0688
Watsco, Inc.	0.85	0.76	2.6256	0.0660
Western Union	0.80	0.68	2.7006	0.0679
Average	0.90	0.81	2.7300	0.0700
Proxy Group of Thirteen Electric Companies	0.89	0.79	2.7265	0.0686

Source of Information: Valueline Proprietary Database, January 2021

Southwestern Public Service Company
Summary of Cost of Equity Models Applied to
Proxy Group of Forty-Eight Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Thirteen Electric Companies

Principal Methods	Proxy Group of Forty-Eight Non-Price Regulated Companies
Discounted Cash Flow Model (DCF) (1)	11.92 %
Risk Premium Model (RPM) (2)	12.45 %
Capital Asset Pricing Model (CAPM) (3)	11.70 %
	12.02 %
	11.92 %
	11.97 %

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

Southwestern Public Service Company
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Thirteen Electric Companies

	[1]	[2]	[3]		[4]	[5]	[6]	[7]
Proxy Group of Forty-Eight Non-Price Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Zack's Five Year Projected Growth Rate in EPS	Bloomberg's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS	Adjusted Dividend Yield	Indicated Common Equity Cost Rate (1)
Abbot Laboratories	1.65 %	12.00 %	12.30 %	9.70 %	13.28 %	11.82 %	1.75 %	13.57 %
Analog Devices	1.82	8.50	12.30	8.80	11.47	10.27	1.91	12.18
Assurant Inc.	2.02	6.50	NA	NA	19.40	12.95	2.15	15.10
ANSYS, Inc.	-	10.00	NA	13.60	6.39	10.00	-	NA
Smith (A.O.)	1.89	5.00	9.00	10.00	8.00	8.00	1.97	9.97
Becton, Dickinson	1.38	9.00	9.00	12.79	9.50	10.07	1.45	11.52
Brown-Forman 'B'	-	11.00	NA	5.53	8.81	8.45	-	NA
Broadridge Fin'l	1.57	10.50	NA	7.40	10.00	9.30	1.64	10.94
Cerner Corp.	1.18	9.00	11.90	11.68	10.55	10.78	1.24	12.02
Chemed Corp.	0.27	12.50	10.10	10.19	10.10	10.72	0.28	11.00
Cooper Cos.	0.02	14.50	11.00	10.83	10.00	11.58	0.02	11.60
Cisco Systems, Inc.	3.46	7.00	6.30	6.57	6.14	6.50	3.57	10.07
CSW Industrials	0.52	8.50	NA	5.00	12.00	8.50	0.54	9.04
Quest Diagnostics	1.82	11.00	26.50	17.66	9.72	16.22	1.97	18.19
Dolby Labs.	1.02	9.50	13.00	NA	16.00	12.83	1.09	13.92
Estee Lauder	0.87	12.00	12.80	13.73	16.53	13.77	0.93	14.70
Exponent, Inc.	0.93	11.00	NA	15.00	15.00	13.67	0.99	14.66
Gentex Corporation	1.51	9.50	2.10	5.59	15.00	8.05	1.57	9.62
Alphabet Inc.	-	14.50	16.90	17.88	16.81	16.52	-	NA
Hershey Co.	2.16	5.00	7.70	7.07	7.77	6.88	2.23	9.11
Ingredion Inc.	3.30	6.00	NA	8.60	1.90	5.50	3.39	8.89
Hunt (J.B.)	0.81	6.50	15.00	11.60	11.65	11.19	0.86	12.05
J & J Snack Foods Corp.	1.55	6.00	NA	NA	6.00	6.00	1.60	7.60
Jack Henry & Associates, Inc.	1.09	10.50	10.70	9.00	10.80	10.25	1.15	11.40
McCormick and Co.	1.45	6.50	5.50	10.04	4.80	6.71	1.50	8.21
Altria Group	8.54	6.00	4.00	3.70	5.60	4.83	8.75	13.58
MSCI Inc.	0.78	17.00	NA	12.15	14.80	14.65	0.84	15.49
Motorola Solutions, Inc.	1.68	8.00	9.00	11.10	5.88	8.50	1.75	10.25
Maxim Integrated	-	7.00	10.00	11.65	15.71	11.09	-	NA
NewMarket Corp.	2.00	2.00	NA	NA	7.70	4.85	2.05	6.90
Northrop Grumman	1.91	10.50	NA	19.92	7.62	12.68	2.03	14.71
Omnicom Group Inc.	4.45	5.50	4.30	1.78	3.20	3.69	4.53	8.22
PerkinElmer, Inc.	0.21	17.50	19.50	11.07	17.00	16.27	0.23	16.50
Pool Corp.	0.66	14.50	NA	17.00	17.00	16.17	0.71	16.88
Rollins, Inc.	0.55	12.00	NA	NA	8.20	10.10	0.58	10.68
Starbucks Corporation	1.85	13.50	13.80	18.24	49.68	23.81	2.07	25.88
The Sherwin-Williams Company	0.75	10.00	10.30	9.21	9.57	9.77	0.79	10.56
Selective Ins. Group	1.62	6.50	NA	55.90	1.88	21.43	1.79	23.22
Synopsys, Inc.	-	12.50	11.50	13.38	11.50	12.22	-	NA
Sensient Technologies Corporation	2.18	4.00	NA	7.55	3.80	5.12	2.24	7.36
Tetra Tech	0.59	11.00	15.00	13.65	15.00	13.66	0.63	14.29
Texas Instruments	2.59	4.00	9.30	10.30	10.00	8.40	2.70	11.10
AMERCO	-	1.50	NA	NA	15.00	8.25	-	NA
UniFirst Corporation	0.52	3.00	NA	10.00	10.00	7.67	0.54	8.21
Verisign	-	9.50	NA	NA	8.00	8.75	-	NA
Waters Corp.	-	6.00	5.00	5.32	4.90	5.31	-	NA
Watsco, Inc.	3.09	8.00	NA	NA	15.00	11.50	3.27	14.77
Western Union	4.14	6.00	NA	5.80	8.71	6.84	4.28	11.12
							Mean	12.38 %
							Median	11.46 %
							Average of Mean and Median	11.92 %

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 January 8, 2021. The dividend yield is then adjusted by 1/2 the average projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.zacks.com, Bloomberg Professional Services, and www.yahoo.com (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.

Source of Information:
Value Line Investment Survey
www.zacks.com Downloaded on 01/08/2021
www.yahoo.com Downloaded on 01/08/2021
Bloomberg Professional Services

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

Line No.		Proxy Group of Forty-Eight Non-Price Regulated Companies
1.	Prospective Yield on Baa2 Rated Corporate Bonds (1)	4.03 %
2.	Adjustment to Reflect Proxy Group Bond Rating (2)	(0.17)
3.	Prospective Bond Rating	3.86
4.	Equity Risk Premium (3)	8.59
5	Risk Premium Derived Common Equity Cost Rate	12.45 %

Notes: (1) Average forecast of Baa2 corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated December 1, 2020 and January 1, 2021 (see pages 10 and 11 of Schedule 4). The estimates are detailed below.

First Quarter 2021	3.50 %
Second Quarter 2021	3.60
Third Quarter 2021	3.70
Fourth Quarter 2021	3.80
First Quarter 2022	3.80
Second Quarter 2022	3.80
2022-2026	4.60
2027-2031	5.40
Average	4.03 %

(2) To reflect the Baa1 average rating of the non-utility proxy group, the prosepctive yield on Baa corporate bonds must be adjusted downward by 1/3 of the spread between A2 and Baa2 corporate bond yields as shown below:

	A2 Corp. Bond Yield	Baa2 Corp. Bond Yield	Spread
Dec-2020	2.72 %	3.16 %	0.44 %
Nov-2020	2.79	3.30	0.51
Oct-2020	2.88	3.44	0.56
		Average yield spread	0.50 %
		1/3 of spread	0.17 %

(3) From page 5 of this Schedule.

Southwestern Public Service Company
Comparison of Long-Term Issuer Ratings for the
Proxy Group of Forty-Eight Non-Price Regulated Companies of Comparable risk to the
Proxy Group of Thirteen Electric Companies

Proxy Group of Forty-Eight Non-Price Regulated Companies	Moody's Long-Term Issuer Rating January 2021	Numerical Weighting (1)	Standard & Poor's Long-Term Issuer Rating January 2021	Numerical Weighting (1)
	Long-Term Issuer Rating		Long-Term Issuer Rating	
Abbot Laboratories	A3	7.0	A	6.0
Analog Devices	Baa1	8.0	BBB	9.0
Assurant Inc.	Baa3	10.0	BBB	9.0
ANSYS, Inc.	NA	--	NA	--
Smith (A.O.)	NA	--	NA	--
Becton, Dickinson	Ba1	11.0	BBB	9.0
Brown-Forman 'B'	A1	5.0	A-	7.0
Broadridge Fin'l	Baa1	8.0	BBB+	8.0
Cerner Corp.	NA	--	NA	--
Chemed Corp.	WR	--	NR	--
Cooper Cos.	WR	--	NR	--
Cisco Systems, Inc.	A1	5.0	AA-	4.0
CSW Industrials	NA	--	NA	--
Quest Diagnostics	Baa2	9.0	BBB+	8.0
Dolby Labs.	NA	--	NA	--
Estee Lauder	A1	5.0	A+	5.0
Exponent, Inc.	NA	--	NA	--
Gentex Corporation	NA	--	NA	--
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 Corp.	NA	--	NA	--
Jack Henry & Associates, Inc.	NA	--	NA	--
McCormick and Co.	Baa2	9.0	BBB	9.0
Altria Group	A3	7.0	BBB	9.0
MSCI Inc.	Ba2	12.0	BB+	11.0
Motorola Solutions, Inc.	Baa3	10.0	BBB-	10.0
Maxim Integrated	Baa1	8.0	BBB+	8.0
NewMarket Corp.	Baa2	9.0	BBB+	8.0
Northrop Grumman	Baa2	9.0	BBB	9.0
Omnicom Group Inc.	Baa1	8.0	BBB+	8.0
PerkinElmer, Inc.	Baa3	10.0	BBB	9.0
Pool Corp.	NA	--	NA	--
Rollins, Inc.	NA	--	NA	--
Starbucks Corporation	Baa1	8.0	BBB+	8.0
The Sherwin-Williams Company	Baa2	9.0	BBB-	10.0
Selective Ins. Group	Baa2	9.0	BBB	9.0
Synopsys, Inc.	NA	--	NA	--
Sensient Technologies Corporation	WR	--	NR	--
Tetra Tech	NA	--	NA	--
Texas Instruments	A1	5.0	A+	5.0
AMERCO	WR	--	NR	--
UniFirst Corporation	NA	--	NA	--
Verisign	Ba1	11.0	BBB-	10.0
Waters Corp.	NA	--	NA	--
Watsco, Inc.	NA	--	NA	--
Western Union	Baa2	9.0	BBB	9.0
Average	Baa1	8.0	BBB+	7.9

Notes:
(1) From page 6 of Schedule 4.

Source of Information:
Bloomberg Professional Services

Southwestern Public Service Company
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
Proxy Group of Forty-Eight Non-Price Regulated Companies of Comparable risk to the
Proxy Group of Thirteen Electric Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Forty-Eight Non-Price Regulated Companies
	Ibbotson-Based Equity Risk Premiums:	
1.	Ibbotson Equity Risk Premium (1)	5.78 %
2.	Regression on Ibbotson Risk Premium Data (2)	9.37
3.	Ibbotson Equity Risk Premium based on PRPM (3)	9.63
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	7.89
5	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	10.99
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	12.36
7.	Conclusion of Equity Risk Premium	9.34 %
8.	Adjusted Beta (7)	0.92
9.	Forecasted Equity Risk Premium	8.59 %

Notes:
(1) From note 1 of page 9 of Schedule 4.
(2) From note 2 of page 9 of Schedule 4.
(3) From note 3 of page 9 of Schedule 4.
(4) From note 4 of page 9 of Schedule 4.
(5) From note 5 of page 9 of Schedule 4.
(6) From note 6 of page 9 of Schedule 4.
(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, December 1, 2020 and January 1, 2021
Bloomberg Professional Services

Southwestern Public Service Company
Traditional CAPM and ECAPM Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Thirteen Electric Companies

Proxy Group of Forty-Eight Non-Price Regulated Companies	[1] Value Line Adjusted Beta	[2] Bloomberg 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)
Abbot Laboratories	0.95	0.90	0.92	10.21 %	2.25 %	11.65 %	11.85 %	11.75 %
Analog Devices	0.95	1.06	1.01	10.21	2.25	12.57	12.54	12.55
Assurant Inc.	0.90	1.02	0.96	10.21	2.25	12.06	12.16	12.11
ANSYS, Inc.	0.90	0.93	0.92	10.21	2.25	11.65	11.85	11.75
Smith (A.O.)	0.90	1.02	0.96	10.21	2.25	12.06	12.16	12.11
Becton, Dickinson	0.80	0.63	0.71	10.21	2.25	9.50	10.24	9.87
Brown-Forman 'B'	0.85	0.97	0.91	10.21	2.25	11.54	11.77	11.66
Broadridge Fin'l	0.85	0.83	0.84	10.21	2.25	10.83	11.24	11.03
Cerner Corp.	0.95	0.91	0.93	10.21	2.25	11.75	11.93	11.84
Chemed Corp.	0.85	0.90	0.87	10.21	2.25	11.14	11.47	11.30
Cooper Cos.	0.95	0.94	0.95	10.21	2.25	11.95	12.08	12.02
Cisco Systems, Inc.	0.95	0.85	0.90	10.21	2.25	11.44	11.70	11.57
CSW Industrials	0.85	1.02	0.94	10.21	2.25	11.85	12.00	11.93
Quest Diagnostics	0.90	1.00	0.95	10.21	2.25	11.95	12.08	12.02
Dolby Labs.	0.90	0.95	0.93	10.21	2.25	11.75	11.93	11.84
Estee Lauder	0.90	0.98	0.94	10.21	2.25	11.85	12.00	11.93
Exponent, Inc.	0.85	0.92	0.88	10.21	2.25	11.24	11.54	11.39
Gentex Corporation	0.95	1.04	1.00	10.21	2.25	12.46	12.46	12.46
Alphabet Inc.	0.90	0.87	0.89	10.21	2.25	11.34	11.62	11.48
Hershey Co.	0.85	0.83	0.84	10.21	2.25	10.83	11.24	11.03
Ingredion Inc.	0.90	0.92	0.91	10.21	2.25	11.54	11.77	11.66
Hunt (J.B.)	0.95	0.92	0.94	10.21	2.25	11.85	12.00	11.93
J & J Snack Foods Corp.	0.90	0.78	0.84	10.21	2.25	10.83	11.24	11.03
Jack Henry & Associates, Inc.	0.85	0.89	0.87	10.21	2.25	11.14	11.47	11.30
McCormick and Co.	0.85	0.70	0.77	10.21	2.25	10.11	10.70	10.41
Altria Group	0.85	0.88	0.86	10.21	2.25	11.03	11.39	11.21
MSCI Inc.	0.95	0.92	0.93	10.21	2.25	11.75	11.93	11.84
Motorola Solutions, Inc.	0.90	0.93	0.92	10.21	2.25	11.65	11.85	11.75
Maxim Integrated	0.95	1.00	0.98	10.21	2.25	12.26	12.31	12.29
NewMarket Corp.	0.80	0.55	0.67	10.21	2.25	9.09	9.94	9.51
Northrop Grumman	0.85	0.80	0.82	10.21	2.25	10.63	11.09	10.86
Omnicom Group Inc.	0.95	1.03	0.99	10.21	2.25	12.36	12.39	12.37
PerkinElmer, Inc.	0.95	0.84	0.89	10.21	2.25	11.34	11.62	11.48
Pool Corp.	0.90	0.93	0.91	10.21	2.25	11.54	11.77	11.66
Rollins, Inc.	0.85	0.66	0.75	10.21	2.25	9.91	10.55	10.23
Starbucks Corporation	0.95	1.06	1.01	10.21	2.25	12.57	12.54	12.55
The Sherwin-Williams Company	0.95	1.02	0.99	10.21	2.25	12.36	12.39	12.37
Selective Ins. Group	0.85	0.98	0.91	10.21	2.25	11.54	11.77	11.66
Synopsys, Inc.	1.00	1.00	1.00	10.21	2.25	12.46	12.46	12.46
Sensient Technologies Corporation	0.90	0.95	0.92	10.21	2.25	11.65	11.85	11.75
Tetra Tech	0.90	1.00	0.95	10.21	2.25	11.95	12.08	12.02
Texas Instruments	0.85	0.90	0.88	10.21	2.25	11.24	11.54	11.39
AMERCO	0.95	1.09	1.02	10.21	2.25	12.67	12.62	12.64
UniFirst Corporation	0.95	1.11	1.03	10.21	2.25	12.77	12.69	12.73
Verisign	0.95	0.82	0.88	10.21	2.25	11.24	11.54	11.39
Waters Corp.	0.95	0.84	0.90	10.21	2.25	11.44	11.70	11.57
Watsco, Inc.	0.85	0.78	0.82	10.21	2.25	10.63	11.09	10.86
Western Union	0.85	1.05	0.95	10.21	2.25	11.95	12.08	12.02
Mean			0.91			11.52 %	11.76 %	11.64 %
Median			0.92			11.65 %	11.85 %	11.75 %
Average of Mean and Median			0.92			11.59 %	11.81 %	11.70 %

Notes:
(1) From note 1 of page 2 of Schedule 5.
(2) From note 2 of page 2 of Schedule 5.
(3) Average of CAPM and ECAPM cost rates.

Southwestern Public Service Company
Derivation of Investment Risk Adjustment Based upon
Ibbotson Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.		[1] Market Capitalization on January 8, 2021 (1) (millions)		[2] Applicable Decile of the NYSE/AMEX/ NASDAQ (2)	[3] Applicable Size Premium (3)	[4] Spread from Applicable Size Premium (4)
1.	Southwestern Public Service Company	$ 3,334.553		5	1.10%	
2.	Proxy Group of Thirteen Electric Companies	$ 15,710.344	4.7 x	2	0.50%	0.60%
			[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 0.60% in Column [4], Line No. 2 is derived as follows 0.60% = 1.10% - 0.50%.

Southwestern Public Service Company
Market Capitalization of Southwestern Public Service Company and the
Proxy Group of Thirteen 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 January 08, 2021	[5] Market-to-Book Ratio on January 08, 2021 (2)	[6] Market Capitalization on January 08, 2021 (3) (millions)
Southwestern Public Service Company		NA	NA	1,820.171 (4)	NA		
Based upon Proxy Group of Thirteen Electric Companies						183.2 (5)	$ 3,334.553 (6)
Proxy Group of Thirteen Electric Companies							
ALLETE, Inc.	NYSE	51.696	$ 43.173	$ 2,231.900	$ 64.410	149.2 %	$ 3,329.771
Alliant Energy Corporation	NASDAQ	245.023	21.243	5,205.100	49.350	232.3	12,091.875
Ameren Corporation	NYSE	246.232	32.729	8,059.000	75.000	229.2	18,467.378
Duke Energy	NYSE	733.321965	63.849	46,822.000	90.050	141.0	66,035.643
Edison International	NYSE	361.985	36.750	13,303.000	62.300	169.5	22,551.674
Entergy Corporation	NYSE	199.727	51.188	10,223.675	95.490	186.5	19,071.906
IDACORP, Inc.	NYSE	50.410	48.892	2,464.628	89.210	182.5	4,497.067
NorthWestern Corporation	NASDAQ	53.999	37.762	2,039.094	56.920	150.7	3,073.634
OGE Energy Corporation	NYSE	200.177	20.679	4,139.500	32.070	155.1	6,419.688
Otter Tail Corporation	NASDAQ	40.158	19.460	781.482	42.670	219.3	1,713.524
Pinnacle West Capital Corporation	NYSE	112.540	48.255	5,430.648	77.770	161.2	8,752.246
Portland General Electric Company	NYSE	89.387	28.986	2,591.000	41.800	144.2	3,736.382
Xcel Energy, Inc.	NASDAQ	524.539	25.239	13,239.000	65.760	260.5	34,493.685
Average		223.784	$ 36.785	$ 8,963.848	$ 64.831	183.2 %	$ 15,710.344

NA= Not Available

Notes: (1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 1 * Column 4.
(4) Proposed rate base multiplied by the requested common equity ratio.
(5) The market-to-book ratio of Southwestern Public Service Company on January 08, 2021 is assumed to be equal to the market-to-book ratio of Proxy Group of Thirteen Electric Companies on January 08, 2021 as appropriate.
(6) Column [3] multiplied by Column [5].

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

Southwestern Public Service Company
Derivation of the Flotation Cost Adjustment to the Cost of Common Equity

Equity Issuances (Company Provided)

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	$ 10.750	$ 10.250	$ 0.124	$ 0.137	$ 9.989	$ 1,205,605	$ 17,030,559	$ 15,824,953	7.079%
6/4/1952	Northern States Power	1,108,966	10.500	10.500	0.098	0.162	10.240	288,331	11,644,143	11,355,812	2.476%
4/14/1954	Northern States Power	1,219,856	15.250	14.000	0.060	0.124	13.816	1,749,274	18,602,804	16,853,530	9.403%
2/29/1956	Northern States Power	670,920	17.825	16.750	0.050	0.221	16.479	903,058	11,959,149	11,056,091	7.551%
7/22/1959	Northern States Power	952,033	23.375	22.000	0.069	0.191	21.740	1,556,574	22,253,771	20,697,197	6.995%
7/28/1965	Northern States Power	772,008	35.250	33.000	0.092	0.225	32.683	1,981,745	27,213,282	25,231,537	7.282%
1/22/1969	Northern States Power	1,080,811	29.000	27.000	0.119	0.187	26.694	2,492,350	31,343,519	28,851,169	7.952%
10/21/1970	Northern States Power	1,729,298	23.125	21.500	0.175	0.149	21.176	3,370,402	39,990,016	36,619,614	8.428%
7/26/1972	Northern States Power	1,902,228	25.000	23.500	0.129	0.166	23.205	3,414,499	47,555,700	44,141,201	7.180%
10/10/1973	Northern States Power	2,092,451	25.825	24.500	0.128	0.153	24.219	3,360,476	54,037,547	50,677,071	6.219%
11/20/1974	Northern States Power	2,300,000	17.625	17.500	0.910	0.069	16.521	2,539,200	40,537,500	37,998,300	6.264%
8/14/1975	Northern States Power	1,750,000	23.000	23.000	0.740	0.077	22.183	1,429,750	40,250,000	38,820,250	3.552%
6/3/1976	Northern States Power	2,000,000	24.000	24.000	0.720	0.064	23.216	1,568,000	48,000,000	46,432,000	3.267%
5/31/1993	Northern States Power	3,041,955	44.125	43.625	1.200	0.048	42.377	5,317,337	134,226,264	128,908,927	3.961%
9/23/1997	Northern States Power	4,500,000	49.938	49.563	1.230	0.133	48.200	7,821,000	224,721,000	216,900,000	3.480%
9/29/1997	Northern States Power	400,000	50.500	49.563	1.230	0.133	48.200	920,000	20,200,000	19,280,000	4.554%
2/25/2002	Xcel Energy, Inc.	20,000,000	22.950	22.500	0.730	0.015	21.755	23,900,000	459,000,000	435,100,000	5.207%
9/9/2008	Xcel Energy, Inc.	17,250,000	20.860	20.200	0.100	0.006	20.094	13,218,352	359,835,000	346,616,648	3.673%
8/3/2010	Xcel Energy, Inc.	21,850,000	22.100	21.500	0.645	0.013	20.571	33,407,927	482,885,000	449,477,073	6.918%
3/1/2013	Xcel Energy, Inc.	7,757,449	29.057	29.057	0.291	0.052	28.714	2,657,558	225,407,642	222,750,085	1.179%
6/1/2014	Xcel Energy, Inc.	5,693,946	30.663	30.663	0.307	0.030	30.326	1,915,210	174,592,340	172,677,130	1.097%
9/1/2018	Xcel Energy, Inc.	4,733,435	47.885	47.885	0.407	0.073	47.405	2,271,040	226,661,287	224,390,247	1.002%
8/29/2019	Xcel Energy, Inc.	9,359,103	48.416	48.416	0.173	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 Thirteen Electric Companies	3.71 %	4.65 %	3.80 %	8.45 %	8.60 %	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) Schedule 3
(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