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April 9, 2021

ELECTRONIC FILING

Mr. Adam J. Teitzman, Commission Clerk
Office of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Re: Docket 20210034-EI, Petition for Rate Increase by Tampa Electric Company


Dear Mr. Teitzman:

Attached for filing on behalf of Tampa Electric Company in the above-referenced docket is the Direct Testimony and Exhibit of Dylan W. D'Ascendis.

Thank you for your assistance in connection with this matter.

(Document 14 of 34)

Sincerely,



J. Jeffry Wahlen

JJW/ne
Attachment

cc: Richard Gentry, Public Counsel
Jon Moyle, FIPUG

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 20210034-EI

IN RE: PETITION FOR RATE INCREASE
BY TAMPA ELECTRIC COMPANY

DIRECT TESTIMONY AND EXHIBIT
OF
DYLAN W. D'ASCENDIS, CRRA, CVA
ON BEHALF OF TAMPA ELECTRIC COMPANY

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PREPARED DIRECT TESTIMONY AND EXHIBIT

OF

DYLAN W. D'ASCENDIS, CRRA, CVA

ON BEHALF OF TAMPA ELECTRIC COMPANY

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1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **PREPARED DIRECT TESTIMONY**

3 **OF**

4 **DYLAN W. D'ASCENDIS, CRRA, CVA**

5 **ON BEHALF OF TAMPA ELECTRIC COMPANY**

6

7 **I. INTRODUCTION AND PURPOSE**

8 **Q.** Please state your name, affiliation, and business address.

9

10 **A.** My name is Dylan W. D'Ascendis. I am a Director at
11 ScottMadden, Inc. My business address is 3000 Atrium Way,
12 Suite 241, Mount Laurel, New Jersey 08054.

13

14 **Q.** On whose behalf are you submitting this testimony?

15

16 **A.** I am submitting this direct testimony before the Florida
17 Public Service Commission ("Commission") on behalf of Tampa
18 Electric Company ("Tampa Electric" or the "company").

19

20 **Q.** Please summarize your educational background and
21 professional experience.

22

23 **A.** I am a graduate of the University of Pennsylvania, where I
24 received a Bachelor of Arts degree in Economic History. I
25 have also received a Master of Business Administration with

1 high honors and concentrations in Finance and International
2 Business from Rutgers University.

3
4 I have offered expert testimony on behalf of investor-owned
5 utilities in over 25 state regulatory commissions in the
6 United States, the Federal Energy Regulatory Commission, the
7 Alberta Utility Commission, and one American Arbitration
8 Association panel on issues including, but not limited to,
9 common equity cost rate, rate of return, valuation, capital
10 structure, class cost of service, and rate design.

11
12 On behalf of the American Gas Association ("AGA"), I
13 calculate the AGA Gas Index, which serves as the benchmark
14 against which the performance of the American Gas Index Fund
15 ("AGIF") is measured on a monthly basis. The AGA Gas Index
16 and AGIF are a market capitalization weighted index and
17 mutual fund, respectively, comprised of the common stocks
18 of the publicly traded corporate members of the AGA.

19
20 I am a member of the Society of Utility and Regulatory
21 Financial Analysts ("SURFA"). In 2011, I was awarded the
22 professional designation of "Certified Rate of Return
23 Analyst" by SURFA, which is based on education, experience,
24 and the successful completion of a comprehensive written
25 examination.

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

5
6 The details of my educational background and expert witness
7 appearances are provided in Document No. 1 of Exhibit No.
8 (DWD-1).

9
10 **Q.** What is the purpose of your prepared direct testimony in
11 this proceeding?

12
13 **A.** The purpose of my direct testimony is to present evidence
14 on behalf of Tampa Electric and recommend a return on equity
15 ("ROE") to be used for ratemaking purposes in this
16 proceeding.

17
18 **Q.** Have you prepared an exhibit in support of your prepared
19 direct testimony?

20
21 **A.** Yes. My analyses and conclusions are supported by the data
22 presented in Document Nos. 2 through 13 of Exhibit No. (DWD-
23 1), which have been prepared by me or under my direction and
24 supervision.

25

1 **II. SUMMARY**

2 **Q.** What is your recommended ROE for Tampa Electric?

3
4 **A.** I recommend that the Commission authorize Tampa Electric the
5 opportunity to earn an ROE of 10.75 percent on its
6 jurisdictional rate base. The ratemaking capital structure
7 and cost of long-term debt is sponsored by Tampa Electric
8 witnesses Jeffrey S. Chronister and Kenneth McOnie.

9
10 **Q.** Please summarize the support for your recommended ROE for
11 Tampa Electric.

12
13 **A.** My recommended ROE of 10.75 percent is summarized in
14 Document No. 2. To support my ROE recommendation, I have
15 assessed the market-based common equity cost rates of
16 companies of relatively similar, but not necessarily
17 identical, risk to Tampa Electric. Using companies of
18 relatively comparable risk as proxies is consistent with the
19 principles of fair rate of return established by the United
20 States Supreme Court in two cases: (1) *Federal Power Comm'n*
21 *v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) ("*Hope*"); and
22 (2) *Bluefield Water Works Improvement Co. v. Public Serv.*
23 *Comm'n*, 262 U.S. 679 (1923) ("*Bluefield*"). No proxy group
24 can be identical in risk to any single company.
25 Consequently, there must be an evaluation of relative risk

1 between the company and the proxy group to determine if it
2 is appropriate to adjust the proxy group's indicated rate
3 of return.

4
5 My recommendation results from applying several cost of
6 common equity models, specifically the Discounted Cash Flow
7 ("DCF") model, the Risk Premium Model ("RPM"), and the
8 Capital Asset Pricing Model ("CAPM"), to the market data of
9 the Utility Proxy Group whose selection criteria will be
10 discussed below. In addition, I applied the DCF model, RPM,
11 and CAPM to the Non-Price Regulated Proxy Group as discussed
12 further below. The results derived from each are summarized
13 in Document No. 2.

14
15 As shown in Document No. 2, I adjusted the indicated common
16 equity cost rate to reflect the effect of flotation costs,
17 as well as the company's business risks associated with its
18 smaller relative size and lack of geographic diversification
19 as compared to the Utility Proxy Group. These adjustments
20 resulted in a company-specific indicated range of common
21 equity cost rates between 10.30 percent and 11.30 percent.
22 Given the Utility Proxy Group and company-specific ranges
23 of common equity cost rates, and the company's high customer
24 growth and level of capital investment plans, my recommended
25 ROE for the company is 10.75 percent.

1 Q. Please summarize the company's proposed capital structure.

2

3 A. The company is proposing a capital structure which includes
4 a 55.00 percent common equity ratio. That common equity
5 ratio is consistent with the company's historical equity
6 ratios, and the equity ratios maintained by the Utility
7 Proxy Group and their operating subsidiary utility
8 companies.

9

10 **III. GENERAL PRINCIPLES**

11 Q. What general principles have you considered in arriving at
12 your recommended common equity cost rate of 10.75 percent?

13

14 A. In unregulated industries, marketplace competition is the
15 principal determinant of the price of products or services.
16 For regulated public utilities, regulation must act as a
17 substitute for marketplace competition. Assuring that a
18 utility can fulfill its obligations to the public, while
19 providing safe and reliable service at all times, requires
20 a level of earnings sufficient to maintain the integrity of
21 presently invested capital. Sufficient earnings also permit
22 a utility to attract needed new capital at a reasonable
23 cost, for which the utility must compete with other firms
24 of comparable risk, consistent with the fair rate of return
25 standards established by the U.S. Supreme Court in the

1 previously cited *Hope* and *Bluefield* cases. Consequently,
2 marketplace data must be relied on in assessing a common
3 equity cost rate appropriate for ratemaking purposes. Just
4 as the use of market data for the Utility Proxy Group adds
5 the reliability necessary to inform expert judgment in
6 arriving at a recommended common equity cost rate, the use
7 of multiple generally accepted common equity cost rate
8 models also adds reliability and accuracy when arriving at
9 a recommended common equity cost rate.

10
11 ***Business Risk***

12 **Q.** Please define business risk and explain why it is important
13 for determining a fair rate of return.

14
15 **A.** The investor-required return on common equity reflects
16 investors' assessment of the total investment risk of the
17 subject firm. Total investment risk is often discussed in
18 the context of business and financial risks.

19
20 Business risk reflects the uncertainty associated with
21 owning a company's common stock without the company's use
22 of debt and/or preferred stock financing. One way of
23 considering the distinction between business and financial
24 risks is to view the former as the uncertainty of the
25 expected earned return on common equity, assuming the firm

1 is financed with no debt.

2
3 Examples of business risks generally faced by utilities
4 include, but are not limited to, the regulatory environment,
5 mandatory environmental compliance requirements, customer
6 mix and concentration of customers, service territory
7 economic growth, market demand, risks and uncertainties of
8 supply, operations, capital intensity, size, the degree of
9 operating leverage, emerging technologies including
10 distributed energy resources, the vagaries of weather, all
11 of which have a direct bearing on earnings. Although
12 analysts, including rating agencies, may categorize business
13 risks individually, as a practical matter, such risks are
14 interrelated and not wholly distinct from one another.
15 Therefore, it is difficult to specifically and numerically
16 quantify the effect of any individual risk on investors'
17 required return, *i.e.*, the cost of capital. For determining
18 an appropriate return on common equity, the relevant issue
19 is where investors see the subject company as falling within
20 a spectrum of risk. To the extent investors view a company
21 as being exposed to higher risk, the required return will
22 increase, and vice versa.

23
24 For regulated utilities, business risks are both long-term
25 and near-term in nature. Whereas near-term business risks

1 are reflected in year-to-year variability in earnings and
2 cash flow brought about by economic or regulatory factors,
3 long-term business risks reflect the prospect of an impaired
4 ability of investors to obtain both a fair rate of return
5 on, and return of, their capital. Moreover, because
6 utilities accept the obligation to provide safe, adequate,
7 and reliable service at all times (in exchange for a
8 reasonable opportunity to earn a fair return on their
9 investment), they generally do not have the option to delay,
10 defer, or reject capital investments. Because those
11 investments are capital-intensive, utilities generally do
12 not have the option to avoid raising external funds during
13 periods of capital market distress.

14
15 Because utilities invest in long-lived assets, long-term
16 business risks are of paramount concern to equity investors.
17 That is, the risk of not recovering the return on their
18 investment extends far into the future. The timing and
19 nature of events that may lead to losses, however, also are
20 uncertain and, consequently, those risks and their
21 implications for the required return on equity tend to be
22 difficult to quantify. Regulatory commissions (like
23 investors who commit their capital) must review a variety
24 of quantitative and qualitative data and apply their
25 reasoned judgment to determine how long-term risks weigh in

1 their assessment of the market-required return on common
2 equity.

3
4 **Financial Risk**

5 **Q.** Please define financial risk and explain why it is important
6 in determining a fair rate of return.

7
8 **A.** Financial risk is the additional risk created by the
9 introduction of debt and preferred stock into the capital
10 structure. The higher the proportion of debt and preferred
11 stock in the capital structure, the higher the financial
12 risk to common equity owners (*i.e.*, failure to receive
13 dividends due to default or other covenants). Therefore,
14 consistent with the basic financial principle of risk and
15 return, common equity investors require higher returns as
16 compensation for bearing higher financial risk.

17
18 **Q.** Can bond and credit ratings be a proxy for a firm's combined
19 business and financial risks to equity owners (*i.e.*,
20 investment risk)?

21
22 **A.** Yes, similar bond ratings/issuer credit ratings reflect, and
23 are representative of, similar combined business and
24 financial risks (*i.e.*, total risk) faced by bond investors.¹
25 Although specific business or financial risks may differ

1 between companies, the same bond/credit rating indicates
2 that the combined risks are roughly similar from a
3 debtholder perspective. The caveat is that these debtholder
4 risk measures do not translate directly to risks for common
5 equity.

6
7 **Q.** Do rating agencies account for company size in their bond
8 ratings?

9
10 **A.** No. Neither Standard & Poor's ("S&P") nor Moody's Investor
11 Services ("Moody's") have minimum company size requirements
12 for any given rating level. This means, all else being equal,
13 a relative size analysis must be conducted for equity
14 investments in companies with similar bond ratings.

15
16 **IV. TAMPA ELECTRIC AND THE UTILITY PROXY GROUP**

17 **Q.** Are you familiar with the company's operations?

18
19 **A.** Yes. Tampa Electric's electric division provides generation,
20 transmission, and distribution electric service to
21 approximately 800,000 retail customers in Florida.² Tampa
22 Electric has long-term issuer ratings of A3 from Moody's and
23 BBB+ from S&P.³ The company is not publicly traded as it
24 comprises an operating subsidiary of TECO Energy, Inc.,
25 whose ultimate parent is Emera Incorporated ("Emera" or the

1 "Parent"). Emera has electric generation, transmission, and
2 distribution operations, natural gas transmission and
3 distribution operations, and non-regulated energy marketing
4 operations in Canada, the United States, and the Caribbean.⁴

5
6 Page 1 of Document No. 3 contains comparative capitalization
7 and financial statistics for Tampa Electric for the years
8 2015 to 2019.⁵ During the five-year period ending 2019, the
9 historically achieved average earnings rate on book common
10 equity for the company averaged 10.77 percent. The average
11 common equity ratio based on total permanent capital
12 (excluding short-term debt) was 55.44 percent, and the
13 average dividend payout ratio was 99.71 percent.

14
15 Total debt to earnings before interest, taxes, depreciation,
16 and amortization for the years 2015 to 2019 ranges between
17 2.65 and 3.82 times, with an average of 3.10 times. Funds
18 from operations to total debt range from 20.92 percent to
19 32.22 percent, with an average of 25.46 percent.

20
21 **Q.** Please explain how you chose the companies in the Utility
22 Proxy Group.

23
24 **A.** The companies selected for the Utility Proxy Group met the
25 following criteria:

- 1 • They were included in the Eastern, Central, or Western
2 Electric Utility Group of *Value Line* (Standard Edition);
- 3 • They have 70.00 percent or greater of fiscal year 2019
4 total operating income derived from, and 70.00 percent or
5 greater of fiscal year 2019 total assets attributable to,
6 regulated electric operations;
- 7 • They are vertically integrated (*i.e.*, utilities that own
8 and operate regulated generation, transmission, and
9 distribution assets);
- 10 • At the time of preparation of this direct testimony, they
11 had not publicly announced that they were involved in any
12 major merger or acquisition activity (*i.e.*, one publicly
13 traded utility merging with or acquiring another) or any
14 other major development;
- 15 • They have not cut or omitted their common dividends during
16 the five years ending 2019 or through the time of
17 preparation of this direct testimony;
- 18 • They have *Value Line* and Bloomberg Professional Services
19 (“Bloomberg”) adjusted Betas;
- 20 • They have positive *Value Line* five-year dividends per
21 share (“DPS”) growth rate projections; and
- 22 • They have *Value Line*, Zacks, or Yahoo! Finance consensus
23 five-year earnings per share (“EPS”) growth rate
24 projections.

25

1 The following 13 companies met these criteria: ALLETE, Inc.
2 (ALE); Alliant Energy Corporation (LNT); Ameren Corporation
3 (AEE); Duke Energy Corporation (DUK); Edison International
4 (EIX); Entergy Corporation (ETR); IDACORP, Inc. (IDA);
5 NorthWestern Corporation (NWE); OGE Energy Corporation
6 (OGE); Otter Tail Corporation (OTTR); Pinnacle West Capital
7 Corporation (PNW); Portland General Electric Company (POR);
8 and Xcel Energy, Inc. (XEL).

9
10 **Q.** Please describe Document No. 3, page 2.

11
12 **A.** Page 2 of Document No. 3 contains comparative capitalization
13 and financial statistics for the Utility Proxy Group for the
14 years 2015 to 2019.

15
16 During the five-year period ending 2019, the historically
17 achieved average earnings rate on book common equity for the
18 Utility Proxy Group averaged 8.92 percent, the average
19 common equity ratio based on total permanent capital
20 (excluding short-term debt) was 48.93 percent, and the
21 average dividend payout ratio was 53.55 percent.

22
23 Total debt to earnings before interest, taxes, depreciation,
24 and amortization for the years 2015 to 2019 for the Utility
25 Proxy Group ranges between 3.96 and 5.30 times, with an

1 average of 4.52 times. Finally, funds from operations to
2 total debt for the Utility Proxy Group range from 15.01
3 percent to 23.50 percent, with an average of 19.71 percent.
4

5 **V. CAPITAL STRUCTURE**

6 **Q.** What is Tampa Electric's requested capital structure?
7

8 **A.** The company's requested capital structure (investor sources)
9 consists of 45.00 percent long-term debt and 55.00 percent
10 common equity. Tampa Electric's requested capital structure
11 is its projected capital structure at the end of the test
12 year, as testified to by Mr. McOnie.
13

14 **Q.** Does Tampa Electric have a separate capital structure that
15 is recognized by investors?
16

17 **A.** Yes. Tampa Electric is a separate corporate entity that has
18 its own capital structure and issues its own debt. Tampa
19 Electric's actual capital structure is reflected in
20 registrations of its debt issuances with the United States
21 Securities and Exchange Commission.
22

23 **Q.** What are the typical sources of capital commonly considered
24 in establishing a utility's capital structure?
25

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

5 **Q.** Please explain.

6
7 **A.** Long-lived assets are typically financed with long-lived
8 securities, so that the overall term structure of the
9 utility's long-term liabilities (both debt and equity)
10 closely match the life of the assets being financed. As
11 stated by Brigham and Houston:

12 In practice, firms don't finance each specific asset
13 with a type of capital that has a maturity equal to the
14 asset's life. However, academic studies do show that
15 most firms tend to finance short-term assets from
16 short-term sources and long-term assets from long-term
17 sources.⁶

18
19 Whereas short-term debt has a maturity of one year or less,
20 long-term debt may have maturities of 30 years or longer.
21 Although there are practical financing constraints, such as
22 the need to "stagger" long-term debt maturities, the general
23 objective is to extend the average life of long-term debt.
24 Still, long-term debt has a finite life, which is likely to
25 be less than the life of the assets included in rate base.

1 Common equity, on the other hand, is outstanding into
2 perpetuity. Thus, common equity more accurately matches the
3 life of the going concern of the utility, which is also
4 assumed to operate in perpetuity. Consequently, it is both
5 typical and important for utilities to have significant
6 proportions of common equity in their capital structures.
7

8 **Q.** Why is it important that the company's requested capital
9 structure, consisting of 45.00 percent long-term debt and
10 55.00 percent common equity, be authorized in this
11 proceeding?
12

13 **A.** In order to provide safe, reliable, and affordable service
14 to its customers, Tampa Electric must meet the needs and
15 serve the interests of its various stakeholders, including
16 its customers, shareholders, and bondholders. The interests
17 of these stakeholder groups are aligned with maintaining a
18 healthy balance sheet, strong credit ratings, and a
19 supportive regulatory environment, so that the company has
20 access to capital on reasonable terms in order to make
21 necessary investments.
22

23 Safe and reliable service cannot be maintained at a
24 reasonable cost if utilities do not have the financial
25 flexibility and strength to access competitive financing

1 markets on reasonable terms. As Mr. McOnie explains, an
2 appropriate capital structure is important not only to
3 ensure long-term financial integrity, it also is critical
4 to enabling access to capital during constrained markets,
5 or when near-term liquidity is needed to fund extraordinary
6 requirements. In that respect, the capital structure, and
7 the financial strength it engenders, must support both
8 normal circumstances and periods of market uncertainty. The
9 authorization of a capital structure that understates the
10 company's actual common equity will weaken the financial
11 condition of its operations and adversely impact the
12 company's ability to address expenses and investments, to
13 the detriment of customers and shareholders. Safe and
14 reliable service for customers cannot be sustained over the
15 long term if the interests of shareholders and bondholders
16 are minimized such that the public interest is not
17 optimized.

18
19 **Q.** How does the company's requested common equity ratio of
20 55.00 percent compare with the common equity ratios
21 maintained by the Utility Proxy Group?

22
23 **A.** The company's requested ratemaking common equity ratio of
24 55.00 percent is reasonable and consistent with the range
25 of common equity ratios maintained by the Utility Proxy

1 Group. As shown on pages 3 and 4 of Document No. 3, common
2 equity ratios of the Utility Proxy Group companies range
3 from 36.11 percent to 58.04 percent for fiscal year 2019.

4
5 I also considered the *Value Line* projected capital
6 structures for the Utility Proxy Group companies for 2023-
7 2025. That analysis shows a range of projected common equity
8 ratios between 37.50 percent and 59.00 percent (see, pages
9 2 through 14 of Document No. 4).

10
11 In addition to comparing the company's actual common equity
12 ratio with current and projected common equity ratios
13 maintained by the Utility Proxy Group companies, I also
14 compared the company's actual common equity ratio with the
15 equity ratios maintained by the utility operating
16 subsidiaries of the Utility Proxy Group companies. As shown
17 on page 5 of Document No. 3, common equity ratios of the
18 utility operating subsidiaries of the Utility Proxy Group
19 range from 47.47 percent to 65.22 percent for fiscal year
20 2019.

21
22 **Q.** Is Tampa Electric's equity ratio of 55.00 percent
23 appropriate for ratemaking purposes given these measures
24 cited above?

25

1 **A.** Yes, it is. The company's equity ratio of 55.00 percent is
2 appropriate for ratemaking purposes in the current
3 proceeding because it is within the range of the common
4 equity ratios currently maintained, and expected to be
5 maintained, by the Utility Proxy Group and their utility
6 operating subsidiaries.

7

8 **VI. COMMON EQUITY COST RATE MODELS**

9 ***Discounted Cash Flow Model***

10 **Q.** What is the theoretical basis of the DCF model?

11

12 **A.** The theory underlying the DCF model is that the present
13 value of an expected future stream of net cash flows during
14 the investment holding period can be determined by
15 discounting those cash flows at the cost of capital, or the
16 investors' capitalization rate. DCF theory indicates that
17 an investor buys a stock for an expected total return rate,
18 which is derived from the cash flows received from dividends
19 and market price appreciation. Mathematically, the dividend
20 yield on market price plus a growth rate equals the
21 capitalization rate, *i.e.*, the total common equity return
22 rate expected by investors.

23

24 **Q.** Which version of the DCF model did you rely on?

25

1 **A.** I used the single-stage constant growth DCF model in my
2 analyses.

3

4 **Q.** Please describe the dividend yield you used in applying the
5 constant growth DCF model.

6

7 **A.** The unadjusted dividend yields are based on the Utility
8 Proxy Group companies' dividends as of January 29, 2021,
9 divided by the average closing market price for the 60
10 trading days ended January 29, 2021 (see, Column 1, page 1
11 of Document No. 4).

12

13 **Q.** Please explain your adjustment to the dividend yield.

14

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

19

20 DCF theory calls for using the full growth rate, or D_1 , in
21 calculating the model's dividend yield component. Since the
22 companies in the Utility Proxy Group increase their
23 quarterly dividends at various times during the year, a
24 reasonable assumption is to reflect one-half of the annual
25 dividend growth rate in the dividend yield component, or

1 D_{1/2}. Because the dividend should be representative of the
2 next 12-month period, this adjustment is a conservative
3 approach that does not overstate the dividend yield.
4 Therefore, the actual average dividend yields in Column 1,
5 page 1 of Document No. 4 were adjusted upward to reflect
6 one-half of the average projected growth rate shown in
7 Column 6.

8
9 **Q.** Please explain the basis for the growth rates you apply to
10 the Utility Proxy Group in your constant growth DCF model.

11
12 **A.** Investors with more limited resources than institutional
13 investors are likely to rely on widely available financial
14 information services, such as *Value Line*, *Zacks*, and *Yahoo!*
15 *Finance*. Investors realize that analysts have significant
16 insight into the dynamics of the industries and individual
17 companies they analyze, as well as companies' abilities to
18 effectively manage the effects of changing laws and
19 regulations, and ever-changing economic and market
20 conditions. For these reasons, I used analysts' five-year
21 forecasts of EPS growth in my DCF analysis.

22
23 Over the long run, there can be no growth in DPS without
24 growth in EPS. Security analysts' earnings expectations have
25 a more significant influence on market prices than dividend

1 expectations. Thus, using projected earnings growth rates
2 in a DCF analysis provides a better match between investors'
3 market price appreciation expectations and the growth rate
4 component of the DCF.

5
6 **Q.** Please summarize the constant growth DCF model results.

7
8 **A.** As shown on page 1 of Document No. 4, the application of the
9 constant growth DCF model to the Utility Proxy Group results
10 in a wide range of indicated ROEs from 6.28 percent to 11.20
11 percent. The adjusted mean of those results is 9.03 percent,
12 the adjusted median result is 8.85 percent, and the average
13 of the two is 8.94 percent. In arriving at a conclusion for
14 the constant growth DCF-indicated common equity cost rate
15 for the Utility Proxy Group, I relied on an average of the
16 mean and the median results of the DCF.

17
18 ***The Risk Premium Model***

19 **Q.** Please describe the theoretical basis of the RPM.

20
21 **A.** The RPM is based on the fundamental financial principle of
22 risk and return; namely, that investors require greater
23 returns for bearing greater risk. The RPM recognizes that
24 common equity capital has greater investment risk than debt
25 capital, as common equity shareholders are behind

1 debtholders in any claim on a company's assets and earnings.
2 As a result, investors require higher returns from common
3 stocks than from bonds to compensate them for bearing the
4 additional risk.

5
6 While it is possible to directly observe bond returns and
7 yields, the investors' required common equity returns cannot
8 be directly determined or observed. According to RPM theory,
9 one can estimate a common equity risk premium over bonds
10 (either historically or prospectively) and use that premium
11 to derive a cost rate of common equity. The cost of common
12 equity equals the expected cost rate for long-term debt
13 capital, plus a risk premium over that cost rate, to
14 compensate common shareholders for the added risk of being
15 unsecured and last-in-line for any claim on the
16 corporation's assets and earnings upon liquidation.

17
18 **Q.** Please explain how you derived your indicated cost of common
19 equity based on the RPM.

20
21 **A.** To derive my indicated cost of common equity under the RPM,
22 I used two risk premium methods. The first method was the
23 Predictive Risk Premium Model ("PRPM"), and the second
24 method was a risk premium model using a total market
25 approach. The PRPM estimates the risk-return relationship

1 directly, while the total market approach indirectly derives
2 a risk premium by using known metrics as a proxy for risk.

3
4 **Q.** Please explain the first risk premium method (*i.e.*, the
5 PRPM).

6
7 **A.** The PRPM, published in the *Journal of Regulatory Economics*,⁷
8 was developed from the work of Robert F. Engle III, who
9 shared the Nobel Prize in Economics in 2003 “for methods of
10 analyzing economic time series with time-varying volatility”
11 or ARCH.⁸ Engle found that volatility changes over time and
12 is related from one period to the next, especially in
13 financial markets. Furthermore, Engle discovered that the
14 volatility of prices and returns cluster over time and is,
15 therefore, highly predictable and can be used to predict
16 future levels of risk and risk premiums.

17
18 The PRPM estimates the risk-return relationship directly,
19 as the predicted equity risk premium is generated by
20 predicting volatility or risk. The PRPM is not based on an
21 estimate of investor behavior, but rather on an evaluation
22 of the results of that behavior (*i.e.*, the variance of
23 historical equity risk premiums).

24
25 The inputs to the model are the historical returns on the

1 common shares of each Utility Proxy Group company minus the
2 historical monthly yield on long-term United States Treasury
3 securities through January 2021. Using a generalized form
4 of ARCH, known as GARCH, I calculated each Utility Proxy
5 Group company's projected equity risk premium using Eviews©
6 statistical software. When the GARCH model is applied to the
7 historical return data, it produces a predicted GARCH
8 variance series (see, Columns 1 and 2, page 2 of Document
9 No. 5) and a GARCH coefficient (see, Column 4, page 2 of
10 Document No. 5). Multiplying the predicted monthly variance
11 by the GARCH coefficient and then annualizing it⁹ produces
12 the predicted annual equity risk premium. I then added the
13 forecasted 30-year U.S. Treasury bond yield of 2.31 percent
14 (see, Column 6, page 2 of Document No. 5.) to each company's
15 PRPM-derived equity risk premium to arrive at an indicated
16 cost of common equity. The 30-year U.S. Treasury bond yield
17 is a consensus forecast derived from *Blue Chip Financial*
18 *Forecasts* ("Blue Chip").¹⁰

19
20 As shown on page 2 of Document No. 5, the mean PRPM indicated
21 common equity cost rate for the Utility Proxy Group is 10.47
22 percent, the median is 10.24 percent, and the average of the
23 two is 10.36 percent. Consistent with my reliance on the
24 average of the median and mean results of the DCF models, I
25 relied on the average of the mean and median results of the

1 Utility Proxy Group PRPM to calculate a cost of common equity
2 rate of 10.36 percent.

3
4 **Q.** Please explain the second risk premium method (*i.e.*, the
5 total market approach RPM).

6
7 **A.** The total market approach RPM adds a prospective public
8 utility bond yield to an average of: (1) an equity risk
9 premium that is derived from a Beta-adjusted total market
10 equity risk premium, (2) an equity risk premium based on the
11 S&P Utilities Index, and (3) an equity risk premium based
12 on authorized ROEs for electric utilities.

13
14 **Q.** Please explain the basis of the expected bond yield of 3.66
15 percent applicable to the Utility Proxy Group.

16
17 **A.** The first step in the total market approach RPM analysis is
18 to determine the expected bond yield. Because both
19 ratemaking and the cost of capital, including the common
20 equity cost rate, are prospective in nature, a prospective
21 yield on similarly-rated long-term debt is essential. I
22 relied on a consensus forecast of about 50 economists of the
23 expected yield on Aaa-rated corporate bonds for the six
24 calendar quarters ending with the second calendar quarter
25 of 2022, and *Blue Chip's* long-term projections for 2022 to

1 2026, and 2027 to 2031. As shown on line 1, page 3 of
2 Document No. 5, the average expected yield on Moody's Aaa-
3 rated corporate bonds is 3.06 percent. In order to adjust
4 the expected Aaa-rated corporate bond yield to an equivalent
5 A2-rated public utility bond yield, I made an upward
6 adjustment of 0.50 percent, which represents a recent spread
7 between Aaa-rated corporate bonds and A2-rated public
8 utility bonds (as shown on line 2 and explained in note 2
9 on page 3 of Document No. 5). Adding that recent 0.50 percent
10 spread to the expected Aaa-rated corporate bond yield of
11 3.06 percent results in an expected A2-rated public utility
12 bond yield of 3.56 percent. Since the Utility Proxy Group's
13 average Moody's long-term issuer rating is A3, another
14 adjustment to the expected A2-rated public utility bond is
15 needed to reflect this difference in bond ratings. An upward
16 adjustment of 0.10 percent, which represents one-third of a
17 recent spread between A2-rated and Baa2-rated public utility
18 bond yields, is necessary to make the A2 prospective bond
19 yield applicable to an A3-rated public utility bond (as
20 shown on line 4 and explained in note 3 on page 3 of Document
21 No. 5). Adding the 0.10 percent to the 3.56 percent
22 prospective A2-rated public utility bond yield results in a
23 3.66 percent expected bond yield applicable to the Utility
24 Proxy Group as shown on page 3 of Document No. 5.

25

1 Q. Please explain how the Beta-derived equity risk premium is
2 determined.

3

4 A. The components of the Beta-derived risk premium model are:
5 (1) an expected market equity risk premium over corporate
6 bonds, and (2) the Beta coefficient. The derivation of the
7 Beta-derived equity risk premium that I applied to the
8 Utility Proxy Group is shown on lines 1 through 9, on page
9 8 of Document No. 5. The total Beta-derived equity risk
10 premium I applied is based on an average of three historical
11 market data-based equity risk premiums, two *Value Line*-based
12 equity risk premiums, and a Bloomberg-based equity risk
13 premium. Each of these is described below.

14

15 Q. How did you derive a market equity risk premium based on
16 long-term historical data?

17

18 A. To derive an historical market equity risk premium, I used
19 the most recent holding period returns for the large company
20 common stocks from the Stocks, Bonds, Bills, and Inflation
21 ("SBBI") Yearbook 2020 ("SBBI - 2020")¹¹ less the average
22 historical yield on Moody's Aaa/Aa-rated corporate bonds for
23 the period 1928 to 2019. Using holding period returns over
24 a long period of time is appropriate because it is consistent
25 with the long-term investment horizon presumed by investing

1 in a going concern, *i.e.*, a company expected to operate in
2 perpetuity.

3
4 SBBI's long-term arithmetic mean monthly total return rate
5 on large company common stocks was 11.83 percent and the
6 long-term arithmetic mean monthly yield on Moody's Aaa/Aa-
7 rated corporate bonds was 6.05 percent (as explained in note
8 1, page 9 of Document No. 5). As shown on line 1, page 8 of
9 Document No. 5, subtracting the mean monthly bond yield from
10 the total return on large company stocks results in a long-
11 term historical equity risk premium of 5.78 percent.

12
13 I used the arithmetic mean monthly total return rates for
14 the large company stocks and yields (income returns) for the
15 Moody's Aaa/Aa corporate bonds, because they are appropriate
16 for the purpose of estimating the cost of capital as noted
17 in SBBI - 2020.¹² Using the arithmetic mean return rates and
18 yields is appropriate because historical total returns and
19 equity risk premiums provide insight into the variance and
20 standard deviation of returns needed by investors in
21 estimating future risk when making a current investment. If
22 investors relied on the geometric mean of historical equity
23 risk premiums, they would have no insight into the potential
24 variance of future returns, because the geometric mean
25 relates the change over many periods to a constant rate of

1 change, thereby obviating the year-to-year fluctuations, or
2 variance, which is critical to risk analysis.

3
4 **Q.** Please explain the derivation of the regression-based market
5 equity risk premium.

6
7 **A.** To derive the regression-based market equity risk premium
8 of 9.30 percent shown on line 2, page 8 of Document No. 5,
9 I used the same monthly annualized total returns on large
10 company common stocks relative to the monthly annualized
11 yields on Moody's Aaa/Aa-rated corporate bonds as mentioned
12 above. I modeled the relationship between interest rates and
13 the market equity risk premium using the observed monthly
14 market equity risk premium as the dependent variable, and
15 the monthly yield on Moody's Aaa/Aa-rated corporate bonds
16 as the independent variable. I then used a linear Ordinary
17 Least Squares ("OLS") regression, in which the market equity
18 risk premium is expressed as a function of the Moody's
19 Aaa/Aa-rated corporate bonds yield:

$$20 \quad \quad \quad 21 \quad \quad \quad \text{RP} = \alpha + \beta (R_{\text{Aaa/Aa}})$$

22
23 **Q.** Please explain the derivation of the PRPM equity risk
24 premium.

1 **A.** I applied the same PRPM approach described above to the PRPM
2 equity risk premium. The inputs to the model are the
3 historical monthly returns on large company common stocks
4 minus the monthly yields on Moody's Aaa/Aa-rated corporate
5 bonds during the period from January 1928 through January
6 2021.¹³ Using the previously discussed generalized form of
7 ARCH, known as GARCH, the projected equity risk premium is
8 determined using Eviews© statistical software. The resulting
9 PRPM predicted a market equity risk premium of 9.65 percent
10 (see, line 3, page 8 of Document No. 5).

11
12 **Q.** Please explain the derivation of a projected equity risk
13 premium based on *Value Line* data for your RPM analysis.

14
15 **A.** As noted above, because both ratemaking and the cost of
16 capital are prospective, a prospective market equity risk
17 premium is needed. The derivation of the forecasted or
18 prospective market equity risk premium can be found in note
19 4, page 9 of Document No. 5. Consistent with my calculation
20 of the dividend yield component in my DCF analysis, this
21 prospective market equity risk premium is derived from an
22 average of the three- to five-year median market price
23 appreciation potential by *Value Line* for the 13 weeks ended
24 January 29, 2021, plus an average of the median estimated
25 dividend yield for the common stocks of the 1,700 firms

1 covered in *Value Line* (as explained in note 1, page 2 of
2 Document No. 6).

3
4 The average median expected price appreciation is 35.00
5 percent, which translates to a 7.79 percent annual
6 appreciation, and when added to the average of *Value Line's*
7 median expected dividend yields of 2.04 percent, equates to
8 a forecasted annual total return rate on the market of 9.83
9 percent. The forecasted Moody's Aaa-rated corporate bond
10 yield of 3.06 percent is deducted from the total market
11 return of 9.83 percent, resulting in an equity risk premium
12 of 6.77 percent, as shown on line 4, page 8 of Document No.
13 5.

14
15 **Q.** Please explain the derivation of an equity risk premium
16 based on the S&P 500 companies.

17
18 **A.** Using data from *Value Line*, I calculated an expected total
19 return on the S&P 500 companies using expected dividend
20 yields and long-term growth estimates as a proxy for capital
21 appreciation. The expected total return for the S&P 500 is
22 14.10 percent. Subtracting the prospective yield on Moody's
23 Aaa-rated corporate bonds of 3.06 percent results in a 11.04
24 percent projected equity risk premium as shown on line 5,
25 page 8 of Document No. 5.

1 Q. Please explain the derivation of an equity risk premium
2 based on Bloomberg data.

3

4 A. Using data from Bloomberg, I calculated an expected total
5 return on the S&P 500 using expected dividend yields and
6 long-term growth estimates as a proxy for capital
7 appreciation, identical to the method described above. The
8 expected total return for the S&P 500 is 17.78 percent.
9 Subtracting the prospective yield on Moody's Aaa-rated
10 corporate bonds of 3.06 percent results in a 14.72 percent
11 projected equity risk premium as shown on line 6, page 8 of
12 Document No. 5.

13

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

16

17 A. I gave equal weight to all six equity risk premiums based
18 on each source - historical, *Value Line*, and Bloomberg - in
19 arriving at a 9.54 percent equity risk premium as shown on
20 line 7, page 8 of Document No. 5.

21

22 After calculating the average market equity risk premium of
23 9.54 percent, I adjusted it by the Beta coefficient to
24 account for the risk of the Utility Proxy Group. As discussed
25 below, the Beta coefficient is a meaningful measure of

1 prospective relative risk to the market as a whole, and is
2 a logical way to allocate a company's, or proxy group's,
3 share of the market's total equity risk premium relative to
4 corporate bond yields. As shown on page 1 of Document No.
5 6, the average of the mean and median Beta coefficient for
6 the Utility Proxy Group is 0.96. Multiplying the 0.96
7 average Beta coefficient by the market equity risk premium
8 of 9.54 percent results in a Beta-adjusted equity risk
9 premium for the Utility Proxy Group of 9.16 percent (see
10 line 9, page 8 of Document No. 5).

11
12 **Q.** How did you derive the equity risk premium based on the S&P
13 Utility Index and Moody's A-rated public utility bonds?

14
15 **A.** I estimated three equity risk premiums based on the S&P
16 Utility Index holding period returns, and two equity risk
17 premiums based on the expected returns of the S&P Utilities
18 Index, using *Value Line* and Bloomberg data, respectively.
19 Turning first to the S&P Utility Index holding period
20 returns, I derived a long-term monthly arithmetic mean
21 equity risk premium between the S&P Utility Index total
22 returns of 10.74 percent and monthly Moody's A-rated public
23 utility bond yields of 6.53 percent from 1928 to 2019 to
24 arrive at an equity risk premium of 4.21 percent (as shown
25 on line 1, page 12 of Document No. 5.). I then used the same

1 historical data to derive an equity risk premium of 6.83
2 percent based on a regression of the monthly equity risk
3 premiums (as shown on line 2, page 12 of Document No. 5).
4 The final S&P Utility Index holding period equity risk
5 premium involved applying the PRPM using the historical
6 monthly equity risk premiums from January 1928 to January
7 2021 to arrive at a PRPM-derived equity risk premium of 5.59
8 percent for the S&P Utility Index (as shown on line 3, page
9 12 of Document No. 5).

10
11 I then derived expected total returns on the S&P Utilities
12 Index of 10.36 percent and 7.67 percent using data from
13 *Value Line* and Bloomberg, respectively, and subtracted the
14 prospective Moody's A2-rated public utility bond yield of
15 3.56 percent (derived on line 3, page 3 of Document No. 5),
16 which resulted in equity risk premiums of 6.80 percent and
17 4.11 percent, respectively (as shown on lines 4 and 5,
18 respectively, on page 12 of Document No. 5). As with the
19 market equity risk premiums, I averaged each risk premium
20 based on each source (*i.e.*, historical, *Value Line*, and
21 Bloomberg) to arrive at my utility-specific equity risk
22 premium of 5.51 percent as shown on line 6, page 12 of
23 Document No. 5.

24
25 Q. How do you derive an equity risk premium of 5.92 percent

1 based on authorized ROEs for electric utilities?

2

3 **A.** The equity risk premium of 5.92 percent shown on line 3,
4 page 7 of Document No. 5 is the result of a regression
5 analysis based on regulatory awarded ROEs related to the
6 yields on Moody's A2-rated public utility bonds. That
7 analysis is shown on page 13 of Document No. 5. Page 13 of
8 Document No. 5 contains the graphical results of a
9 regression analysis of 1,179 rate cases for electric
10 utilities which were fully litigated during the period from
11 January 1, 1980, through January 29, 2021. It shows the
12 implicit equity risk premium relative to the yields on A2-
13 rated public utility bonds immediately prior to the issuance
14 of each regulatory decision. It is readily discernible that
15 there is an inverse relationship between the yield on A2-
16 rated public utility bonds and equity risk premiums. In
17 other words, as interest rates decline, the equity risk
18 premium rises and vice versa, a result consistent with
19 financial literature on the subject.¹⁴ I used the regression
20 results to estimate the equity risk premium applicable to
21 the projected yield on Moody's A2-rated public utility
22 bonds. Given the expected A2-rated utility bond yield of
23 3.56 percent, it can be calculated that the indicated equity
24 risk premium applicable to that bond yield is 5.92 percent,
25 which is shown on line 3, page 7 of Document No. 5.

- 1 **Q.** What is your conclusion of an equity risk premium for use
2 in your total market approach RPM analysis?
3
- 4 **A.** The equity risk premium I apply to the Utility Proxy Group
5 is 6.86 percent, which is the average of the Beta-adjusted
6 equity risk premium for the Utility Proxy Group, the S&P
7 Utilities Index, and the authorized return utility equity
8 risk premiums of 9.16 percent, 5.51 percent, and 5.92
9 percent, respectively, as shown on page 7 of Document No.
10 5.
11
- 12 **Q.** What is the indicated RPM common equity cost rate based on
13 the total market approach?
14
- 15 **A.** As shown on line 7, page 3 of Document No. 5, I calculated
16 a common equity cost rate of 10.52 percent for the Utility
17 Proxy Group based on the total market approach RPM.
18
- 19 **Q.** What are the results of your application of the PRPM and the
20 total market approach RPM?
21
- 22 **A.** As shown on page 1 of Document No. 5, the indicated RPM-
23 derived common equity cost rate is 10.44 percent, which
24 gives equal weight to the PRPM (10.36 percent) and the
25 adjusted-market approach results (10.52 percent).

1 **The Capital Asset Pricing Model**

2 **Q.** Please explain the theoretical basis of the CAPM.

3
4 **A.** CAPM theory defines risk as the co-variability of a
5 security's returns with the market's returns as measured by
6 the Beta coefficient (β). A Beta coefficient less than 1.0
7 indicates lower variability than the market as a whole,
8 while a Beta coefficient greater than 1.0 indicates greater
9 variability than the market.

10
11 The CAPM assumes that all non-market or unsystematic risk
12 can be eliminated through diversification. The risk that
13 cannot be eliminated through diversification is called
14 market, or systematic, risk. In addition, the CAPM presumes
15 that investors only require compensation for systematic
16 risk, which is the result of macroeconomic and other events
17 that affect the returns on all assets. The model is applied
18 by adding a risk-free rate of return to a market risk
19 premium, which is adjusted proportionately to reflect the
20 systematic risk of the individual security relative to the
21 total market as measured by the Beta coefficient. The
22 traditional CAPM model is expressed as:

23
24
$$R_s = R_f + \beta (R_m - R_f)$$

25 Where: R_s = Return rate on the common stock;

1 With few exceptions, the empirical studies agree that
2 ... low-beta securities earn returns somewhat higher than
3 the CAPM would predict, and high-beta securities earn
4 less than predicted.¹⁷

5 * * *

6 Therefore, the empirical evidence suggests that the
7 expected return on a security is related to its risk
8 by the following approximation:

$$9 \quad K = R_F + x(R_M - R_F) + (1-x) \beta (R_M - R_F)$$

10
11 where x is a fraction to be determined empirically. The
12 value of x that best explains the observed relationship
13 [is] $\text{Return} = 0.0829 + 0.0520 \beta$ is between 0.25 and
14 0.30. If $x = 0.25$, the equation becomes:

$$15 \quad K = R_F + 0.25(R_M - R_F) + 0.75 \beta (R_M - R_F)^{18}$$

16
17 Fama and French provide similar support for the ECAPM when
18 they state:

19 The early tests firmly reject the Sharpe-Lintner
20 version of the CAPM. There is a positive relation
21 between beta and average return, but it is too 'flat.'...
22 The regressions consistently find that the intercept
23 is greater than the average risk-free rate... and the
24 coefficient on beta is less than the average excess
25 market return... This is true in the early tests... as well

1 as in more recent cross-section regressions tests, like
2 Fama and French (1992).¹⁹

3
4 Finally, Fama and French further note:

5 Confirming earlier evidence, the relation between beta
6 and average return for the ten portfolios is much
7 flatter than the Sharpe-Linter CAPM predicts. The
8 returns on low beta portfolios are too high, and the
9 returns on the high beta portfolios are too low. For
10 example, the predicted return on the portfolio with the
11 lowest beta is 8.3 percent per year; the actual return
12 as 11.1 percent. The predicted return on the portfolio
13 with the highest beta is 16.8 percent per year; the
14 actual is 13.7 percent.²⁰

15
16 Clearly, the justification from Morin, Fama, and French,
17 along with their reviews of other academic research on the
18 CAPM, validate the use of the ECAPM. In view of theory and
19 practical research, I have applied both the traditional CAPM
20 and the ECAPM to the companies in the Utility Proxy Group
21 and averaged the results.

22
23 **Q.** What Beta coefficients did you use in your CAPM analysis?

24
25 **A.** For the Beta coefficients in my CAPM analysis, I considered

1 two sources: *Value Line* and Bloomberg. While both of those
2 services adjust their calculated (or "raw") Beta
3 coefficients to reflect the tendency of the Beta coefficient
4 to regress to the market mean of 1.00, *Value Line* calculates
5 the Beta coefficient over a five-year period, while
6 Bloomberg calculates it over a two-year period.

7
8 **Q.** Please describe your selection of a risk-free rate of
9 return.

10
11 **A.** As shown in Column 5, page 1 of Document No. 6, the risk-
12 free rate adopted for both applications of the CAPM is 2.31
13 percent. This risk-free rate is based on the average of the
14 *Blue Chip* consensus forecast of the expected yields on 30-
15 year U.S. Treasury bonds for the six quarters ending with
16 the second calendar quarter of 2022, and long-term
17 projections for the years 2022 to 2026 and 2027 to 2031.

18
19 **Q.** Why is the yield on long-term U.S. Treasury bonds
20 appropriate for use as the risk-free rate?

21
22 **A.** The yield on long-term U.S. Treasury bonds is almost risk-
23 free and its term is consistent with the long-term cost of
24 capital of public utilities measured by the yields on
25 Moody's A-rated public utility bonds; the long-term

1 investment horizon inherent in utilities' common stocks; and
2 the long-term life of the jurisdictional rate base to which
3 the allowed fair rate of return (*i.e.*, cost of capital) will
4 be applied. In contrast, short-term U.S. Treasury yields are
5 more volatile and largely a function of Federal Reserve
6 monetary policy.

7
8 **Q.** Please explain the estimation of the expected risk premium
9 for the market used in your CAPM analyses.

10
11 **A.** The basis of the market risk premium is explained in detail
12 in note 1, page 2 of Document No. 6. As discussed above, the
13 market risk premium is derived from an average of three
14 historical data-based market risk premiums, two *Value Line*
15 data-based market risk premiums, and one Bloomberg data-
16 based market risk premium.

17
18 The long-term income return on U.S. Government securities
19 of 5.09 percent was deducted from the SBBI - 2020 monthly
20 historical total market return of 12.10 percent, which
21 results in an historical market equity risk premium of 7.01
22 percent.²¹ I applied a linear OLS regression to the monthly
23 annualized historical returns on the S&P 500 relative to
24 historical yields on long-term U.S. Government securities
25 from SBBI - 2020. That regression analysis yielded a market

1 equity risk premium of 9.98 percent. The PRPM market equity
2 risk premium is 10.76 percent and is derived using the PRPM
3 relative to the yields on long-term U.S. Treasury securities
4 from January 1926 through January 2021.

5
6 The *Value Line*-derived forecasted total market equity risk
7 premium is derived by deducting the forecasted risk-free
8 rate of 2.31 percent, discussed above, from the *Value Line*
9 projected total annual market return of 9.83 percent,
10 resulting in a forecasted total market equity risk premium
11 of 7.52 percent. The S&P 500 projected market equity risk
12 premium using *Value Line* data is derived by subtracting the
13 projected risk-free rate of 2.31 percent from the projected
14 total return of the S&P 500 of 14.10 percent. The resulting
15 market equity risk premium is 11.79 percent.

16
17 The S&P 500 projected market equity risk premium using
18 Bloomberg data is derived by subtracting the projected risk-
19 free rate of 2.31 percent from the projected total return
20 of the S&P 500 of 17.78 percent. The resulting market equity
21 risk premium is 15.47 percent. These six measures, when
22 averaged, result in an average total market equity risk
23 premium of 10.42 percent as shown on page 2 of Document No.
24 6.

25 Q. What are the results of your application of the traditional

1 and empirical CAPM to the Utility Proxy Group?

2
3 **A.** As shown on page 1 of Document No. 6, the adjusted mean
4 result of my CAPM/ECAPM analyses is 12.44 percent, the
5 adjusted median is 12.28 percent, and the average of the two
6 is 12.36 percent. Consistent with my reliance on the average
7 of mean and median DCF results discussed above, the
8 indicated common equity cost rate using the CAPM/ECAPM is
9 12.36 percent.

10
11 ***Common Equity Cost Rates for a Proxy Group of Domestic, Non-Price***
12 ***Regulated Companies Based on the DCF, RPM, and CAPM***

13 **Q.** Why do you also consider a proxy group of domestic, non-
14 price regulated companies?

15
16 **A.** In the *Hope* and *Bluefield* cases, the U.S. Supreme Court did
17 not specify that comparable risk companies had to be
18 utilities. Since the purpose of rate regulation is to be a
19 substitute for marketplace competition, non-price regulated
20 firms operating in the competitive marketplace make an
21 excellent proxy if they are comparable in total risk to the
22 Utility Proxy Group being used to estimate the cost of common
23 equity. The selection of such domestic, non-price regulated
24 competitive firms theoretically and empirically results in
25 a proxy group that is comparable in total risk to the Utility

1 Proxy Group, since all of these companies compete for
2 capital in the exact same markets.

3
4 **Q.** How did you select non-price regulated companies that are
5 comparable in total risk to the Utility Proxy Group?

6
7 **A.** In order to select a proxy group of domestic, non-price
8 regulated companies similar in total risk to the Utility
9 Proxy Group, I relied on the Beta coefficients and related
10 statistics derived from *Value Line* regression analyses of
11 weekly market prices over the most recent 260 weeks (*i.e.*,
12 five years). These selection criteria resulted in a proxy
13 group of 48 domestic, non-price regulated firms comparable
14 in total risk to the Utility Proxy Group. Total risk is the
15 sum of non-diversifiable market risk and diversifiable
16 company-specific risks. The criteria used in selecting the
17 domestic, non-price regulated firms were:

- 18 • They must be covered by *Value Line* (Standard Edition);
- 19 • They must be domestic, non-price regulated companies,
20 *i.e.*, not utilities;
- 21 • Their Beta coefficients must lie within plus or minus two
22 standard deviations of the average unadjusted Beta
23 coefficients of the Utility Proxy Group; and
- 24 • The residual standard errors of the *Value Line* regressions
25 which gave rise to the unadjusted Beta coefficients must

1 lie within plus or minus two standard deviations of the
2 average residual standard error of the Utility Proxy
3 Group.

4
5 Beta coefficients measure market, or systematic, risk, which
6 is not diversifiable. The residual standard errors of the
7 regressions measure each firm's company-specific,
8 diversifiable risk. Companies that have similar Beta
9 coefficients and similar residual standard errors resulting
10 from the same regression analyses have similar total
11 investment risk.

12
13 **Q.** Have you prepared a schedule which shows the data from which
14 you selected the 48 domestic, non-price regulated companies
15 that are comparable in total risk to the Utility Proxy Group?

16
17 **A.** Yes, the basis of my selection and both proxy groups'
18 regression statistics are shown in Document No. 7.

19
20 **Q.** Did you calculate common equity cost rates using the DCF
21 model, RPM, and CAPM for the Non-Price Regulated Proxy
22 Group?

23
24 **A.** Yes. Because the DCF model, RPM, and CAPM have been applied
25 in an identical manner as described above, I will not repeat

1 the details of the rationale and application of each model.
2 One exception is in the application of the RPM, where I did
3 not use public utility-specific equity risk premiums, nor
4 did I apply the PRPM to the individual non-price regulated
5 companies.

6
7 Page 2 of Document No. 8 derives the constant growth DCF
8 model common equity cost rate. As shown, the indicated
9 common equity cost rate, using the constant growth DCF for
10 the Non-Price Regulated Proxy Group comparable in total risk
11 to the Utility Proxy Group, is 11.52 percent.

12
13 Pages 3 through 5 of Document No. 8 contain the data and
14 calculations that support the 12.67 percent RPM common
15 equity cost rate. As shown on line 1, page 3 of Document No.
16 8, the consensus prospective yield on Moody's Baa-rated
17 corporate bonds for the six quarters ending in the second
18 quarter of 2022, and for the years 2022 to 2026 and 2027 to
19 2031, is 4.04 percent.²² Since the Non-Price Regulated Proxy
20 Group has an average Moody's long-term issuer rating of
21 Baa1, a downward adjustment of 0.15 percent to the projected
22 Baa2-rated corporate bond yield is necessary to reflect the
23 difference in ratings which results in a projected Baa1-
24 rated corporate bond yield of 3.89 percent.

25 When the Beta-adjusted risk premium of 8.78 percent (as

1 derived on page 5 of Document No. 8) relative to the Non-
2 Price Regulated Proxy Group is added to the prospective
3 A3/Baa1-rated corporate bond yield of 3.89 percent, the
4 indicated RPM common equity cost rate is 12.67 percent.

5
6 Page 6 of Document No. 8 contains the inputs and calculations
7 that support my indicated CAPM/ECAPM common equity cost rate
8 of 12.00 percent.

9
10 **Q.** What is the cost rate of common equity based on the Non-
11 Price Regulated Proxy Group comparable in total risk to the
12 Utility Proxy Group?

13
14 **A.** As shown on page 1 of Document No. 8, the results of the
15 common equity models applied to the Non-Price Regulated
16 Proxy Group - which group is comparable in total risk to the
17 Utility Proxy Group - are as follows: 11.52 percent (DCF),
18 12.67 percent (RPM), and 12.00 percent (CAPM). The average
19 of the mean and median of these models is 12.03 percent,
20 which I used as the indicated common equity cost rates for
21 the Non-Price Regulated Proxy Group.

22
23 **VII. CONCLUSION OF COMMON EQUITY COST RATE BEFORE ADJUSTMENTS**

24 **Q.** What is the indicated common equity cost rate before
25 adjustments?

1 **A.** By applying multiple cost of common equity models to the
2 Utility Proxy Group and the Non-Price Regulated Proxy Group,
3 the indicated range of common equity cost rates attributable
4 to the Utility Proxy Group before any relative risk
5 adjustments is between 9.94 percent and 10.94 percent as
6 shown in Document No. 2. I used multiple cost of common
7 equity models as primary tools in arriving at my recommended
8 common equity cost rate because no single model is so
9 inherently precise that it can be relied on to the exclusion
10 of other theoretically sound models. Using multiple models
11 adds reliability to the estimated common equity cost rate,
12 with the prudence of using multiple cost of common equity
13 models supported in both the financial literature and
14 regulatory precedent.

15
16 Based on these common equity cost rate results, I conclude
17 that a range of common equity cost rates between 9.94 percent
18 and 10.94 percent is reasonable and appropriate before any
19 adjustments for relative risk differences between the
20 company and the Utility Proxy Group are made. The bottom of
21 the indicated range (*i.e.*, 9.94 percent) was calculated by
22 averaging the average of all model results (10.94 percent)
23 with the lowest model result (8.94 percent), and the top of
24 the indicated range is the approximate average of all model
25 results. I have chosen this indicated range of common equity

1 cost rates applicable to the Utility Proxy Group as a
2 conservative estimate of the required ROE.

3
4 **VIII. ADJUSTMENTS TO THE COMMON EQUITY COST RATE**

5 ***Flotation Costs***

6 **Q.** What are flotation costs?

7
8 **A.** Flotation costs are those costs associated with the sale of
9 new issuances of common stock. They include market pressure
10 and the mandatory unavoidable costs of issuance (e.g.,
11 underwriting fees and out-of-pocket costs for printing,
12 legal, registration, etc.). For every dollar raised through
13 debt or equity offerings, the company receives less than one
14 full dollar in financing.

15
16 **Q.** Why is it important to recognize flotation costs in the
17 allowed common equity cost rate?

18
19 **A.** It is important because there is no other mechanism in the
20 ratemaking paradigm through which such costs can be
21 recognized and recovered. Because these costs are real,
22 necessary, and legitimate, recovery of these costs should
23 be permitted. As noted by Morin:

24 The costs of issuing these securities are just as real
25 as operating and maintenance expenses or costs incurred

1 to build utility plants, and fair regulatory treatment
2 must permit recovery of these costs...

3 The simple fact of the matter is that common equity
4 capital is not free... [Flotation costs] must be
5 recovered through a rate of return adjustment.²³
6

7 **Q.** Do the common equity cost rate models you have used already
8 reflect investors' anticipation of flotation costs?
9

10 **A.** No. All of these models assume no transaction costs. The
11 literature is quite clear that these costs are not reflected
12 in the market prices paid for common stocks. For example,
13 Brigham and Daves confirm this and provide the methodology
14 utilized to calculate the flotation adjustment.²⁴ In
15 addition, Morin confirms the need for such an adjustment
16 even when no new equity issuance is imminent.²⁵ Consequently,
17 it is proper to include a flotation cost adjustment when
18 using cost of common equity models to estimate the common
19 equity cost rate.
20

21 **Q.** How did you calculate the flotation cost allowance?
22

23 **A.** I modified the DCF calculation to provide a dividend yield
24 that would reimburse investors for issuance costs in
25 accordance with the method cited in literature by Brigham

1 and Daves, as well as by Morin. The flotation cost adjustment
2 recognizes the actual costs of issuing equity that were
3 incurred by Tampa Electric's parent, Emera, in its equity
4 issuances since its acquisition of Tampa Electric. Based on
5 the issuance costs shown on page 1 of Document No. 9, an
6 adjustment of 0.13 percent is required to reflect the
7 flotation costs applicable to the Utility Proxy Group.

8
9 ***Business Risk Adjustment***

10 **Q.** What company-specific business risks did you consider in
11 your recommended ROE?

12
13 **A.** As detailed below, I've considered the company's smaller
14 size and lack of geographic diversification relative to the
15 Utility Proxy Group in my ROE recommendation.

16
17 **Q.** Does the company's smaller size relative to the Utility
18 Proxy Group companies increase its business risk?

19
20 **A.** Yes. The company's smaller size relative to the Utility
21 Proxy Group companies indicates greater relative business
22 risk for the company because, all else being equal, size has
23 a material bearing on risk.

24
25 Size affects business risk because smaller companies

1 generally are less able to cope with significant events that
2 affect sales, revenues, and earnings. For example, smaller
3 companies face more risk exposure to business cycles and
4 economic conditions, both nationally and locally.
5 Additionally, the loss of revenues from a few larger
6 customers would have a greater effect on a small company
7 than on a bigger company with a larger, more diverse,
8 customer base.

9
10 **Q.** Is the increased relative risk due to small size and the
11 associated implications on the rate of return on common
12 equity supported by financial literature?

13
14 **A.** Yes, it is. As further evidence that smaller firms are
15 riskier, investors generally demand greater returns from
16 smaller firms to compensate for less marketability and
17 liquidity of their securities. Duff & Phelps' 2020 Valuation
18 Handbook - U.S. Guide to Cost of Capital ("D&P - 2020")
19 discusses the nature of the small-size phenomenon, providing
20 an indication of the magnitude of the size premium based on
21 several measures of size. In discussing "Size as a Predictor
22 of Equity Returns," D&P - 2020 states:

23 The size effect is based on the empirical observation
24 that companies of smaller size are associated with
25 greater risk and, therefore, have greater cost of

1 capital [sic]. The "size" of a company is one of the
2 most important risk elements to consider when
3 developing cost of equity capital estimates for use in
4 valuing a business simply because size has been shown
5 to be a *predictor* of equity returns. In other words,
6 there is a significant (negative) relationship between
7 size and historical equity returns - as size *decreases*,
8 returns tend to *increase*, and vice versa. (footnote
9 omitted) (emphasis in original)²⁶

10
11 Furthermore, in "The Capital Asset Pricing Model: Theory and
12 Evidence," Fama and French note size is indeed a risk factor
13 which must be reflected when estimating the cost of common
14 equity. On page 14, they note:

15 . . . the higher average returns on small stocks and
16 high book-to-market stocks reflect unidentified state
17 variables that produce undiversifiable risks
18 (covariances) in returns not captured in the market
19 return and are priced separately from market betas.²⁷

20
21 Based on this evidence, Fama and French proposed their
22 three-factor model, which includes a size variable in
23 recognition of the effect size has on the cost of common
24 equity.

1 Also, it is a basic financial principle that the use of
2 funds invested, and not the source of funds, is what gives
3 rise to the risk of any investment.²⁸ Eugene Brigham, a well-
4 known authority, states:

5 A number of researchers have observed that portfolios
6 of small-firms (sic) have earned consistently higher
7 average returns than those of large-firm stocks; this
8 is called the "small-firm effect." On the surface, it
9 would seem to be advantageous to the small firms to
10 provide average returns in a stock market that are
11 higher than those of larger firms. In reality, it is
12 bad news for the small firm; **what the small-firm effect**
13 **means is that the capital market demands higher returns**
14 **on stocks of small firms than on otherwise similar**
15 **stocks of the large firms.**²⁹ (emphasis added)

16
17 Consistent with the financial principle of risk and return
18 discussed above, increased relative risk due to Tampa
19 Electric's smaller size must be considered in the allowed
20 rate of return on common equity. Therefore, the Commission's
21 authorization of a cost rate of common equity in this
22 proceeding must appropriately reflect the unique risks of
23 the company, including its smaller relative size, which is
24 justified and supported above by evidence in the financial
25 literature.

1 **Q.** Please describe the company's lack of geographic diversity
2 and why that increases its relative risk?

3

4 **A.** Tampa Electric's service area in West Central Florida is
5 extremely compact compared to other Florida investor-owned
6 utilities. In the event of a substantial storm or other
7 catastrophic event, the entire system and customer base of
8 Tampa Electric is at risk for damage, outages, and other
9 customer impacts. This is unlike other utilities in Florida,
10 and more importantly, the Utility Proxy Group, which have
11 more geographically diverse service areas or larger service
12 territories, which may only have a portion of the system
13 assets and customer base affected in the case of storms or
14 other natural disasters or catastrophic events, allowing the
15 unaffected areas and assets to help mitigate certain impacts
16 and help sustain the utility while repairs are made in
17 affected areas. Tampa Electric's smaller size and limited
18 geographic diversity have also been recognized as key risks
19 in the company's recent S&P and Moody's credit ratings
20 reports.³⁰

21

22 **Q.** Is there a way to quantify a relative risk adjustment due
23 to the company's smaller size and lack of geographic
24 diversity when compared to the Utility Proxy Group?

25

1 **A.** Yes. The company has greater relative risk than the average
2 utility in the Utility Proxy Group because of its smaller
3 size and lack of geographic diversity. As a proxy for its
4 greater risk, I will use the difference in size between
5 Tampa Electric and the Utility Proxy Group as measured by
6 its estimated market capitalization of common equity.

7
8 As shown in Document No. 10, the company's estimated market
9 capitalization is approximately \$7,780 million, compared
10 with the market capitalization of the average company in the
11 Utility Proxy Group of \$15,616 million. The average company
12 in the Utility Proxy Group has a market capitalization
13 approximately 2.00 times the size of the company's estimated
14 market capitalization.

15
16 As a result, it is necessary to upwardly adjust the indicated
17 range of common equity cost rates attributable to the
18 Utility Proxy Group to reflect the company's greater risk
19 due to its smaller relative size. The determination is based
20 on the size premiums for portfolios of New York Stock
21 Exchange, American Stock Exchange, and NASDAQ listed
22 companies ranked by deciles for the 1926 to 2019 period. The
23 average size premium for the Utility Proxy Group with a
24 market capitalization of \$15,616 million falls in the second
25 decile, while the company's estimated market capitalization

1 of \$7,780 million places it in the third decile. The size
2 premium spread between the second decile and the third
3 decile is 0.23 percent.

4
5 **Q.** Since Tampa Electric is part of a larger corporation, why
6 is the size of the total corporation not more appropriate
7 to use when determining the size adjustment?

8
9 **A.** The return derived in this proceeding will not apply to
10 Emera's operations as a whole, but only to Tampa Electric's.
11 Emera is the sum of its constituent parts, including those
12 constituent parts' ROEs. Potential investors in the parent
13 company are aware that it is a combination of operations in
14 each state, province, and country and that each geographic
15 area's operations experience the operating risks specific
16 to their jurisdiction. The market's expectation of Emera's
17 return is commensurate with the realities of the
18 corporation's composite operations in each of the geographic
19 areas in which it operates.

20
21 ***Other Considerations***

22 **Q.** Have you considered any other company-specific issues in
23 your recommended ROE?

24
25 **A.** Yes, I have. In addition to the company's flotation costs

1 and its smaller relative size, I have also considered the
2 company's high customer growth, and level of capital
3 expenditures compared to the Utility Proxy Group companies
4 in my ROE recommendation.

5
6 **Q.** Please describe the company's high customer growth.

7
8 **A.** Tampa Electric's total number of retail customers has
9 increased by 56,500 (*i.e.*, approximately 7.7 percent) over
10 the past five years.³¹ The increased customer growth in Tampa
11 Electric's service territory necessitates increased and
12 accelerated capital investment.

13
14 **Q.** Please briefly summarize the company's capital investment
15 plans.

16
17 **A.** Tampa Electric currently plans to invest over \$4.0 billion
18 of additional capital over the 2021-2024 period,³² which
19 represents over 54.00 percent of its 2019 year-end net
20 utility plant.³³ That amount includes investments required
21 to support growth, and to maintain safe, sufficient, and
22 reliable service in both its transmission and distribution
23 facilities. As discussed by Mr. McOnie, the company will
24 require continued access to the capital markets, at
25 reasonable terms, to finance its capital spending plan. As

1 the company moves forward with its capital spending plan,
2 timely recovery of its capital costs is critical to mitigate
3 the delay of capital recovery and execute its capital
4 spending program.

5
6 **Q.** Do substantial capital expenditures directly relate to a
7 utility being allowed the opportunity to earn a return
8 adequate to attract capital at reasonable terms?
9

10 **A.** Yes, they do. The allowed ROE should enable the subject
11 utility to finance capital expenditures and working capital
12 requirements at reasonable rates, and to maintain its
13 financial integrity in a variety of economic and capital
14 market conditions. As discussed throughout my direct
15 testimony, a return adequate to attract capital at
16 reasonable terms enables the utility to provide safe,
17 reliable service while maintaining its financial soundness.
18 To the extent a utility is provided the opportunity to earn
19 its market-based cost of capital, neither customers nor
20 shareholders should be disadvantaged. These requirements are
21 of particular importance to a utility when it is engaged in
22 a substantial capital expenditure program.
23

24 The ratemaking process is predicated on the principle that,
25 for investors and companies to commit the capital needed to

1 provide safe and reliable utility services, the utility must
2 have the opportunity to recover the return of, and the
3 market-required return on, invested capital. Regulatory
4 commissions recognize that since utility operations are
5 capital intensive, regulatory decisions should enable the
6 utility to attract capital at reasonable terms; doing so
7 balances the long-term interests of the utility and its
8 ratepayers.

9
10 Further, the financial community carefully monitors the
11 current and expected financial conditions of utility
12 companies, as well as the regulatory environment in which
13 those companies operate. In that respect, the regulatory
14 environment is one of the most important factors considered
15 in both debt and equity investors' assessments of risk. That
16 is especially important during periods in which the utility
17 expects to make significant capital investments and,
18 therefore, may require access to capital markets.

19
20 **Q.** Do credit rating agencies recognize risk associated with
21 increased capital expenditures?

22
23 **A.** Yes, they do. From a credit perspective, the additional
24 pressure on cash flows associated with high levels of
25 capital expenditures exerts corresponding pressure on credit

1 metrics and, therefore, credit ratings. S&P has noted
2 several long-term challenges for utilities' financial health
3 including: heavy construction programs to address demand
4 growth; declining capacity margins; and aging infrastructure
5 and regulatory responsiveness to mounting requests for rate
6 increases.³⁴ More recently, S&P noted:

7 We assume that capital spending will remain a focus of
8 most utility managements and strain credit metrics. It
9 provides growth when sales are diminished by ongoing
10 demanded efficiency from regulators and other trends,
11 and it is welcomed by policymakers that appreciate the
12 economic stimulus and the benefits of safer, more
13 reliable service. The speed with which the regulatory
14 process turns the new spending into higher rates to
15 begin to pay for it is an important factor in our
16 assumptions and the forecast. Any extended lag between
17 spending and recovery can exacerbate the negative
18 effect on credit metrics and therefore ratings.³⁵

19
20 The rating agency views noted above also are consistent with
21 certain observations discussed in my direct testimony: (1)
22 the benefits of maintaining a strong financial profile are
23 significant when capital access is required and become
24 particularly acute during periods of market instability; and
25 (2) the Commission's decision in this proceeding will have

1 a direct bearing on the company's credit profile and its
2 ability to access the capital needed to fund its
3 investments.

4
5 **Q.** How do the company's expected capital expenditures compare
6 to the Utility Proxy Group?

7
8 **A.** To reasonably make that comparison, I calculated the ratio
9 of expected capital expenditures to net plant for each
10 company in the Utility Proxy Group. I performed that
11 calculation using Tampa Electric's projected capital
12 expenditures during 2021 through 2024 relative to its net
13 plant for the year ended December 31, 2019. As shown in
14 Document No. 11, Tampa Electric has the highest ratio of
15 projected capital expenditures to net plant relative to the
16 Utility Proxy Group, approximately 39.00 percent higher than
17 the Utility Proxy Group median.

18
19 **Q.** What are your conclusions regarding the effect of Tampa
20 Electric's capital investment plan on its risk profile and
21 cost of capital?

22
23 **A.** It is clear that Tampa Electric's capital investment plan
24 relative to net plant is larger than the median of the
25 Utility Proxy Group companies. It also is clear that equity

1 investors and credit rating agencies recognize the
2 additional risks associated with substantial capital
3 expenditures.

4
5 **Q.** What is the indicated cost of common equity after your
6 company-specific adjustments?

7
8 **A.** Applying the 0.13 percent flotation cost adjustment and the
9 0.23 percent business risk adjustment to the indicated range
10 of common equity cost rates between 9.94 percent and 10.94
11 percent results in a company-specific range of common equity
12 rates between 10.30 percent and 11.30 percent. In
13 consideration of both of these indicated ranges in addition
14 to the company's high customer growth, and its substantial
15 capital expenditure program, I recommend an ROE of 10.75
16 percent for Tampa Electric in this proceeding.

17
18 **IX. CONCLUSION**

19 **Q.** What is your recommended ROE for Tampa Electric?

20
21 **A.** Given the discussion above and the results from the analyses
22 that I have performed, I recommend that an ROE of 10.75
23 percent is appropriate for the company at this time.

24
25 **Q.** In your opinion, is your proposed ROE of 10.75 percent fair

1 and reasonable to the company and its customers?

2

3 **A.** Yes, it is.

4

5 **Q.** In your opinion, is the company's proposed equity ratio of
6 55.00 percent fair and reasonable to the company and its
7 customers?

8

9 **A.** Yes, it is.

10

11 **Q.** Does this conclude your prepared direct testimony?

12

13 **A.** Yes, it does.

14

15

16

17

18

19

20

21

22

23

24

25

EXHIBIT

OF

DYLAN W. D'ASCENDIS, CRRA, CVA

ON BEHALF OF TAMPA ELECTRIC COMPANY

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

Summary

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

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

Areas of Specialization

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

Recent Expert Testimony Submission/Apearances

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

Recent Assignments

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

Recent Publications and Speeches

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



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

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



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

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



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

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
New Jersey Board of Public Utilities				
Atlantic City Electric Company	12/20	Atlantic City Electric Company	Docket No. ER20120746	Return on Equity
FirstEnergy	02/20	Jersey Central Power & Light Co.	Docket No. ER20020146	Rate of Return
Aqua New Jersey, Inc.	12/18	Aqua New Jersey, Inc.	Docket No. WR18121351	Rate of Return
Middlesex Water Company	10/17	Middlesex Water Company	Docket No. WR17101049	Rate of Return
Middlesex Water Company	03/15	Middlesex Water Company	Docket No. WR15030391	Rate of Return
The Atlantic City Sewerage Company	10/14	The Atlantic City Sewerage Company	Docket No. WR14101263	Cost of Service / Rate Design
Middlesex Water Company	11/13	Middlesex Water Company	Docket No. WR1311059	Capital Structure
New Mexico Public Regulation Commission				
Southwestern Public Service Company	01/21	Southwestern Public Service Company	Case No. 20-00238-UT	Return on Equity
North Carolina Utilities Commission				
Duke Energy Carolinas, LLC	07/20	Duke Energy Carolinas, LLC	Docket No. E-7, Sub 1214	Return on Equity
Duke Energy Progress, LLC	07/20	Duke Energy Progress, LLC	Docket No. E-2, Sub 1219	Return on Equity
Aqua North Carolina, Inc.	12/19	Aqua North Carolina, Inc.	Docket No. W-218 Sub 526	Rate of Return
Carolina Water Service, Inc.	06/19	Carolina Water Service, Inc.	Docket No. W-354 Sub 364	Rate of Return
Carolina Water Service, Inc.	09/18	Carolina Water Service, Inc.	Docket No. W-354 Sub 360	Rate of Return
Aqua North Carolina, Inc.	07/18	Aqua North Carolina, Inc.	Docket No. W-218 Sub 497	Rate of Return
North Dakota Public Service Commission				
Northern States Power Company	11/20	Northern States Power Company	Case No. PU-20-441	Rate of Return
Public Utilities Commission of Ohio				
Aqua Ohio, Inc.	05/16	Aqua Ohio, Inc.	Docket No. 16-0907-WW-AIR	Rate of Return
Pennsylvania Public Utility Commission				
Valley Energy, Inc.	07/19	C&T Enterprises	Docket No. R-2019-3008209	Rate of Return
Wellsboro Electric Company	07/19	C&T Enterprises	Docket No. R-2019-3008208	Rate of Return
Citizens' Electric Company of Lewisburg	07/19	C&T Enterprises	Docket No. R-2019-3008212	Rate of Return
Steeltown Borough Authority	01/19	Steeltown Borough Authority	Docket No. A-2019-3006880	Valuation
Mahoning Township, PA	08/18	Mahoning Township, PA	Docket No. A-2018-3003519	Valuation
SUEZ Water Pennsylvania Inc.	04/18	SUEZ Water Pennsylvania Inc.	Docket No. R-2018-000834	Rate of Return
Columbia Water Company	09/17	Columbia Water Company	Docket No. R-2017-2598203	Rate of Return
Veolia Energy Philadelphia, Inc.	06/17	Veolia Energy Philadelphia, Inc.	Docket No. R-2017-2593142	Rate of Return
Emporium Water Company	07/14	Emporium Water Company	Docket No. R-2014-2402324	Rate of Return
Columbia Water Company	07/13	Columbia Water Company	Docket No. R-2013-2360798	Rate of Return
Penn Estates Utilities, Inc.	12/11	Penn Estates, Utilities, Inc.	Docket No. R-2011-2255159	Capital Structure / Long-Term Debt Cost Rate
South Carolina Public Service Commission				
Blue Granite Water Co.	12/19	Blue Granite Water Company	Docket No. 2019-292-WS	Rate of Return
Carolina Water Service, Inc.	02/18	Carolina Water Service, Inc.	Docket No. 2017-292-WS	Rate of Return



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

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Carolina Water Service, Inc.	06/15	Carolina Water Service, Inc.	Docket No. 2015-199-WS	Rate of Return
Carolina Water Service, Inc.	11/13	Carolina Water Service, Inc.	Docket No. 2013-275-WS	Rate of Return
United Utility Companies, Inc.	09/13	United Utility Companies, Inc.	Docket No. 2013-199-WS	Rate of Return
Utility Services of South Carolina, Inc.	09/13	Utility Services of South Carolina, Inc.	Docket No. 2013-201-WS	Rate of Return
Tega Cay Water Services, Inc.	11/12	Tega Cay Water Services, Inc.	Docket No. 2012-177-WS	Capital Structure
Tennessee Public Utility Commission				
Piedmont Natural Gas Company	07/20	Piedmont Natural Gas Company	Docket No. 20-00086	Return on Equity
Public Utility Commission of Texas				
Southwestern Public Service Company	02/21	Southwestern Public Service Company	Docket No. 51802	Return on Equity
Southwestern Electric Power Company	10/20	Southwestern Electric Power Company	Docket No. 51415	Rate of Return
Virginia State Corporation Commission				
Massanutten Public Service Corporation	12/20	Massanutten Public Service Corporation	Case No. PUE-2020-00039	Return on Equity
Aqua Virginia, Inc.	07/20	Aqua Virginia, Inc.	PUR-2020-00106	Rate of Return
WGL Holdings, Inc.	07/18	Washington Gas Light Company	PUR-2018-00080	Rate of Return
Atmos Energy Corporation	05/18	Atmos Energy Corporation	PUR-2018-00014	Rate of Return
Aqua Virginia, Inc.	07/17	Aqua Virginia, Inc.	PUR-2017-00082	Rate of Return
Massanutten Public Service Corp.	08/14	Massanutten Public Service Corp.	PUE-2014-00035	Rate of Return / Rate Design

Tampa Electric Company, Inc.
Brief Summary of Common Equity Cost Rate

<u>Line No.</u>	<u>Principal Methods</u>	<u>Proxy Group of Thirteen Electric Companies</u>
1.	Discounted Cash Flow Model (DCF) (1)	8.94%
2.	Risk Premium Model (RPM) (2)	10.44%
3.	Capital Asset Pricing Model (CAPM) (3)	12.36%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	<u>12.03%</u>
5.	Indicated Range of Common Equity Cost Rates before Adjustment for Company-Specific Risk (5)	9.94% - 10.94%
6.	Flotation Cost Adjustment (6)	0.13%
7.	Business Risk Adjustment (7)	<u>0.23%</u>
8.	Indicated Range of Common Equity Cost Rates after Adjustment	<u><u>10.30% - 11.30%</u></u>
9.	Recommended Common Equity Cost Rate	<u><u>10.75%</u></u>

- Notes: (1) From page 1 of Document No. 4.
(2) From page 1 of Document No. 5.
(3) From page 1 of Document No. 6.
(4) From page 1 of Document No. 8.
(5) The low end of the indicated range is calculated by using the average of the DCF results (8.94%) and average model result (10.94%). The high end of the indicated range is the average model result (10.94%).
(6) Adjustment to reflect an allowance for flotation costs as detailed in Mr. D'Ascendis' direct testimony.
(7) Adjustment to reflect the Company's greater business risk due to its smaller size and lack of geographic diversity relative to the Utility Proxy Group as detailed in Mr. D'Ascendis' direct testimony.

Tampa Electric Company, Inc.
Capitalization and Financial Statistics (1)
2015 - 2019, Inclusive

	2019	2018	2017	2016	2015	
	(MILLIONS OF DOLLARS)					
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	\$ 5,721.456	\$ 5,152.162	\$ 4,503.007	\$ 4,333.101	\$ 4,269.851	
SHORT-TERM DEBT	<u>256.861</u>	<u>167.348</u>	<u>300.000</u>	<u>139.950</u>	<u>65.500</u>	
TOTAL-CAPITAL EMPLOYED	<u>\$ 5,978.317</u>	<u>\$ 5,319.510</u>	<u>\$ 4,803.007</u>	<u>\$ 4,473.051</u>	<u>\$ 4,335.351</u>	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	4.29 %	4.16 %	4.55 %	4.79 %	5.07 %	
CAPITAL STRUCTURE RATIOS						
BASED ON TOTAL PERMANENT CAPITAL:						<u>5 YEAR AVERAGE</u>
LONG-TERM DEBT	44.70 %	44.37 %	42.60 %	44.27 %	46.88 %	44.56 %
PREFERRED STOCK	-	-	-	-	-	-
COMMON EQUITY	<u>55.30</u>	<u>55.63</u>	<u>57.40</u>	<u>55.73</u>	<u>53.12</u>	<u>55.44</u>
TOTAL	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	47.08 %	46.12 %	46.18 %	46.02 %	47.69 %	46.62 %
PREFERRED STOCK	-	-	-	-	-	-
COMMON EQUITY	<u>52.92</u>	<u>53.88</u>	<u>53.82</u>	<u>53.98</u>	<u>52.31</u>	<u>53.38</u>
TOTAL	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
DIVIDEND PAYOUT RATIO	100.86 %	106.39 %	93.12 %	101.78 %	96.39 %	99.71 %
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	10.48 %	10.77 %	10.91 %	10.68 %	10.99 %	10.77 %
TOTAL DEBT / EBITDA (3)	3.82 x	3.41 x	2.65 x	2.79 x	2.81 x	3.10 x
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	25.69 %	27.02 %	21.46 %	32.22 %	20.92 %	25.46 %
TOTAL DEBT / TOTAL CAPITAL	47.08 %	46.12 %	46.18 %	46.02 %	47.69 %	46.62 %

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	
	(MILLIONS OF DOLLARS)					
<u>CAPITALIZATION STATISTICS</u>						
<u>AMOUNT OF CAPITAL EMPLOYED</u>						
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	<u>\$20,947.566</u>	<u>\$19,217.224</u>	<u>\$18,221.031</u>	<u>\$17,225.137</u>	<u>\$16,145.968</u>	
<u>INDICATED AVERAGE CAPITAL COST RATES (2)</u>						
TOTAL DEBT	4.46 %	4.64 %	4.62 %	4.83 %	4.63 %	
PREFERRED STOCK	5.65	5.38	5.46	5.63	5.60	
<u>CAPITAL STRUCTURE RATIOS</u>						
<u>5 YEAR AVERAGE</u>						
<u>BASED ON TOTAL PERMANENT CAPITAL:</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>BASED ON TOTAL CAPITAL:</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>FINANCIAL STATISTICS</u>						
<u>FINANCIAL RATIOS - MARKET BASED</u>						
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
<u>RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY</u>	10.26 %	8.86 %	9.14 %	8.04 %	8.29 %	8.92 %
<u>TOTAL DEBT / EBITDA (3)</u>	4.30 x	4.88 x	3.96 x	5.30 x	4.15 x	4.52 x
<u>FUNDS FROM OPERATIONS / TOTAL DEBT (4)</u>	15.01 %	20.77 %	19.97 %	19.29 %	23.50 %	19.71 %
<u>TOTAL DEBT / TOTAL CAPITAL</u>	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
<u>ALLETE, Inc.</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Alliant Energy Corporation</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Ameren Corporation</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Duke Energy Corporation</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Edison International</u>						
Long-Term Debt	54.21 %	53.76 %	46.65 %	44.02 %	45.68 %	48.86 %
Preferred Stock	6.48	8.01	8.44	8.65	8.20	7.96
Common Equity	39.31	38.23	44.91	47.33	46.12	43.18
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Entergy Corporation</u>						
Long-Term Debt	63.12 %	64.08 %	64.80 %	64.16 %	58.19 %	62.87 %
Preferred Stock	0.77	0.87	0.85	0.88	1.39	0.95
Common Equity	36.11	35.05	34.35	34.96	40.42	36.18
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>IDACORP, Inc.</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>

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
<u>NorthWestern Corporation</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>OGE Energy Corporation</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Otter Tail Corporation</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Pinnacle West Capital Corporation</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Portland General Electric Company</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Xcel Energy, Inc.</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Proxy Group of Thirteen Electric Companies</u>						
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	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>

Source of Information: Company Annual Forms 10-K

Tampa Electric Company, Inc.
Operating Subsidiary Company Capital Structures of the
Proxy Group of Thirteen Electric Companies

Company Name	Parent Company Ticker	2019		
		Common Equity	Long-Term Debt	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	<u>52.50%</u>	<u>47.50%</u>	<u>100.00%</u>
	Median	<u>52.00%</u>	<u>48.00%</u>	<u>100.00%</u>

Source of Information: S&P Global Market Intelligence

Tampa Electric Company, Inc.
Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for the
Proxy Group of Thirteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Thirteen Electric Companies	Average Dividend Yield (1)	Value Line Projected Five Year Growth in EPS (2)	Zack's Five Year Projected Growth Rate in EPS (3)	Bloomberg's Five Year Projected Growth Rate in EPS (4)	Yahoo! Finance Projected Five Year Growth in EPS (5)	Average Projected Five Year Growth in EPS (3)	Adjusted Dividend Yield (4)	Indicated Common Equity Cost Rate (5)
ALLETE, Inc.	4.09	4.50	NA	5.50	7.00	5.67	4.21	9.88
Alliant Energy Corporation	3.10	5.50	5.90	5.79	5.80	5.75	3.19	8.94
Ameren Corporation	2.65	6.00	6.80	7.03	6.60	6.61	2.74	9.35
Duke Energy Corporation	4.19	5.00	4.40	4.07	2.81	4.07	4.28	8.35
Edison International	4.29	12.00	3.10	4.17	(0.50)	6.42	4.43	10.85
Energy Corporation	3.73	3.00	5.20	4.62	5.20	4.51	3.81	8.32
IDACORP, Inc.	3.09	4.50	2.60	2.88	2.60	3.14	3.14	6.28
NorthWestern Corporation	4.19	2.50	3.70	3.90	3.20	3.32	4.26	7.58
OG&E Energy Corporation	4.99	3.00	3.60	3.51	2.10	3.05	5.07	8.12
Other Tail Corporation	3.55	6.50	NA	7.05	9.00	7.52	3.68	11.20
Pinnacle West Capital Corporation	4.10	4.50	3.50	3.78	3.70	3.87	4.18	8.05
Portland General Electric Company	3.87	4.00	5.50	5.12	5.50	5.03	3.97	9.00
Xcel Energy, Inc.	2.55	6.00	6.20	6.14	6.20	6.13	2.63	8.76
							Average	9.03
							Median	8.85
							Average of Mean and Median	8.94

NMF= Not Meaningful Figure

Notes:

- (1) Indicated dividend at 01/29/2021 divided by the average closing price of the last 60 trading days ending 01/29/2021 for each company.
- (2) From pages 2 through 14 of Document No. 4.
- (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., $4.09\% \times (1 + (1/2 \times 5.67\%)) = 4.21\%$.
- (5) Column 6 + column 7.
- (6) IDACORP Inc.'s results were excluded from the final average and median as they were more than two standard deviations below the proxy group mean.

Sources of Information: Value Line Investment Survey
www.zacks.com Downloaded on 01/29/2021
www.yahoo.com Downloaded on 01/29/2021
Bloomberg Professional Services

ALLIANT ENERGY NDQ-LNT			RECENT PRICE	P/E RATIO 22.5 (Trailing: 19.8 Median: 17.0)										RELATIVE P/E RATIO	DIV'D YLD	2.9%	VALUE LINE	
TIMELINESS 3 Lowered 7/3/20	High: 15.8	18.8	22.2	23.8	27.1	34.9	35.4	41.0	45.6	46.6	55.4	60.3						
SAFETY 2 Raised 9/28/07	Low: 10.2	14.6	17.0	20.9	21.9	25.0	27.1	30.4	36.6	36.8	40.8	37.7						
TECHNICAL 1 Raised 12/11/20	LEGENDS 0.90 x Dividends p sh divided by Interest Rate Relative Price Strength 2-for-1 split 5/16 Options: Yes Shaded area indicates recession																	
BETA .85 (1.00 = Market)	18-Month Target Price Range Low-High Midpoint (% to Mid) \$43-\$91 \$67 (25%)																	
2023-25 PROJECTIONS High Price Gain Ann'l Total Return Low 40 55 4% 4% 40 209 272 258 -3%																		
Institutional Decisions 4Q2019 1Q2020 2Q2020 Percent 24 to Buy 272 236 227 shares 16 to Sell 209 272 258 traded 8 Hld's(000) 188011 182284 186056																		
© VALUE LINE PUB. LLC 23-25 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 11930 11448 Avg. Indust. Rev. 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 Past 10 Yrs. Past 5 Yrs. Est'd '17-'19 to '23-'25 Revenues +5% +5% 4.0% "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.) Cal-endar 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 Cal-endar 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 +† Cal-endar 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																		
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																		
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																		
Company's Financial Strength A Stock's Price Stability 95 Price Growth Persistence 75 Earnings Predictability 90																		
(A) Diluted EPS. Excl. nonrecr. gains (losses) due. (Bc); '11, (1c); '12, (8c). Next earnings rpt. due mid-February. (B) Dividends historically paid in mid-Feb., May, Aug., and Nov. (D) 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.																		
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AMEREN NYSE-AEE										RECENT PRICE	P/E RATIO		RELATIVE P/E RATIO		DIV/D YLD		VALUE LINE																																																																																																																																																																																																																																
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TIMELINESS 2 Lowered 11/20/20 SAFETY 2 Raised 6/20/14 TECHNICAL 2 Raised 12/11/20 BETA .85 (1.00 = Market)										High: 35.3 Low: 19.5	29.9 23.1	34.1 25.5	35.3 28.4	37.3 30.6	48.1 35.2	46.8 37.3	54.1 41.5	64.9 51.4	70.9 51.9	80.9 63.1	87.7 58.7	Target Price Range 2023 2024 2025																																																																																																																																																																																																																											
18-Month Target Price Range Low-High Midpoint (% to Mid) \$63-\$127 \$95 (20%)																				% 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																																																																																																																																																																																																																													
2023-25 PROJECTIONS High Price Gain Ann'l Total Low 85 (+10%) 5% Return 60 (-25%) -3%										Institutional Decisions 4Q2019 1Q2020 2Q2020 to Buy 266 242 220 to Sell 265 273 301 Hld's(000) 186367 187833 196379										Percent 30 shares 20 traded 10																																																																																																																																																																																																																													
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)										<table border="1"> <thead> <tr> <th>2004</th><th>2005</th><th>2006</th><th>2007</th><th>2008</th><th>2009</th><th>2010</th><th>2011</th><th>2012</th><th>2013</th><th>2014</th><th>2015</th><th>2016</th><th>2017</th><th>2018</th><th>2019</th><th>2020</th><th>2021</th><th>© VALUE LINE PUB. LLC</th><th>23-25</th></tr> </thead> <tbody> <tr> <td>26.43</td><td>33.12</td><td>33.30</td><td>36.23</td><td>36.92</td><td>29.87</td><td>31.77</td><td>31.04</td><td>28.14</td><td>24.06</td><td>24.95</td><td>25.13</td><td>25.04</td><td>25.46</td><td>25.73</td><td>24.00</td><td>22.65</td><td>23.65</td><td>Revenues per sh</td><td>25.50</td></tr> <tr> <td>5.57</td><td>6.10</td><td>6.02</td><td>6.76</td><td>6.44</td><td>6.06</td><td>6.33</td><td>5.87</td><td>5.87</td><td>5.25</td><td>5.77</td><td>6.08</td><td>6.59</td><td>6.80</td><td>7.64</td><td>7.83</td><td>8.15</td><td>8.80</td><td>"Cash Flow" per sh</td><td>10.50</td></tr> <tr> <td>2.82</td><td>3.13</td><td>2.66</td><td>2.98</td><td>2.88</td><td>2.78</td><td>2.77</td><td>2.47</td><td>2.41</td><td>2.10</td><td>2.40</td><td>2.38</td><td>2.68</td><td>2.77</td><td>3.32</td><td>3.35</td><td>3.45</td><td>3.70</td><td>Earnings per sh ^A</td><td>4.50</td></tr> <tr> <td>2.54</td><td>2.54</td><td>2.54</td><td>2.54</td><td>2.54</td><td>1.54</td><td>1.54</td><td>1.54</td><td>1.60</td><td>1.60</td><td>1.61</td><td>1.66</td><td>1.72</td><td>1.78</td><td>1.85</td><td>1.92</td><td>2.00</td><td>2.09</td><td>Div'd Decl'd per sh ^B</td><td>2.45</td></tr> <tr> <td>4.13</td><td>4.63</td><td>4.99</td><td>6.96</td><td>9.75</td><td>7.51</td><td>4.66</td><td>4.50</td><td>5.49</td><td>5.87</td><td>7.66</td><td>8.12</td><td>8.78</td><td>9.05</td><td>9.56</td><td>9.92</td><td>15.85</td><td>11.65</td><td>Cap'l Spending per sh</td><td>11.00</td></tr> <tr> <td>29.71</td><td>31.09</td><td>31.86</td><td>32.41</td><td>32.80</td><td>33.08</td><td>32.15</td><td>32.64</td><td>27.27</td><td>26.97</td><td>27.67</td><td>28.63</td><td>29.27</td><td>29.61</td><td>31.21</td><td>32.73</td><td>35.70</td><td>37.75</td><td>Book Value per sh ^C</td><td>44.50</td></tr> <tr> <td>195.20</td><td>204.70</td><td>206.60</td><td>208.30</td><td>212.30</td><td>237.40</td><td>240.40</td><td>242.60</td><td>242.63</td><td>242.63</td><td>242.63</td><td>242.63</td><td>242.63</td><td>242.63</td><td>244.50</td><td>246.20</td><td>254.00</td><td>258.00</td><td>Common Shs Outst'g ^D</td><td>270.00</td></tr> <tr> <td>16.3</td><td>16.7</td><td>19.4</td><td>17.4</td><td>14.2</td><td>9.3</td><td>9.7</td><td>11.9</td><td>13.4</td><td>16.5</td><td>16.7</td><td>17.5</td><td>18.3</td><td>20.6</td><td>18.3</td><td>22.1</td><td>22.6</td><td>22.6</td><td>Avg Ann'l P/E Ratio</td><td>16.0</td></tr> <tr> <td>.86</td><td>.89</td><td>1.05</td><td>.92</td><td>.85</td><td>.62</td><td>.62</td><td>.75</td><td>.85</td><td>.93</td><td>.88</td><td>.88</td><td>.96</td><td>1.04</td><td>.99</td><td>1.18</td><td>1.18</td><td>1.18</td><td>Relative P/E Ratio</td><td>.90</td></tr> <tr> <td>5.5%</td><td>4.9%</td><td>4.9%</td><td>4.9%</td><td>6.2%</td><td>6.0%</td><td>5.8%</td><td>5.3%</td><td>5.0%</td><td>4.6%</td><td>4.0%</td><td>3.5%</td><td>3.1%</td><td>3.0%</td><td>3.0%</td><td>2.6%</td><td>2.6%</td><td>2.6%</td><td>Avg Ann'l Div'd Yield</td><td>3.4%</td></tr> </tbody> </table>										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	1.54	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	22.6	22.6	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	1.18	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%	3.5%	3.1%	3.0%	3.0%	2.6%	2.6%	2.6%	Avg Ann'l Div'd Yield	3.4%	Bold figures are Value Line estimates	
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25																																																																																																																																																																																																																														
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5.5%	4.9%	4.9%	4.9%	6.2%	6.0%	5.8%	5.3%	5.0%	4.6%	4.0%	3.5%	3.1%	3.0%	3.0%	2.6%	2.6%	2.6%	Avg Ann'l Div'd Yield	3.4%																																																																																																																																																																																																																														
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. Pkgs. per KWH (c) 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										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.																																																																																																																																																																																																																													
ANNUAL RATES of change (per sh) 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%										QUARTERLY REVENUES (\$ mill.) Cal-endar 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										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%.																																																																																																																																																																																																																													
EARNINGS PER SHARE ^A Cal-endar 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										QUARTERLY DIVIDENDS PAID ^B Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2016 .425 .425 .425 .44 1.72 2017 .44 .44 .44 .45 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%.																																																																																																																																																																																																																													
Next egs. report due mid-Feb. (B) Div'ds pd. late Mar., June, Sept., & Dec. ■ Div'd reinv. plan avail. (C) Incl. discng. in '19: \$5.70/sh. (D) In mill. (E) Rate base: Orig. cost depr. Rate										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 in-										tervenors 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. <i>Paul E. Debbas, CFA December 11, 2020</i>																																																																																																																																																																																																																													
(A) Dil. EPS. Excl. nonrec. gain (losses): '05, (11c); '10, (\$2.19); '11, (32c); '12, (\$6.42); '17, (63c); gain (loss) from disc. ops.: '13, (92c); '15, 21c. '17 EPS don't sum due to rounding.										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 85 Price Growth Persistence 90 Earnings Predictability 90																																																																																																																																																																																																																													

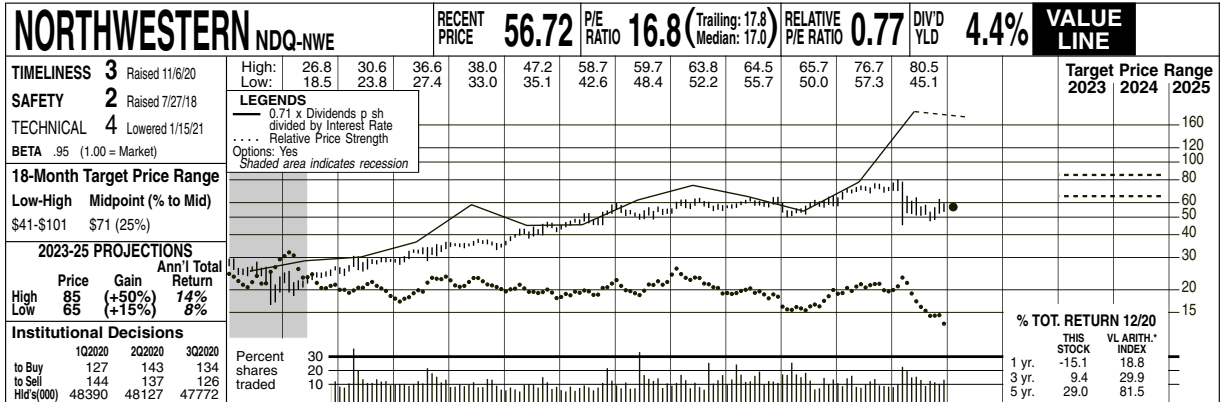
DUKE ENERGY NYSE-DUK		RECENT PRICE	P/E RATIO		RELATIVE P/E RATIO		DIV/D YLD		VALUE LINE										
		93.82	17.9	(Trailing: 18.7 Median: 18.0)	0.94	4.2%													
TIMELINESS — Suspended 11/13/20	High: 53.8 Low: 35.2	55.8 46.4	66.4 50.6	71.1 59.6	75.5 64.2	87.3 67.1	90.0 65.5	87.8 70.2	91.8 76.1	91.4 72.0	97.4 82.5	103.8 62.1	Target Price Range 2023 2024 2025						
SAFETY 2 New 6/1/07	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																		
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 High Price 120 Gain (+30%) 10% Ann'l Total Return 3% Low Price 90 Gain (-5%) 3%																			
Institutional Decisions 4Q2019 1Q2020 2Q2020 to Buy 806 682 699 to Sell 557 723 666 Hlds(000) 476731 473369 471851 Percent 15 shares 10 traded 5																			
2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021																			
--	--	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	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		17.7	Avg Ann'l P/E Ratio	17.5
--	--	.85	1.04	.89	.81	.87	1.11	.98	.94	9.2	1.12	1.00	1.05	1.05	1.05	1.05	1.05	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%	4.5%	4.2%	4.5%	Avg Ann'l Div'd Yield	4.0%
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. Rev. per KWH (c) 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																			
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 <i>The Wall Street Journal</i> 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 <i>Journal's</i> report). The stock's Timeliness rank is suspended due to the takeover speculation.																			
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																			
ANNUAL RATES Past 10 Yrs. Past 5 Yrs. Est'd '17-'19 to '23-'25 Revenues 1.0% 1.0% 5% "Cash Flow" 3.5% 6.0% 5.0% Earnings 3.0% 2.5% 5.0% Dividends 3.0% 3.0% 2.5% Book Value 2.0% 1.0% 2.5%																			
QUARTERLY REVENUES (\$ mill.) Cal-endar 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																			
EARNINGS PER SHARE A Cal-endar 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																			
QUARTERLY DIVIDENDS PAID B Cal-endar 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																			
Company's Financial Strength A Stock's Price Stability 90 Price Growth Persistence 40 Earnings Predictability 90																			

(A) Dil. EPS. Excl. nonrec. losses: '12, 70c; '13, 24c; '14, 67c; '17, 15c; '18, 41c; '20, \$2.21; losses on disc. ops.: '14, 80c; '16, 60c; '18 EPS don't sum due to rounding. Next eps. 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.

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ENTERGY CORP. NYSE-ETR										RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE																
TIMELINESS 3 Raised 12/26/18 SAFETY 2 Raised 12/13/19 TECHNICAL 3 Raised 12/11/20 BETA .95 (1.00 = Market)										108.85	18.4 (Trailing: 15.8 Median: 13.0)	0.88	3.5%																	
18-Month Target Price Range Low-High Midpoint (% to Mid) \$82-\$181 \$132 (20%)										High: 86.6 Low: 59.9	84.3 68.7	74.5 57.6	74.5 61.6	72.6 60.2	92.0 60.4	90.3 61.3	82.1 65.4	87.9 69.6	90.8 71.9	122.1 83.2	135.5 75.2	Target Price Range 2023 2024 2025								
2023-25 PROJECTIONS High Price 140 Low Price 105 Ann'l Total Gain (+30%) Return 10% Ann'l Total Gain (-5%) Return 3%																				% TOT. RETURN 11/20 THIS STOCK -3.8 VL ARITH. INDEX 15.7 1 yr. 40.3 3 yr. 99.5 5 yr. 64.0										
Institutional Decisions 4Q2019 1Q2020 2Q2020 to Buy 348 281 283 to Sell 242 349 315 Hlds(000) 176392 172217 173722 Percent shares traded 30 20 10										MARKET CAP: \$22 billion (Large Cap)										© VALUE LINE PUB. LLC 23-25										
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	REVENUES PER SH		2021	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	50.50	Revenues per sh	50.50	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	18.05	"Cash Flow" per sh	21.00	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	5.95	Earnings per sh A	7.00	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	3.86	Div'd Decl'd per sh B = †	4.55	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	18.70	Cap'l Spending per sh C	19.00	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	56.30	Book Value per sh C	64.50	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	204.00	Common Shs Outst'g D	210.00	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	13.8	16.5	16.5	Avg Ann'l P/E Ratio	17.5	17.5									
.80	.87	.77	1.02	1.00	.80	.74	.57	.71	.74	.68	.63	.57	.75	.75	.88	.88	.88	.88	Relative P/E Ratio	.95	.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%	4.4%	3.5%	4.4%	Avg Ann'l Div'd Yield	3.7%	3.7%									
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)										11488	11229	10302	11391	12495	11513	10846	11074	11009	10879	10150	10300	10600	10600	10600	10600	10600	Revenues (\$mill)	10600	10600	
Leases, Uncapitalized Annual rentals \$62.1 mill. Pension Assets-12/19 \$6271.2 mill. Oblig \$8406.2 mill.										1270.3	1367.4	1091.9	904.5	1060.0	1061.2	1249.8	950.7	1092.1	1258.2	1155	1225	1480	1480	1480	1480	1480	Net Profit (\$mill)	1480	1480	
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.										32.7%	17.3%	13.0%	26.7%	37.8%	2.2%	11.3%	1.8%	17.5%	16.7%	14.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	Income Tax Rate	22.0%	22.0%	
Common Stock 200,232,522 shs. as of 10/30/20 MARKET CAP: \$22 billion (Large Cap)										7.4%	8.9%	11.9%	10.1%	9.3%	7.4%	8.1%	14.7%	17.5%	16.7%	18.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	AFUDC % to Net Profit	12.0%	12.0%	
ELECTRIC OPERATING STATISTICS 2017 2018 2019 % Change Retail Sales (KWH) +2 +4.1 -1.4 Avg. Indust. Use (MWH) 1034 946 1070 Avg. Indust. Pkgs. per KWH(c) 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										56.3%	52.2%	55.8%	55.1%	54.9%	57.8%	63.6%	63.6%	63.2%	62.0%	64.5%	64.0%	60.5%	63.2%	62.0%	64.5%	64.0%	64.0%	Long-Term Debt Ratio	60.5%	60.5%
Fixed Charge Cov. (%) 169 95 165										42.1%	46.4%	42.9%	43.6%	43.8%	40.8%	35.5%	35.5%	35.9%	37.1%	35.0%	35.0%	35.0%	35.9%	37.1%	35.0%	35.0%	Common Equity Ratio	38.5%	38.5%	
ANNUAL RATES Past 10 Yrs. Past 5 Yrs. Est'd '17-'19 of change (per sh) -5% -2.0% -2.5% Revenues +3.0% +4.0% +4.0% "Cash Flow" -5% -5% -5% Earnings +2.5% +1.5% +4.0% Dividends 1.0% -2.5% 5.0% Book Value										20166	19324	21432	22109	22842	22714	22777	22528	24602	27557	30900	32725	35100	35100	35100	35100	35100	Total Capital (\$mill)	35100	35100	
QUARTERLY REVENUES (\$ mill.) Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year										23848	25609	27299	27882	28723	27824	27921	29664	31974	35183	37075	38475	42400	42400	42400	42400	42400	Net Plant (\$mill)	42400	42400	
EARNINGS PER SHARE A Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year										7.7%	8.5%	6.4%	5.4%	6.0%	6.0%	6.9%	5.7%	5.8%	5.9%	5.0%	5.0%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	Return on Total Cap'l	5.5%	5.5%
QUARTERLY DIVIDENDS PAID B = † Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year										14.4%	14.8%	11.5%	9.1%	10.3%	11.1%	15.1%	11.6%	12.0%	12.0%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	Return on Shr. Equity	10.5%	10.5%
QUARTERLY REVENUES (\$ mill.) 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										7.6%	8.4%	5.2%	3.0%	4.4%	4.8%	7.7%	3.9%	4.9%	5.2%	3.5%	3.5%	4.0%	4.9%	5.2%	3.5%	3.5%	3.5%	Retained to Com Eq	11.0%	11.0%
EARNINGS PER SHARE A 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										49%	45%	56%	68%	58%	58%	50%	68%	61%	58%	66%	65%	66%	66%	66%	66%	66%	66%	All Div'ds to Net Prof	66%	66%
QUARTERLY DIVIDENDS PAID B = † 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										WORLDWIDE OPERATING STATISTICS 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										
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																				
FOOTNOTES: (A) Diluted EPS. Excl. nonrec. losses: '05, 21c; '12, \$1.26; '13, \$1.14; '14, 56c; '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. (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.										TO SUBSCRIBE CALL 1-800-VALUELINE																				



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	24.00	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	6.80	7.25	"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	3.15	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	2.48	Div'd Decl'd per sh B = †	2.75
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	8.75	Cap'l Spending per sh C	7.50
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	41.10	42.40	Book Value per sh C	45.75
35.60	35.79	35.97	38.97	35.93	36.00	36.23	36.28	37.22	38.75	46.91	48.17	48.33	49.37	50.32	50.45	50.60	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	18.9	18.9	Avg Ann'l P/E Ratio	18.5
--	.91	1.40	1.15	.84	.77	.82	.79	1.00	.95	.85	.93	.90	.90	.91	1.06	.95	.95	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%	4.0%	4.0%	Avg Ann'l Div'd Yield	3.7%

CAPITAL STRUCTURE as of 9/30/20
 Total Debt \$2307.0 mill. Due in 5 Yrs \$548.1 mill.
 LT Debt \$2204.4 mill. LT Interest \$80.5 mill.
 Incl. \$15.5 mill. capitalized leases.
 (LT interest earned: 2.8x)

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

Pfd Stock None

Common Stock 50,581,973 shs.
 as of 10/16/20

MARKET CAP: \$2.9 billion (Mid Cap)

ELECTRIC OPERATING STATISTICS			
	2017	2018	2019
% Change Retail Sales (KWH)	+3.8	+2.9	+4.6
Avg. Indust. Use (MWH)	30967	34573	37608
Avg. Indust. Pkgs. per KWH (c)	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)	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%

Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
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	280.6	329.7	1215
2021	355	285	290	335	1265

Cal-endar	EARNINGS PER SHARE A				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
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	.58	1.14	3.15
2021	1.15	.50	.65	1.20	3.50

Cal-endar	QUARTERLY DIVIDENDS PAID B = †				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
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	.60	2.40
2021					

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 almost certainly declined in 2020. Mild weather and unusual costs hurt the first-quarter comparison. Over the remainder of the year, the utility was affected by the slump in commercial and industrial kilowatt-hour sales resulting from the weak economy (partly offset by higher residential volume) and some coronavirus-related costs. NorthWestern stated that it planned to book a pretax charge of \$9.5 million against fourth-quarter results because the Montana commission disallowed some purchased-power costs. We are including this in our earnings presentation even though the company is excluding it from its targeted range of \$3.30-\$3.45 a share. **We expect earnings in 2021 to approach the 2019 tally.** We figure NorthWestern will have a more-typical showing in the March quarter, lower coronavirus-related effects for the full-year, and no charge for the disallowance in the December period. Our profit estimate of \$3.50 a share is at the midpoint of the company's preliminary guidance of \$3.40-\$3.60. **NorthWestern is adding generating capacity.** The company is building a 60-

megawatt gas-fired plant in South Dakota that is scheduled to be on line in late 2021 at a cost of \$80 million. The utility plans to add another 30-40 mw of capacity in 2023 at an expected cost of \$60 million. NorthWestern canceled plans to purchase a stake in a coal-fired plant because obtaining regulatory approval appeared unlikely. The utility has a request for proposals pending in Montana, and expects to announce the winning bidder(s) in the current quarter.

We think the board of directors will raise the dividend in the current quarter. We estimate the annual disbursement will be hiked by \$0.08 a share (3.3%). This would be a slightly smaller increase than in recent years. Based on our estimates for earnings and dividends this year, the payout ratio would be at the upper end of NorthWestern's goal of 60%-70%.

The dividend yield of NorthWestern stock is somewhat above the utility average. Total return potential is attractive for the year ahead and respectable for the 3- to 5-year period.

Paul E. Debbas, CFA January 22, 2021

(A) Diluted EPS. Excl. gain (loss) on disc. ops.: '05, (6c); '06, 1c; nonrec. gains: '12, 39c net; '15, 27c; '18, 52c; '19, 45c. '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 70 Price Growth Persistence 90 Earnings Predictability 85

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OGE ENERGY CORP. NYSE-OGE										RECENT PRICE	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	High: 18.9	23.1	28.6	30.1	40.0	39.3	36.5	34.2	37.4	41.8	45.8	46.4	Target Price Range																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
SAFETY 2 Lowered 12/18/15	Low: 9.9	16.9	20.3	25.1	27.7	32.8	24.2	23.4	32.6	29.6	38.0	23.0	2023	2024	2025																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
TECHNICAL 4 Raised 11/20/20	LEGENDS 0.76 x Dividends p sh divided by Interest Rate Relative Price Strength 2-for-1 split 7/13 Options: Yes Shaded area indicates recession																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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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. </td> </tr> <tr> <td colspan="16"> Fixed Charge Cov. (%) 315 292 335 </td> </tr> <tr> <td colspan="16"> ANNUAL RATES <table border="1"> <thead> <tr> <th>Past 10 Yrs.</th> <th>Past 5 Yrs.</th> <th>Est'd '17-'19 to '23-'25</th> </tr> </thead> <tbody> <tr> <td>Revenues</td> <td>-5.0%</td> <td>-5.5%</td> <td>3.5%</td> </tr> <tr> <td>"Cash Flow"</td> <td>4.0%</td> <td>1.0%</td> <td>6.0%</td> </tr> <tr> <td>Earnings</td> <td>5.0%</td> <td>2.0%</td> <td>3.0%</td> </tr> <tr> <td>Dividends</td> <td>7.0%</td> <td>10.0%</td> <td>6.0%</td> </tr> <tr> <td>Book Value</td> <td>7.0%</td> <td>5.5%</td> <td>.5%</td> </tr> </tbody> </table> </td> </tr> <tr> <td colspan="16"> QUARTERLY REVENUES (\$ mill.) <table border="1"> <thead> <tr> <th>Cal-endar</th> <th>Mar.31</th> <th>Jun.30</th> <th>Sep.30</th> <th>Dec.31</th> <th>Full Year</th> </tr> </thead> <tbody> <tr> <td>2017</td> <td>456.0</td> <td>586.4</td> <td>716.8</td> <td>501.9</td> <td>2261.1</td> </tr> <tr> <td>2018</td> <td>492.7</td> <td>567.0</td> <td>698.8</td> <td>511.8</td> <td>2270.3</td> </tr> <tr> <td>2019</td> <td>490.0</td> <td>513.7</td> <td>755.4</td> <td>472.5</td> <td>2231.6</td> </tr> <tr> <td>2020</td> <td>431.3</td> <td>503.5</td> <td>702.1</td> <td>463.9</td> <td>2100</td> </tr> <tr> <td>2021</td> <td>500</td> <td>550</td> <td>750</td> <td>500</td> <td>2300</td> </tr> </tbody> </table> </td> </tr> <tr> <td colspan="16"> EARNINGS PER SHARE A <table border="1"> <thead> <tr> <th>Cal-endar</th> <th>Mar.31</th> <th>Jun.30</th> <th>Sep.30</th> <th>Dec.31</th> <th>Full Year</th> </tr> </thead> <tbody> <tr> <td>2017</td> <td>.18</td> <td>.52</td> <td>.92</td> <td>.30</td> <td>1.92</td> </tr> <tr> <td>2018</td> <td>.27</td> <td>.55</td> <td>1.02</td> <td>.27</td> <td>2.12</td> </tr> <tr> <td>2019</td> <td>.24</td> <td>.50</td> <td>1.25</td> <td>.26</td> <td>2.24</td> </tr> <tr> <td>2020</td> <td>.23</td> <td>.51</td> <td>1.04</td> <td>.27</td> <td>2.05</td> </tr> <tr> <td>2021</td> <td>.25</td> <td>.55</td> <td>1.20</td> <td>.25</td> <td>2.25</td> </tr> </tbody> </table> </td> </tr> <tr> <td colspan="16"> QUARTERLY DIVIDENDS PAID B <table border="1"> <thead> <tr> <th>Cal-endar</th> <th>Mar.31</th> <th>Jun.30</th> <th>Sep.30</th> <th>Dec.31</th> <th>Full Year</th> </tr> </thead> <tbody> <tr> <td>2016</td> <td>.275</td> <td>.275</td> <td>.275</td> <td>.3025</td> <td>1.13</td> </tr> <tr> <td>2017</td> <td>.3025</td> <td>.3025</td> <td>.3025</td> <td>.3325</td> <td>1.24</td> </tr> <tr> <td>2018</td> <td>.3325</td> <td>.3325</td> <td>.3325</td> <td>.365</td> <td>1.36</td> </tr> <tr> <td>2019</td> <td>.365</td> <td>.365</td> <td>.365</td> <td>.3875</td> <td>1.48</td> </tr> <tr> <td>2020</td> <td>.3875</td> <td>.3875</td> <td>.3875</td> <td>.4025</td> <td></td> </tr> </tbody> </table> </td> </tr> <tr> <td colspan="16"> OG 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. </td> </tr> <tr> <td colspan="16"> 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. </td> </tr> <tr> <td colspan="16"> 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. </td> </tr> <tr> <td colspan="16"> 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. </td> </tr> <tr> <td colspan="16"> 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. </td> </tr> <tr> <td colspan="16"> 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. </td> </tr> <tr> <td colspan="16"> 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. </td> </tr> <tr> <td colspan="16"> <i>Paul E. Debbas, CFA December 11, 2020</i> </td> </tr> <tr> <td colspan="16"> Company's Financial Strength A Stock's Price Stability 80 Price Growth Persistence 35 Earnings Predictability 85 </td> </tr> </tbody> </table>																2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. 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Rev. per KWH (c)	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	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.																Fixed Charge Cov. (%) 315 292 335																ANNUAL RATES <table border="1"> <thead> <tr> <th>Past 10 Yrs.</th> <th>Past 5 Yrs.</th> <th>Est'd '17-'19 to '23-'25</th> </tr> </thead> <tbody> <tr> <td>Revenues</td> <td>-5.0%</td> <td>-5.5%</td> <td>3.5%</td> </tr> <tr> <td>"Cash Flow"</td> <td>4.0%</td> <td>1.0%</td> <td>6.0%</td> </tr> <tr> <td>Earnings</td> <td>5.0%</td> <td>2.0%</td> <td>3.0%</td> </tr> <tr> <td>Dividends</td> <td>7.0%</td> <td>10.0%</td> <td>6.0%</td> </tr> <tr> <td>Book Value</td> <td>7.0%</td> <td>5.5%</td> <td>.5%</td> </tr> </tbody> </table>																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%	QUARTERLY REVENUES (\$ mill.) <table border="1"> <thead> <tr> <th>Cal-endar</th> <th>Mar.31</th> <th>Jun.30</th> <th>Sep.30</th> <th>Dec.31</th> <th>Full Year</th> </tr> </thead> <tbody> <tr> <td>2017</td> <td>456.0</td> <td>586.4</td> <td>716.8</td> <td>501.9</td> <td>2261.1</td> </tr> <tr> <td>2018</td> <td>492.7</td> <td>567.0</td> <td>698.8</td> <td>511.8</td> <td>2270.3</td> </tr> <tr> <td>2019</td> <td>490.0</td> <td>513.7</td> <td>755.4</td> <td>472.5</td> <td>2231.6</td> </tr> <tr> <td>2020</td> <td>431.3</td> <td>503.5</td> <td>702.1</td> <td>463.9</td> <td>2100</td> </tr> <tr> <td>2021</td> <td>500</td> <td>550</td> <td>750</td> <td>500</td> <td>2300</td> </tr> </tbody> </table>																Cal-endar	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	EARNINGS PER SHARE A <table border="1"> <thead> <tr> <th>Cal-endar</th> <th>Mar.31</th> <th>Jun.30</th> <th>Sep.30</th> <th>Dec.31</th> <th>Full Year</th> </tr> </thead> <tbody> <tr> <td>2017</td> <td>.18</td> <td>.52</td> <td>.92</td> <td>.30</td> <td>1.92</td> </tr> <tr> <td>2018</td> <td>.27</td> <td>.55</td> <td>1.02</td> <td>.27</td> <td>2.12</td> </tr> <tr> <td>2019</td> <td>.24</td> <td>.50</td> <td>1.25</td> <td>.26</td> <td>2.24</td> </tr> <tr> <td>2020</td> <td>.23</td> <td>.51</td> <td>1.04</td> <td>.27</td> <td>2.05</td> </tr> <tr> <td>2021</td> <td>.25</td> <td>.55</td> <td>1.20</td> <td>.25</td> <td>2.25</td> </tr> </tbody> </table>																Cal-endar	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	QUARTERLY DIVIDENDS PAID B <table border="1"> <thead> <tr> <th>Cal-endar</th> <th>Mar.31</th> <th>Jun.30</th> <th>Sep.30</th> <th>Dec.31</th> <th>Full Year</th> </tr> </thead> <tbody> <tr> <td>2016</td> <td>.275</td> <td>.275</td> <td>.275</td> <td>.3025</td> <td>1.13</td> </tr> <tr> <td>2017</td> <td>.3025</td> <td>.3025</td> <td>.3025</td> <td>.3325</td> <td>1.24</td> </tr> <tr> <td>2018</td> <td>.3325</td> <td>.3325</td> <td>.3325</td> <td>.365</td> <td>1.36</td> </tr> <tr> <td>2019</td> <td>.365</td> <td>.365</td> <td>.365</td> <td>.3875</td> <td>1.48</td> </tr> <tr> <td>2020</td> <td>.3875</td> <td>.3875</td> <td>.3875</td> <td>.4025</td> <td></td> </tr> </tbody> </table>																Cal-endar	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		OG 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.																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.																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.																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.																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.																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.																<i>Paul E. Debbas, CFA December 11, 2020</i>																Company's Financial Strength A Stock's Price Stability 80 Price Growth Persistence 35 Earnings Predictability 85															
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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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MARKET CAP: \$6.5 billion (Large Cap) <table border="1"> <thead> <tr> <th>2017</th> <th>2018</th> <th>2019</th> </tr> </thead> <tbody> <tr> <td>3716.9</td> <td>3915.9</td> <td>3671.2</td> </tr> <tr> <td>295.3</td> <td>342.9</td> <td>355.0</td> </tr> <tr> <td>34.9%</td> <td>30.7%</td> <td>26.0%</td> </tr> <tr> <td>5.7%</td> <td>9.0%</td> <td>2.7%</td> </tr> <tr> <td>50.8%</td> <td>51.6%</td> <td>50.7%</td> </tr> <tr> <td>49.2%</td> <td>48.4%</td> <td>49.3%</td> </tr> <tr> <td>4652.5</td> <td>5300.4</td> <td>5615.8</td> </tr> <tr> <td>6464.4</td> <td>7474.0</td> <td>8344.8</td> </tr> <tr> <td>7.8%</td> <td>7.8%</td> <td>7.7%</td> </tr> <tr> <td>12.9%</td> <td>13.4%</td> <td>12.8%</td> </tr> <tr> <td>12.9%</td> <td>13.4%</td> <td>12.8%</td> </tr> <tr> <td>6.7%</td> <td>7.7%</td> <td>7.2%</td> </tr> <tr> <td>48%</td> <td>43%</td> <td>44%</td> </tr> </tbody> </table>																2017	2018	2019	3716.9	3915.9	3671.2	295.3	342.9	355.0	34.9%	30.7%	26.0%	5.7%	9.0%	2.7%	50.8%	51.6%	50.7%	49.2%	48.4%	49.3%	4652.5	5300.4	5615.8	6464.4	7474.0	8344.8	7.8%	7.8%	7.7%	12.9%	13.4%	12.8%	12.9%	13.4%	12.8%	6.7%	7.7%	7.2%	48%	43%	44%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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OG 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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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(A) Diluted EPS. Excl. nonrecurring gain (losses): '04, (3c); '15, (33c); '17, \$1.18; '19, (8c); '20, (\$2.95); gains on dividend ops.: '05, 25c; '06, 20c; '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.

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OTTER TAIL CORP. NDQ-OTTR										RECENT PRICE	P/E RATIO					RELATIVE P/E RATIO	DIV'D YLD	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 High Price Gain Ann'l Total Low 45 60 (+50%) 14% Return 7% Institutional Decisions 4Q2019 1Q2020 2Q2020 to Buy 85 78 75 to Sell 69 84 82 Hlds(000) 18484 18228 18869 Percent 9 shares 6 traded 3										39.82	16.4	0.78	3.9%	Target Price Range 2023 2024 2025					
High: 25.4 25.4 23.5 25.3 31.9 32.7 33.4 42.6 48.7 Low: 15.5 18.2 17.5 20.7 25.2 26.5 24.8 25.8 35.7 51.9 57.7 56.9 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					% 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				
2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021										© VALUE LINE PUB. LLC 23-25									
30.45 35.59 37.43 41.50 37.06 29.03 31.08 29.86 23.76 24.63 21.48 20.80 20.42 21.47 23.10 22.90 21.20 22.85 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 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 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 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 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 28.98 29.40 29.52 29.85 35.38 35.81 36.00 36.10 36.17 36.27 37.22 38.86 39.35 39.56 39.66 40.16 41.50 41.60 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 23.5 .91 .82 .93 1.01 1.81 2.08 3.51 2.98 1.38 1.19 .99 9.2 1.06 1.11 1.20 1.26 4.2% 4.1% 3.9% 3.5% 5.4% 5.7% 5.6% 5.2% 4.1% 4.1% 4.3% 3.9% 3.1% 2.9% 2.7%										Revenues per sh 26.75 "Cash Flow" per sh 5.25 Earnings per sh ^A 3.00 Div'd Decl'd per sh ^B 1.80 Cap'l Spending per sh 3.00 Book Value per sh ^C 24.50 Common Shs Outst'g ^D 42.00 Avg Ann'l P/E Ratio 17.0 Relative P/E Ratio .95 Avg Ann'l Div'd Yield 3.5%									
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)										1119.1 1077.9 859.2 893.3 799.3 779.8 803.5 849.4 916.4 919.5 880 950 13.6 16.4 39.0 50.2 56.9 58.6 62.0 73.9 82.3 86.8 95.0 105					Revenues (\$mill) 1125 Net Profit (\$mill) 125 Income Tax Rate 18.0% AFUDC % to Net Profit 2.0% Long-Term Debt Ratio 45.5% Common Equity Ratio 54.5% Total Capital (\$mill) 1900 Net Plant (\$mill) 2275				
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)										40.2% 44.6% 44.0% 42.1% 46.5% 42.4% 43.0% 41.3% 44.7% 46.9% 42.0% 45.0% 58.4% 54.0% 54.4% 57.9% 53.5% 57.6% 57.0% 58.7% 55.3% 53.1% 58.0% 55.0% 1083.3 1058.9 959.2 924.4 1071.3 1051.0 1175.4 1187.3 1318.9 1471.1 1490 1640 1108.7 1077.5 1049.5 1167.0 1268.5 1387.8 1477.2 1539.6 1581.1 1753.8 2050 2120 2.7% 3.2% 5.7% 6.8% 6.1% 6.8% 6.5% 7.3% 7.3% 7.0% 7.5% 7.5% 2.1% 2.8% 7.3% 9.4% 9.9% 9.7% 9.3% 10.6% 11.3% 11.1% 11.0% 11.5% 2.0% 2.7% 7.3% 9.3% 9.9% 9.7% 9.3% 10.6% 11.3% 11.1% 11.0% 11.5%					15.0% 16.7% 18.0% 18.0% 4.9% 8.0% 4.0% 45.0% 45.0% 55.0% 55.0% 1490 1640 2050 2120 7.3% 7.0% 7.5% 11.3% 11.1% 11.0% 11.3% 11.1% 11.0% 4.0% 4.0% 4.0% 64% 63%				
ELECTRIC OPERATING STATISTICS 2017 2018 2019 % Change Retail Sales (KWH) +1.4 +3.4 -2 Avg. Indust. Use (MWH) N/A N/A N/A Avg. Indust. Rev. 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										608 409 407					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%.				
ANNUAL RATES Past 10 Yrs. Past 5 Yrs. Est'd '17-'19 of change (per sh) -4.5% -5% 3.0% Revenues "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%										2017 2018 2019 2020 2021 214.1 212.1 216.5 206.7 849.4 241.2 226.3 227.7 221.2 916.4 246.0 229.2 228.6 215.7 919.5 234.7 192.8 235.8 216.7 880 250 235 245 220 950					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.				
QUARTERLY REVENUES (\$ mill.) Cal-endar 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										2017 2018 2019 2020 2021 .49 .42 .45 .50 1.86 .66 .47 .58 .35 2.06 .66 .39 .62 .51 2.17 .60 .42 .87 .41 2.30 .68 .47 .80 .50 2.45					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.				
EARNINGS PER SHARE ^A Cal-endar 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										2016 2017 2018 2019 2020 .3125 .32 .32 .32 1.25 .335 .335 .335 .335 1.28 .35 .35 .35 .35 1.34 .37 .37 .37 1.40					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.				
QUARTERLY DIVIDENDS PAID ^B Cal-endar 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										2016 2017 2018 2019 2020 .3125 .32 .32 .32 1.25 .335 .335 .335 .335 1.28 .35 .35 .35 .35 1.34 .37 .37 .37					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%),				
(A) Dil. EPS. Excl. nonrec. gains (loss): '10, (44c); '11, 26c; '13, 2c; gains (losses) from disc. ops.: '04, 8c; '05, 33c; '06, 1c; '11, (\$1.11); '12, (\$1.22); '13, 2c; '14, 2c; '15, 2c; '16, 1c; '17, 1c. '19 EPS don't sum due to rmdg. 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. ln '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									

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PINNACLE WEST NYSE-PNW										RECENT PRICE	P/E RATIO		RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE
TIMELINESS 2 Lowered 11/27/20 SAFETY 1 Raised 5/3/13 TECHNICAL 3 Lowered 1/8/21 BETA .90 (1.00 = Market)										76.69	16.1 (Trailing: 13.6 Median: 16.0)		0.74	4.5%	
18-Month Target Price Range Low-High Midpoint (% to Mid) \$57-\$134 \$96 (25%)										High: 38.0 42.7 48.9 54.7 61.9 71.1 73.3 82.8 92.5 92.6 99.8 105.5 Low: 22.3 32.3 37.3 45.9 51.5 51.2 56.0 62.5 75.8 73.4 81.6 60.1		Target Price Range 2023 2024 2025			
2023-25 PROJECTIONS Price Gain Ann'l Total High 120 (+55%) 15% Low 100 (+30%) 11%										High 120 (+55%) 15% Low 100 (+30%) 11%					
Institutional Decisions 1Q2020 2Q2020 3Q2020 to Buy 207 229 237 to Sell 277 245 229 Hi's(000) 95773 95025 93145										Percent 30 shares 20 traded 10					
2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021															
REVENUES 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 31.75 32.30 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 11.65 11.90 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 5.10 5.15 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 3.23 3.42 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 11.65 15.20 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 50.10 51.70 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										34.75 34.75 13.25 13.25 6.00 6.00 4.05 4.05 11.75 11.75 58.00 58.00 118.00 118.00		Revenues per sh "Cash Flow" per sh Earnings per sh ^A Div'd Decl'd per sh ^B			
AVG ANNUAL RATIO 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 16.0 .83 1.02 .74 .79 .97 .91 .80 .92 .91 .86 .84 8.1 .98 .97 .96 1.03 .80 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% 4.0%										18.0 18.0 1.00 1.00 3.7% 3.7%		Avg Ann'l P/E Ratio Relative P/E Ratio Avg Ann'l Div'd Yield			
CAPITAL STRUCTURE as of 9/30/20 Total Debt \$6374.3 mill. Due in 5 Yrs \$1573.0 mill. LT Debt \$6316.4 mill. LT Interest \$226.5 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.										3263.6 3241.4 3301.8 3454.6 3491.6 3495.4 3498.7 3565.3 3691.2 3471.2 3575 3650 330.4 328.2 387.4 406.1 397.6 437.3 442.0 497.8 511.0 538.3 575 585		4100 4100 710 710			
MARKET CAP: \$8.6 billion (Large Cap)															
ELECTRIC OPERATING STATISTICS 2017 2018 2019 % Change Retail Sales (KWH) - .3 -3 Avg. Indust. Use (MWH) 620 662 714 Avg. Indust. Pkgs. per KWH (c) 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										425 318 286					
ANNUAL RATES Past 10 Yrs. Past 5 Yrs. Est'd '17-'19 of change (per sh) 5% 5% 1.5% Revenues 2.5% 6.0% 3.5% "Cash Flow" 6.5% 5.0% 4.5% Earnings 3.0% 3.5% 6.0% Dividends 3.0% 4.0% 3.5% Book Value															
QUARTERLY REVENUES (\$ mill.) Cal-endar 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 1254.5 729 3575 2021 750 900 1250 750 3650															
EARNINGS PER SHARE ^A Cal-endar 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 3.07 .05 5.10 2021 .15 1.50 3.15 .35 5.15															
QUARTERLY DIVIDENDS PAID ^B Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 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 .83 3.18 2021															
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 revised its general rate case. Arizona Public Service originally filed for an increase of \$184 million (5.6%), based on a return on equity of 10.15% and a common-equity ratio of 54.7%. The utility reduced its requested hike to \$169 million (5.1%), based on an ROE of 10% and the same common-equity ratio. APS is trying to place capital investments in the rate base and obtain regulatory mechanism to track and recover certain expenses, such as property taxes. The staff of the Arizona Corporation Commission recommended an increase of \$59.8 million (1.8%), based on a 9.4% ROE and the same common-equity ratio. There is no statutory time frame for an order, and the case has been delayed several months. Perhaps an increase will go into effect as early as mid-2021. There is always some risk surrounding rate cases, but the fact that two of the five commissioners are new to their positions adds uncertainty to the current proceedings.															
We raised our 2020 earnings estimate by \$0.15 a share, to \$5.10. The company's third-quarter tally was boosted significantly by a record-hot summer in APS' service area. In fact, upon reporting third-quarter profits, Pinnacle West raised its targeted range by \$0.20 a share, to \$4.95-\$5.15. The fourth-quarter comparison will almost certainly be materially negative due to some discretionary spending and the acceleration of some operating expenses from 2021 to 2020.															
We look for slightly higher profits this year. This is based on the assumption that a rate increase will be in effect by the start of the seasonally strong third quarter. However, APS benefited from favorable weather conditions in the second and third quarters of 2020, and we base our 2021 estimate on normal weather.															
The board of directors raised the annual dividend \$0.19 a share (6.1%) in the fourth quarter. This has been the growth rate of the disbursement in recent years. We think dividend hikes will continue at that level through 2023-2025.															
This timely stock is attractive for conservative income-oriented investors. The yield is above the utility average, and total return potential for the 18-month span and 3- to 5-year period are solid.															
Paul E. Debbas, CFA January 22, 2021															
Company's Financial Strength A+ Stock's Price Stability 90 Price Growth Persistence 65 Earnings Predictability 100															

(A) Diluted EPS. Excl. nonrec. gain (loss): '09, (\$1.45); '17, 8c; gains (losses) from discount. ops.: '05, (.36c); '06, 10c; '08, 28c; '09, (.13c); '10, 18c; '11, 10c; '12, (.5c). '19 EPS don't sum due to rounding. Next earnings report due late Feb. (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.

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PORTLAND GENERAL NYSE-POR										RECENT PRICE	P/E RATIO 27.7 (Trailing: 14.3 Median: 17.0)					RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE																																																																																																																																																																																																																										
TIMELINESS	4	Lowered 1/22/21	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																																																																																																																																																																																																																									
SAFETY	3	Lowered 9/4/20	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																																																																																																																																																																																																																													
TECHNICAL	4	Lowered 1/8/21	LEGENDS 0.73 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession																																																																																																																																																																																																																																									
BETA	.85	(1.00 = Market)	18-Month Target Price Range Low-High Midpoint (% to Mid) \$34-\$80 \$57 (35%)																																																																																																																																																																																																																																									
2023-25 PROJECTIONS High Price 65 Gain (+55%) Ann'l Total Return 15% Low Price 45 Gain (+5%) Ann'l Total Return 6%																																																																																																																																																																																																																																												
Institutional Decisions <table border="1"> <thead> <tr> <th>to Buy</th> <th>1Q2020</th> <th>2Q2020</th> <th>3Q2020</th> <th>Percent shares traded</th> </tr> </thead> <tbody> <tr> <td>132</td> <td>157</td> <td>147</td> <td>21</td> <td>14</td> </tr> <tr> <td>197</td> <td>158</td> <td>180</td> <td>14</td> <td>7</td> </tr> <tr> <td>86455</td> <td>90761</td> <td>81534</td> <td></td> <td></td> </tr> </tbody> </table>																	to Buy	1Q2020	2Q2020	3Q2020	Percent shares traded	132	157	147	21	14	197	158	180	14	7	86455	90761	81534																																																																																																																																																																																																										
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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's earnings almost certainly declined sharply in 2020. The reason was a large energy-trading loss in August. This hurt third-quarter and full-year profits by \$1.09 a share, and sent the September-period tally into the red. The company established a committee of board members to review its operations, and made some changes in personnel and its organizational structure as a result. The costs of these changes were not material, and PGE cut some expenses to offset part of the cost of the trading loss. Management is guiding Wall Street to the upper half of its earnings target of \$1.40-\$1.60 a share.																																																																																																																																																																																																																																												
We expect an earnings recovery this year. The energy-trading loss was limited to the incident in the third quarter of 2020, so we assume no recurrence of any such problems. We also expect the utility to benefit from a better economy in its service area. Renewable-energy investments are being recovered through a renewable adjustment clause. PGE's long-term goal for annual earnings growth is 4%-6%, using the 2019 tally as the base. We expect a dividend increase, too, as the																																																																																																																																																																																																																																												
company expects the trading loss will not affect this. A noteworthy capital project was completed in 2020, and another is on track for completion in 2021. PGE has a one-third stake in a 300-megawatt windfarm in a joint venture with NextEra Energy. (In conjunction with the project, the latter company will own 50 mw of solar capacity and 30 mw of battery of storage that are scheduled for completion by year-end.) The cost of PGE's share of the windfarm was \$160 million. The company is building an integrated operations center at an expected cost of \$200 million. This is scheduled for completion by yearend. Despite the trading loss, finances are sound. Interest coverage is adequate, and the common-equity ratio is healthy. PGE does not need to issue equity to finance its capital expenditures. PGE's Financial Strength rating is B++. This untimely stock's dividend yield is slightly above the utility average. The equity is noteworthy for its 18-month prospects, however, and offers respectable 3- to 5-year total return potential.																																																																																																																																																																																																																																												
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(A) Diluted EPS. Excl. nonrecurring losses: '13, 42c; '17, 19c. Next earnings report due mid-Feb. (B) Divs paid mid-Jan., Apr., July, and Oct. (C) Div'd reinvestment plan avail. (D) Shareholder investment plan avail. (E) Incl. deferred charges. In '19: \$483 mill., \$5.40/sh. (D) In mill. (F) '19: 8.4%. Regulatory Climate: Average. (F) '05 per-share data are pro forma, based on shs. outstanding when stock began trading in '06. (G) Rate base: Net orig. cost. Rate allowed on com. eq. in '19: 9.5%; earned on avg. com. eq.

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XCEL ENERGY NDO-XEL										RECENT PRICE	P/E RATIO 22.2 (Trailing: 23.0 Median: 16.0)					RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE											
TIMELINESS 1 Raised 12/4/20	High: 21.9	24.4	27.8	29.9	31.8	37.6	38.3	45.4	52.2	54.1	66.1	76.4																	
SAFETY 1 Raised 5/1/15	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																	
TECHNICAL 2 Lowered 1/15/21	LEGENDS --- 0.68 x Dividends p sh divided by Interest Rate Relative Price Strength Options: Yes Shaded area indicates recession																												
BETA .80 (1.00 = Market)	18-Month Target Price Range Low-High Midpoint (% to Mid) \$51-\$106 \$79 (20%)																												
2023-25 PROJECTIONS High Price 70 Ann'l Total Return 5% Low 55 Gain (+10%/-15%) Nil																													
Institutional Decisions 1Q2020 2Q2020 3Q2020 Percent 30 to Buy 365 343 356 shares 20 to Sell 378 366 362 traded 10 Hlds(000) 407479 412864 407854																													
% TOT. RETURN 12/20 THIS STOCK VL ARITH. INDEX 1 yr. 7.8 18.8 3 yr. 51.1 29.9 5 yr. 115.7 81.5																													
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	21.15	22.15	Revenues per sh	24.25										
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	6.60	7.20	"Cash Flow" per sh	9.00										
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	2.80	2.95	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	7.70	Cap'l Spending per sh	8.25										
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	27.25	28.55	Book Value per sh ^C	33.25										
400.46	403.39	407.30	428.78	453.79	457.51	482.33	486.49	487.96	497.97	505.73	507.54	507.22	507.76	514.04	524.54	539.00	542.00	Common Shs Outst'g ^D	555.00										
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	23.8	23.8	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	1.20	1.20	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%	2.6%	2.6%	Avg Ann'l Div'd Yield	3.4%										
CAPITAL STRUCTURE as of 9/30/20						10311	10655	10128	10915	11686	11024	11107	11404	11537	11529	11400	12000	Revenues (\$mill)	13500										
Total Debt \$20861 mill. Due in 5 Yrs \$3725 mill.						727.0	841.4	905.2	948.2	1021.3	1063.6	1123.4	1171.0	1261.0	1372.0	1480	1600	Net Profit (\$mill)	1960										
LT Debt \$19960 mill. LT Interest \$800 mill.						37.5%	35.8%	33.2%	33.8%	33.9%	35.8%	34.1%	30.7%	12.6%	8.5%	11.0%	NMF	Income Tax Rate	NMF										
Incl. \$77 mill. capitalized leases.						11.7%	9.4%	10.8%	13.4%	12.5%	7.7%	7.8%	9.4%	12.4%	8.3%	11.0%	7.0%	AFUDC % to Net Profit	7.0%										
(LT interest earned: 2.8x)						53.1%	51.1%	53.3%	53.3%	53.0%	54.1%	56.3%	55.9%	56.4%	56.8%	57.0%	56.0%	56.0%	Long-Term Debt Ratio	55.5%									
Leases, Uncapitalized Annual rentals \$262 mill.						46.3%	48.9%	46.7%	46.7%	47.0%	45.9%	43.7%	44.1%	43.6%	43.2%	43.0%	44.0%	44.0%	Common Equity Ratio	44.5%									
Pension Assets-12/19 \$3184 mill.						17452	17331	19018	20477	21714	23092	25216	25975	28025	30646	34350	35325	Total Capital (\$mill)	41500										
Pfd Stock None Oblig \$3701 mill.						20663	22353	23809	26122	28757	31206	32842	34329	36944	39483	41000	42875	44800	Net Plant (\$mill)	48400									
Common Stock 525,457,773 shs.						5.7%	6.5%	6.1%	6.0%	6.0%	5.8%	5.7%	5.8%	5.7%	5.6%	5.5%	5.5%	5.5%	Return on Total Cap'l	6.0%									
as of 10/19/20						8.9%	9.9%	10.2%	9.9%	10.0%	10.0%	10.2%	10.2%	10.3%	10.4%	10.0%	10.5%	Return on Shr. Equity	10.5%										
MARKET CAP: \$34 billion (Large Cap)						8.9%	9.9%	10.2%	9.9%	10.0%	10.0%	10.2%	10.2%	10.3%	10.4%	10.0%	10.5%	10.5%	Return on Com Equity ^E	10.5%									
ELECTRIC OPERATING STATISTICS						3.6%	4.3%	4.7%	4.5%	4.5%	4.3%	4.0%	3.9%	4.3%	4.4%	4.0%	4.0%	4.0%	Retained to Com Eq	4.0%									
						59%	56%	54%	54%	55%	57%	61%	62%	58%	58%	62%	61%	All Div'ds to Net Prof	61%										
						2017	2018	2019	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.																				
Fixed Charge Cov. (%)						330	281	272	Xcel Energy's Northern States Power facility will not have a general rate case in Minnesota in 2021. NSP had filed a request for a multiyear rate hike over three years, but included an alternative proposal for a continuation of mechanisms that benefited the utility's earning power in 2020 by adjusting revenues for fluctuations in sales, earning a return on certain capital expenditures, and recouping higher property taxes. The commission adopted the alternative proposal, just as it did a year earlier. NSP did file a traditional rate case in North Dakota. The utility asked for a hike of \$22 million (10.8%), based on a return on equity of 10.2% and a common-equity ratio of 52.5%. An interim increase of \$16 million this month, and a final order is expected in the third quarter.																				
ANNUAL RATES						Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25	A rate filing is pending in New Mexico and upcoming in Texas. Southwestern Public Service filed for an \$88 million increase in New Mexico, based on a 10.35% ROE and a 54.7% common-equity ratio. We were expecting an application in Texas as this report went to press. The utility wants to place a wind project in the rate base. Orders on the cases are expected later in 2021, but won't likely have much effect on Xcel's earning power until next year.																				
of change (per sh)						-5%	7.5%	1.5%	Earnings probably rose strongly in 2020, and we expect another solid increase this year. Xcel's utilities are benefiting from rate relief. Effective cost control is helping, too. We have raised our 2020 and 2021 share-earnings estimates \$0.05 each year. These are within the company's guidance of \$2.75-\$2.81 and \$2.90-\$3.00 for 2020 and 2021, respectively.																				
Revenues						5.5%	7.5%	7.5%	This timely and high-quality equity has a low dividend yield for a utility. This is about a percentage point below the industry mean. Total return potential is attractive for the 18-month span, but low for the 2023-2025 period.																				
"Cash Flow"						5.5%	5.0%	6.0%	Paul E. Debbas, CFA January 22, 2021																				
Earnings						5.0%	6.5%	6.0%																					
Dividends						4.5%	4.5%	5.5%																					
Book Value																													
Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year																								
	Mar.31	Jun.30	Sep.30	Dec.31																									
2017	2946	2645	3017	2796	11404																								
2018	2951	2658	3048	2880	11537																								
2019	3141	2577	3013	2798	11529																								
2020	2811	2586	3182	2821	11400																								
2021	3100	2700	3150	3050	12000																								
Cal-endar	EARNINGS PER SHARE ^A				Full Year																								
	Mar.31	Jun.30	Sep.30	Dec.31																									
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	1.14	.56	2.80																								
2021	.65	.55	1.15	.60	2.95																								
Cal-endar	QUARTERLY DIVIDENDS PAID ^B				Full Year																								
	Mar.31	Jun.30	Sep.30	Dec.31																									
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	1.70																								
2021																													
(A) Diluted EPS. Excl. nonrecurring gain (losses): '10, 5c; '15, (16c); '17, (5c); gains (losses) on discontinued ops.: '04, (30c); '05, 3c; '06, 1c; '09, (1c); '10, 1c. '17 EPS don't sum due to rounding. Next earnings report due late Jan. (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 65						Earnings Predictability 100					
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Tampa Electric Company, Inc.
Summary of Risk Premium Models for the
Proxy Group of Thirteen Electric Companies

	<u>Proxy Group of Thirteen Electric Companies</u>
Predictive Risk Premium Model (PRPM) (1)	10.36 %
Risk Premium Using an Adjusted Total Market Approach (2)	<u>10.52 %</u>
Average	<u><u>10.44 %</u></u>

Notes:

- (1) From page 2 of Document No. 5.
- (2) From page 3 of Document No. 5.

Tampa Electric Company, Inc.
Indicated ROE
Derived by the Predictive Risk Premium Model (1)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Proxy Group of Thirteen Electric Companies	LT Average Predicted Variance	Spot Predicted Variance	Recommended Variance (2)	GARCH Coefficient	Predicted Risk Premium (3)	Risk-Free Rate (4)	Indicated ROE (5)
ALLETE, Inc.	0.29%	0.46%	0.29%	2.1356	7.57%	2.31%	9.88%
Alliant Energy Corporation	0.27%	0.31%	0.27%	2.5648	8.54%	2.31%	10.85%
Ameren Corporation	0.23%	0.23%	0.23%	1.9178	5.38%	2.31%	7.69%
Duke Energy Corporation	0.31%	0.27%	0.31%	1.8161	7.01%	2.31%	9.32%
Edison International	0.43%	0.61%	0.43%	1.4753	7.93%	2.31%	10.24%
Entergy Corporation	0.40%	0.56%	0.40%	2.1949	11.06%	2.31%	13.37%
IDACORP, Inc.	0.29%	0.39%	0.29%	2.1492	7.65%	2.31%	9.96%
NorthWestern Corporation	0.34%	0.34%	0.34%	2.3264	9.94%	2.31%	12.25%
OGE Energy Corporation	0.31%	0.30%	0.31%	2.1283	8.17%	2.31%	10.48%
Otter Tail Corporation	0.37%	0.35%	0.37%	1.5726	7.28%	2.31%	9.59%
Pinnacle West Capital Corporation	0.60%	0.42%	0.60%	1.2411	9.27%	2.31%	11.58%
Portland General Electric Company	0.27%	0.35%	0.27%	2.0055	6.73%	2.31%	9.04%
Xcel Energy, Inc.	0.27%	0.18%	0.27%	2.7949	9.54%	2.31%	11.85%
						Average	<u>10.47%</u>
						Median	<u>10.24%</u>
						Average of Mean and Median	<u>10.36%</u>

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) $(1 + (\text{Column [3]} * \text{Column [4]})^{12}) - 1$.
- (4) From note 2 on page 2 of Document No. 6
- (5) Column [5] + Column [6].

Tampa Electric Company, Inc.
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

<u>Line No.</u>		<u>Proxy Group of Thirteen Electric Companies</u>
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	3.06 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A2 Rated Public Utility Bonds	<u>0.50</u> (2)
3.	Adjusted Prospective Yield on A2 Rated Public Utility Bonds	3.56 %
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	<u>0.10</u> (3)
5.	Adjusted Prospective Bond Yield	3.66 %
6.	Equity Risk Premium (4)	<u>6.86</u>
7.	Risk Premium Derived Common Equity Cost Rate	<u><u>10.52</u></u> %

- Notes: (1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 10 and 11 of Document No. 5).
- (2) The average yield spread of A2 rated public utility bonds over Aaa rated corporate bonds of 0.50% from page 4 of Document No. 5.
- (3) Adjustment to reflect the A3 Moody's LT issuer rating of the Utility Proxy Group as shown on page 5 of Document No. 5. The 0.1% upward adjustment is derived by taking 1/3 of the spread between A2 and Baa2 Public Utility Bonds ($1/3 * 0.3\% = 0.10\%$) as derived from page 4 of Document No. 5.
- (4) From page 7 of Document No. 5.

Tampa Electric Company, Inc.
Interest Rates and Bond Spreads for
Moody's Corporate and Public Utility Bonds

Selected Bond Yields

	[1]	[2]	[3]
	<u>Aaa Rated Corporate Bond</u>	<u>A2 Rated Public Utility Bond</u>	<u>Baa2 Rated Public Utility Bond</u>
Jan-2021	2.45 %	2.91 %	3.19 %
Dec-2020	2.26	2.77	3.05
Nov-2020	<u>2.30</u>	<u>2.85</u>	<u>3.17</u>
Average	<u>2.34 %</u>	<u>2.84 %</u>	<u>3.14 %</u>

Selected Bond Spreads

A2 Rated Public Utility Bonds Over Aaa Rated Corporate Bonds:

0.50 % (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

Tampa Electric Company, Inc.
Comparison of Long-Term Issuer Ratings for
Proxy Group of Thirteen Electric Companies

Proxy Group of Thirteen Electric Companies	Moody's		Standard & Poor's	
	Long-Term Issuer Rating		Long-Term Issuer Rating	
	January 2021		January 2021	
	Long-Term Issuer Rating (1)	Numerical Weighting (2)	Long-Term Issuer Rating (1)	Numerical Weighting (2)
ALLETE, Inc.	A3	7.0	NR	--
Alliant Energy Corporation	A3/Baa1	7.5	A/A-	6.5
Ameren Corporation	A3	7.0	BBB+	8.0
Duke Energy Corporation	A3	7.0	BBB+	8.0
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+	7.9

Notes:

- (1) Ratings are that of the average of each company's utility operating subsidiaries.
(2) From page 6 of Document No. 5.

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

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

<u>Moody's Bond Rating</u>	<u>Numerical Bond Weighting</u>	<u>Standard & Poor's Bond Rating</u>
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-

Tampa Electric Company, Inc.
 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)	9.16 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A2 rated bonds (2)	5.51
3.	Predicted Equity Risk Premium Based on Regression Analysis of 1,179 Fully-Litigated Electric Utility Rate Cases	<u>5.92</u>
4.	Average equity risk premium	<u><u>6.86 %</u></u>

- Notes: (1) From page 8 of Document No. 5.
 (2) From page 12 of Document No. 5.
 (3) From page 13 of Document No. 5.

Tampa Electric Company, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Thirteen Electric Companies

<u>Line No.</u>	<u>Equity Risk Premium Measure</u>	<u>Proxy Group of Thirteen Electric Companies</u>
<u>Ibbotson-Based Equity Risk Premiums:</u>		
1.	Ibbotson Equity Risk Premium (1)	5.78 %
2.	Regression on Ibbotson Risk Premium Data (2)	9.30
3.	Ibbotson Equity Risk Premium based on PRPM (3)	9.65
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	6.77
5.	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	11.04
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	<u>14.72</u>
7.	Conclusion of Equity Risk Premium	9.54 %
8.	Adjusted Beta (7)	<u>0.96</u>
9.	Forecasted Equity Risk Premium	<u><u>9.16</u></u> %

Notes provided on page 9 of Document No. 5.

Tampa Electric Company, Inc.

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® 2021 Market Report minus the arithmetic mean monthly yield of Moody's average Aaa and Aa2 corporate bonds from 1926-2019.
- (2) This equity risk premium is based on a regression of the monthly equity risk premiums of large company common stocks relative to Moody's average Aaa and 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 January 2021.
- (4) The equity risk premium based on the Value Line Summary and Index is derived by subtracting the average consensus forecast of Aaa corporate bonds of 3.06% (from page 3 of Document No. 5) from the projected 3-5 year total annual market return of 9.83% (described fully in note 1 on page 2 of Document No. 6).
- (5) Using data from Value Line for the S&P 500, an expected total return of 14.10% was derived of 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 3.06% results in an expected equity risk premium of 11.04%.
- (6) Using data from the Bloomberg Professional Service for the S&P 500, an expected total return of 17.78% was derived of 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 3.06% results in an expected equity risk premium of 14.72%.
- (7) Average of mean and median beta from Document No. 6.

Sources of Information:

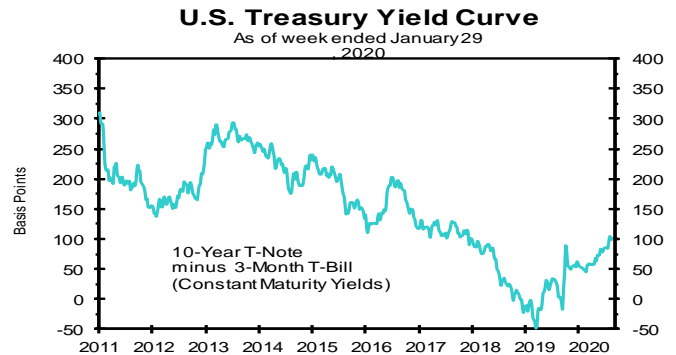
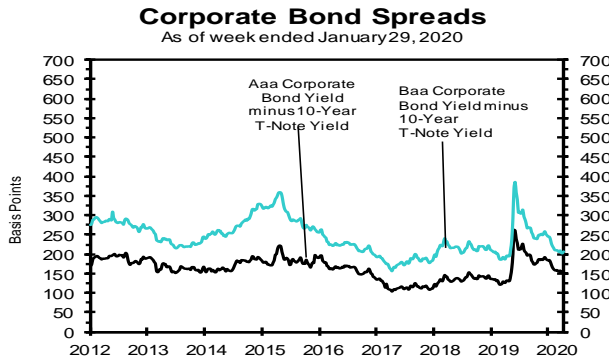
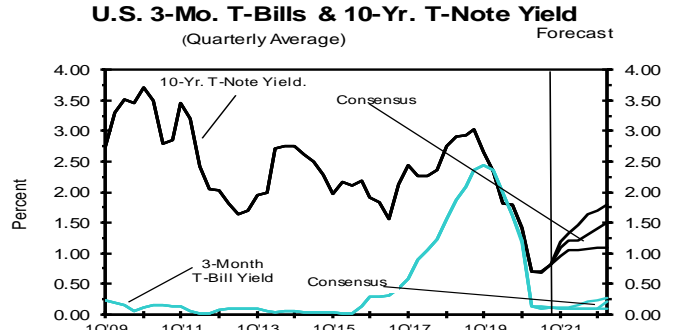
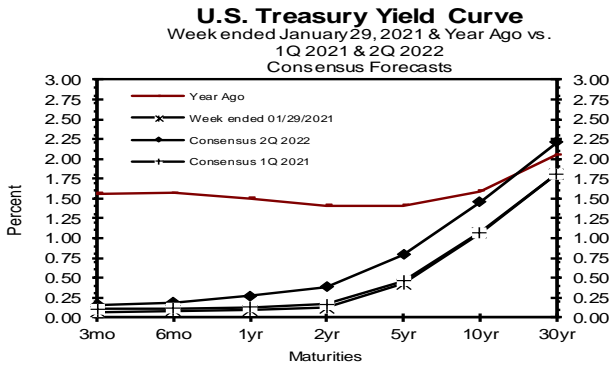
Stocks, Bonds, Bills, and Inflation - 2020 SBBI Yearbook, John Wiley & Sons, Inc.
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, December 1, 2020 and February 3, 2021
Bloomberg Professional Service

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

Interest Rates	History								Consensus Forecasts-Quarterly Avg.						
	Average For Week Ending				Average For Month				Latest Qtr	1Q	2Q	3Q	4Q	1Q	2Q
	Jan 22	Jan 15	Jan 8	Jan 1	Dec	Nov	Oct	4Q 2020	2021	2021	2021	2021	2022	2022	
Federal Funds Rate	0.09	0.09	0.09	0.09	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.	0.22	0.23	0.23	0.24	0.23	0.22	0.22	0.22	0.2	0.3	0.3	0.3	0.3	0.3	
Commercial Paper, 1-mo.	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.1	0.1	0.2	0.2	0.2	0.2	
Treasury bill, 3-mo.	0.09	0.09	0.09	0.10	0.09	0.09	0.10	0.09	0.1	0.1	0.1	0.1	0.1	0.2	
Treasury bill, 6-mo.	0.10	0.10	0.09	0.10	0.09	0.10	0.11	0.10	0.1	0.1	0.1	0.2	0.2	0.2	
Treasury bill, 1 yr.	0.10	0.11	0.10	0.11	0.10	0.12	0.13	0.12	0.1	0.2	0.2	0.2	0.2	0.3	
Treasury note, 2 yr.	0.13	0.14	0.13	0.13	0.14	0.17	0.15	0.15	0.2	0.2	0.3	0.3	0.3	0.4	
Treasury note, 5 yr.	0.45	0.49	0.42	0.37	0.39	0.39	0.34	0.37	0.5	0.5	0.6	0.7	0.7	0.8	
Treasury note, 10 yr.	1.11	1.13	1.03	0.94	0.93	0.87	0.79	0.86	1.1	1.2	1.2	1.3	1.4	1.5	
Treasury note, 30 yr.	1.85	1.86	1.78	1.66	1.67	1.62	1.57	1.62	1.8	1.9	2.0	2.1	2.1	2.2	
Corporate Aaa bond	2.65	2.67	2.61	2.49	2.52	2.58	2.65	2.58	2.5	2.6	2.7	2.8	2.9	2.9	
Corporate Baa bond	3.13	3.16	3.12	3.00	3.03	3.13	3.27	3.14	3.4	3.6	3.7	3.8	3.9	3.9	
State & Local bonds	2.66	2.67	2.67	2.67	2.70	2.82	2.93	2.82	2.5	2.6	2.7	2.8	2.8	2.9	
Home mortgage rate	2.77	2.79	2.65	2.67	2.68	2.77	2.83	2.76	2.8	3.0	3.0	3.1	3.2	3.2	

Key Assumptions	History								Consensus Forecasts-Quarterly					
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q
	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	111.2	112.4	107.2	105.2	103.4	102.8	102.7	102.7	102.5	102.6
Real GDP	2.9	1.5	2.6	2.4	-5.0	-31.4	33.4	4.0	2.1	5.4	6.0	4.5	3.4	3.0
GDP Price Index	1.2	2.5	1.5	1.4	1.4	-1.8	3.5	2.0	1.8	1.7	1.9	1.9	1.9	2.0
Consumer Price Index	0.9	3.0	1.8	2.4	1.2	-3.5	5.2	2.2	2.3	1.8	2.1	2.0	2.1	2.1
PCE Price Index	0.6	2.5	1.4	1.5	1.3	-1.6	3.7	1.5	2.1	1.7	1.9	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).



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.

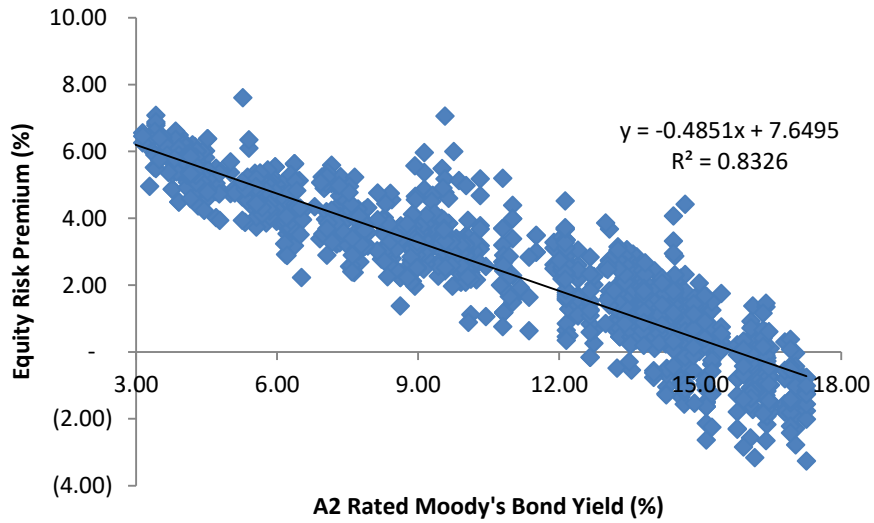
		Average For The Year					Five-Year Averages	
		2022	2023	2024	2025	2026	2022-2026	2027-2031
1. Federal Funds Rate	CONSENSUS	0.1	0.3	0.7	1.2	1.5	0.8	1.8
	Top 10 Average	0.2	0.7	1.4	2.0	2.4	1.3	2.5
	Bottom 10 Average	0.1	0.1	0.2	0.4	0.6	0.3	1.2
2. Prime Rate	CONSENSUS	3.3	3.5	3.9	4.3	4.6	3.9	4.9
	Top 10 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

Tampa Electric Company, Inc.
Derivation of Mean Equity Risk Premium Based Studies
Using Holding Period Returns and
Projected Market Appreciation of the S&P Utility Index

<u>Line No.</u>		<u>Implied Equity Risk Premium</u>
	<u>Equity Risk Premium based on S&P Utility Index Holding Period Returns (1):</u>	
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)	5.59
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Value Line Data) (4)	6.80
5.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg Data) (5)	<u>4.11</u>
6.	Average Equity Risk Premium (6)	<u><u>5.51 %</u></u>

- 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 - January 2021.
- (4) Using data from Value Line for the S&P 500 Utilities Index, an expected return of 10.36% was derived of based upon expected dividend yields and long-term earnings 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 Document No. 5 results in an equity risk premium of 6.80%. (10.36% - 3.56%)
- (5) Using data from the Bloomberg Professional Service for the S&P 500 Utilities Index, an expected return of 7.67% was derived of based upon expected dividend yields and long-term earnings 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 Document No. 5 results in an equity risk premium of 4.11%. (7.67% - 3.56% = 4.11%)
- (6) Average of lines 1 through 5.

Tampa Electric Company, Inc.
Prediction of Equity Risk Premiums Relative to
Moody's A2 Rated Utility Bond Yields



		Prospective A2 Rated Utility Bond (1)	Prospective Equity Risk Premium
<u>Constant</u>	<u>Slope</u>		
7.649492 %	-0.48508	3.56 %	5.92 %

Notes:

(1) From line 3 of page 3 of Document No. 5.

Source of Information: Regulatory Research Associates

Tampa Electric Company, Inc.
Indicated Common Equity Cost Rate Through Use
of the Traditional Capital Asset Pricing Model (CAPM) and Empirical Capital Asset Pricing Model (ECAPM)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Thirteen Electric Companies	Value Line Adjusted Beta	Bloomberg Adjusted Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
ALLETE, Inc.	0.85	1.05	0.95	10.42 %	2.31 %	12.21 %	12.34 %	12.28 %
Alliant Energy Corporation	0.85	1.01	0.93	10.42	2.31	12.00	12.19	12.09
Ameren Corporation	0.85	0.94	0.90	10.42	2.31	11.69	11.95	11.82
Duke Energy Corporation	0.85	0.98	0.92	10.42	2.31	11.90	12.11	12.00
Edison International	0.95	1.10	1.03	10.42	2.31	13.05	12.97	13.01
Energy Corporation	0.95	1.17	1.06	10.42	2.31	13.36	13.20	13.28
IDACORP, Inc.	0.80	1.04	0.92	10.42	2.31	11.90	12.11	12.00
NorthWestern Corporation	0.95	1.25	1.10	10.42	2.31	13.77	13.51	13.64
OGE Energy Corporation	1.10	1.25	1.18	10.42	2.31	14.61	14.14	14.37 (4)
Otter Tail Corporation	0.85	1.05	0.95	10.42	2.31	12.21	12.34	12.28
Pinnacle West Capital Corporation	0.90	1.12	1.01	10.42	2.31	12.84	12.81	12.82
Portland General Electric Company	0.85	1.05	0.95	10.42	2.31	12.21	12.34	12.28
Xcel Energy, Inc.	0.80	0.98	0.89	10.42	2.31	11.59	11.87	11.73
Mean			<u>0.97</u>			<u>12.39 %</u>	<u>12.48 %</u>	<u>12.44 %</u>
Median			<u>0.95</u>			<u>12.21 %</u>	<u>12.34 %</u>	<u>12.28 %</u>
Average of Mean and Median			<u>0.96</u>			<u>12.30 %</u>	<u>12.41 %</u>	<u>12.36 %</u>

Notes on page 2 of Document No. 6.

Tampa Electric Company, Inc.
Notes to Accompany the Application of the CAPM and ECAPM

Notes:

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

Historical Data MRP Estimates:

Measure 1: Ibbotson Arithmetic Mean MRP (1926-2019)

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

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

9.98 %

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

10.76 %

Value Line MRP Estimates:

Measure 4: Value Line Projected MRP (Thirteen weeks ending January 29, 2021)

Total projected return on the market 3-5 years hence*:	9.83 %
Projected Risk-Free Rate (see note 2):	2.31
MRP based on Value Line Summary & Index:	7.52 %
*Forecasted 3-5 year capital appreciation plus expected dividend yield	

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

Total return on the Market based on the S&P 500:	14.10 %
Projected Risk-Free Rate (see note 2):	2.31
MRP based on Value Line data	11.79 %

Measure 6: Bloomberg Projected MRP

Total return on the Market based on the S&P 500:	17.78 %
Projected Risk-Free Rate (see note 2):	2.31
MRP based on Bloomberg data	15.47 %

Average of Value Line, Ibbotson, and Bloomberg MRP: 10.42 %

- (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 Document No. 5) The projection of the risk-free rate is illustrated below:

First Quarter 2021	1.80 %
Second Quarter 2021	1.90
Third Quarter 2021	2.00
Fourth Quarter 2021	2.10
First Quarter 2022	2.10
Second Quarter 2022	2.20
2022-2026	2.80
2027-2031	3.60
	2.31 %

- (3) Average of column 6 and column 7.

- (4) OGE Energy Corporation's results were excluded from the final average and median as they were more than two standard deviations above the proxy group mean.

Sources of Information:

Value Line Summary and Index
Blue Chip Financial Forecasts, December 1, 2020 and February 3, 2021
Stocks, Bonds, Bills, and Inflation - 2020 SBBI Yearbook, John Wiley & Sons, Inc.
Bloomberg Professional Services

Tampa Electric Company, Inc.
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)

Tampa Electric Company, Inc.
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

	[1]	[2]	[3]	[4]
Proxy Group of Thirteen Electric Companies	Value Line Adjusted Beta	Unadjusted Beta	Residual Standard Error of the Regression	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 Corporation	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	<u>0.89</u>	<u>0.79</u>	<u>2.7265</u>	<u>0.0686</u>
Beta Range (+/- 2 std. Devs. of Beta) 2 std. Devs. of Beta	0.65 0.14	0.93		
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: Value Line Proprietary Database, January 2021

Tampa Electric Company, Inc.
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Thirteen Electric Companies

	[1]	[2]	[3]	[4]
Proxy Group of Forty-Eight Non-Price Regulated Companies	VL Adjusted Beta	Unadjusted Beta	Residual Standard Error of the Regression	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:

Value Line Proprietary Database, January 2021

Tampa Electric Company, Inc.
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

<u>Principal Methods</u>	<u>Proxy Group of Forty-Eight Non- Price Regulated Companies</u>
Discounted Cash Flow Model (DCF) (1)	11.52 %
Risk Premium Model (RPM) (2)	12.67 %
Capital Asset Pricing Model (CAPM) (3)	<u>12.00 %</u>
Mean	<u><u>12.06 %</u></u>
Median	<u><u>12.00 %</u></u>
Average of Mean and Median	<u><u>12.03 %</u></u>

Notes:

- (1) From page 2 of Document No. 8.
- (2) From page 3 of Document No. 8.
- (3) From page 6 of Document No. 8.

Tampa Electric Company, Inc.
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]	[8]
Proxy Group of Forty-Eight Non-Price Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Zack's Five Year Projected Growth Rate in EPS	Bloomberg's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS	Adjusted Dividend Yield	Indicated Common Equity Cost Rate (1)
Abbot Laboratories	1.63 %	12.00 %	12.30 %	15.11 %	16.34 %	13.94 %	1.74 %	15.68 %
Analog Devices	1.72	8.50	12.30	8.80	11.47	10.27	1.81	12.08
Assurant Inc.	1.97	6.50	NA	NA	19.40	12.95	2.10	15.05
ANSYS, Inc.	-	10.00	NA	13.60	6.39	10.00	-	NA
Smith (A.O.)	1.86	5.00	9.00	10.00	8.00	8.00	1.93	9.93
Becton, Dickinson	1.35	9.00	9.00	11.79	9.50	9.82	1.42	11.24
Brown-Forman 'B'	0.93	12.00	NA	5.57	8.81	8.79	0.97	9.76
Broadridge Fin'l	1.54	10.50	NA	7.40	10.00	9.30	1.61	10.91
Cerner Corp.	1.15	9.00	11.80	10.04	10.03	10.22	1.21	11.43
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.	3.32	7.00	6.30	6.57	7.50	6.84	3.43	10.27
CSW Industrials	0.48	8.50	NA	5.00	12.00	8.50	0.50	9.00
Quest Diagnostics	1.81	11.00	26.50	17.71	9.72	16.23	1.96	18.19
Dolby Labs.	0.97	10.50	13.00	NA	16.00	13.17	1.03	14.20
Estee Lauder	0.85	12.00	13.00	15.85	17.10	14.49	0.91	15.40
Exponent, Inc.	0.88	11.00	NA	15.00	15.00	13.67	0.94	14.61
Gentex Corporation	1.43	9.50	2.60	5.86	15.00	8.24	1.49	9.73
Alphabet Inc.	-	14.50	16.90	17.88	16.81	16.52	-	NA
Hershey Co.	2.15	5.00	7.70	7.07	7.78	6.89	2.22	9.11
Ingredion Inc.	3.28	6.00	NA	8.60	1.90	5.50	3.37	8.87
Hunt (J.B.)	0.81	6.50	15.00	17.23	20.73	14.87	0.87	15.74
J & J Snack Foods Corp.	1.50	10.00	NA	NA	6.00	8.00	1.56	9.56
Jack Henry & Associates, Inc.	1.09	10.50	10.70	9.00	10.80	10.25	1.15	11.40
McCormick and Co.	1.46	6.50	6.50	11.07	4.80	7.22	1.51	8.73
Altria Group	8.37	6.50	4.00	3.70	4.12	4.58	8.56	13.14
MSCI Inc.	0.75	17.00	NA	11.35	13.20	13.85	0.80	14.65
Motorola Solutions, Inc.	1.67	8.00	9.00	11.10	5.88	8.50	1.74	10.24
Maxim Integrated	-	7.00	10.00	11.30	18.44	11.69	-	NA
NewMarket Corp.	1.93	2.00	NA	NA	7.70	4.85	1.98	6.83
Northrop Grumman	1.92	10.50	NA	4.61	6.04	7.05	1.99	9.04
Omnicom Group Inc.	4.22	5.50	4.70	2.19	3.20	3.90	4.30	8.20
PerkinElmer, Inc.	0.20	17.50	19.50	11.07	17.20	16.32	0.22	16.54
Pool Corp.	0.65	17.50	NA	17.00	17.00	17.17	0.71	17.88
Rollins, Inc.	0.83	12.00	NA	NA	8.20	10.10	0.87	10.97
Starbucks Corporation	1.79	13.50	13.60	18.24	50.81	24.04	2.01	26.05 (2)
The Sherwin-Williams Company	0.74	10.00	10.30	9.07	10.01	9.84	0.78	10.62
Selective Ins. Group	1.54	6.50	NA	37.89	1.88	15.42	1.66	17.08
Synopsys, Inc.	-	12.50	11.50	13.38	11.50	12.22	-	NA
Sensient Technologies Corporation	2.13	2.50	NA	7.55	3.80	4.62	2.18	6.80
Tetra Tech	0.56	11.00	15.00	13.65	15.00	13.66	0.60	14.26
Texas Instruments	2.51	4.00	9.30	10.03	10.00	8.33	2.61	10.94
AMERCO	-	1.50	NA	NA	15.00	8.25	-	NA
UniFirst Corporation	0.50	3.00	NA	10.00	10.00	7.67	0.52	8.19
Verisign	-	9.50	NA	NA	8.00	8.75	-	NA
Waters Corp.	-	6.00	5.10	5.32	4.90	5.33	-	NA
Watsco, Inc.	3.05	8.00	NA	NA	15.00	11.50	3.23	14.73
Western Union	4.09	6.00	NA	11.90	8.88	8.93	4.27	13.20
							Mean	11.92 %
							Median	11.12 %
							Average of Mean and Median	11.52 %

NA= Not Available
NMF= Not Meaningful Figure

(1) The application of the DCF model to the domestic, non-price regulated 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.

(2) SBUX's DCF results were excluded from the final average and median as they were more than 2 standard deviations above the proxy group's mean.

Sources of Information:

Value Line Investment Survey
www.zacks.com Downloaded on 01/29/2021
www.yahoo.com Downloaded on 01/29/2021
Bloomberg Professional Services

Tampa Electric Company, Inc.
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

<u>Line No.</u>		<u>Proxy Group of Forty- Eight Non-Price Regulated Companies</u>
1.	Prospective Yield on Baa2 Rated Corporate Bonds (1)	4.04 %
2.	Adjustment to Reflect Proxy Group Bond Rating (2)	<u>(0.15)</u>
3.	Prospective Bond Rating	3.89
4.	Equity Risk Premium (3)	<u>8.78</u>
5.	Risk Premium Derived Common Equity Cost Rate	<u><u>12.67 %</u></u>

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 February 3, 2021 (see pages 10 and 11 of Document No. 5). The estimates are detailed below.

First Quarter 2021	3.40 %
Second Quarter 2021	3.60
Third Quarter 2021	3.70
Fourth Quarter 2021	3.80
First Quarter 2022	3.90
Second Quarter 2022	3.90
2022-2026	4.60
2027-2031	<u>5.40</u>
Average	<u><u>4.04 %</u></u>

(2) To reflect the Baa1 average rating of the non-utility proxy group, the prospective 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:

	<u>A2 Corp. Bond Yield</u>		<u>Baa2 Corp. Bond Yield</u>		<u>Spread</u>
Jan-2021	2.84 %		3.25 %		0.41 %
Dec-2020	2.72		3.16		0.44
Nov-2020	2.79		3.30		<u>0.51</u>
	Average yield spread				<u><u>0.45 %</u></u>
	1/3 of spread				<u><u>0.15 %</u></u>

(3) From page 5 of Document No. 8.

Tampa Electric Company, Inc.
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		Standard & Poor's Long-Term Issuer Rating January 2021	
	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
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	Baa3	10.0	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 Document No. 5

Source of Information:
Bloomberg Professional Services

Tampa Electric Company, Inc.
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

<u>Line No.</u>	<u>Equity Risk Premium Measure</u>	<u>Proxy Group of Forty-Eight Non- Price Regulated Companies</u>
<u>Ibbotson-Based Equity Risk Premiums:</u>		
1.	Ibbotson Equity Risk Premium (1)	5.78 %
2.	Regression on Ibbotson Risk Premium Data (2)	9.30
3.	Ibbotson Equity Risk Premium based on PRPM (3)	9.65
4.	Equity Risk Premium Based on <u>Value Line</u> Summary and Index (4)	6.77
5.	Equity Risk Premium Based on <u>Value Line</u> S&P 500 Companies (5)	11.04
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	<u>14.72</u>
7.	Conclusion of Equity Risk Premium	9.54 %
8.	Adjusted Beta (7)	<u>0.92</u>
9.	Forecasted Equity Risk Premium	<u><u>8.78 %</u></u>

Notes:

- (1) From note 1 of page 9 of Document No. 5.
- (2) From note 2 of page 9 of Document No. 5.
- (3) From note 3 of page 9 of Document No. 5.
- (4) From note 4 of page 9 of Document No. 5.
- (5) From note 5 of page 9 of Document No. 5.
- (6) From note 6 of page 9 of Document No. 5.
- (7) Average of mean and median beta from page 6 of Document No. 8.

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 February 3, 2021
Bloomberg Professional Services

Tampa Electric Company, Inc.
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

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Forty-Eight Non-Price Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Abbot Laboratories	0.95	0.90	0.92	10.42 %	2.31 %	11.90 %	12.11 %	12.00 %
Analog Devices	0.95	1.06	1.01	10.42	2.31	12.84	12.81	12.82
Assurant Inc.	0.90	1.01	0.95	10.42	2.31	12.21	12.34	12.28
ANSYS, Inc.	0.90	0.93	0.92	10.42	2.31	11.90	12.11	12.00
Smith (A.O.)	0.90	1.01	0.96	10.42	2.31	12.32	12.42	12.37
Becton, Dickinson	0.80	0.62	0.71	10.42	2.31	9.71	10.47	10.09 (4)
Brown-Forman 'B'	0.85	0.97	0.91	10.42	2.31	11.79	12.03	11.91
Broadridge Fin'l	0.85	0.83	0.84	10.42	2.31	11.07	11.48	11.27
Cerner Corp.	0.95	0.91	0.93	10.42	2.31	12.00	12.19	12.09
Chemed Corp.	0.85	0.90	0.88	10.42	2.31	11.48	11.79	11.64
Cooper Cos.	0.95	0.93	0.94	10.42	2.31	12.11	12.26	12.19
Cisco Systems, Inc.	0.95	0.84	0.90	10.42	2.31	11.69	11.95	11.82
CSW Industrials	0.85	1.02	0.94	10.42	2.31	12.11	12.26	12.19
Quest Diagnostics	0.90	0.99	0.95	10.42	2.31	12.21	12.34	12.28
Dolby Labs.	0.95	0.95	0.95	10.42	2.31	12.21	12.34	12.28
Estee Lauder	0.90	0.97	0.94	10.42	2.31	12.11	12.26	12.19
Exponent, Inc.	0.85	0.91	0.88	10.42	2.31	11.48	11.79	11.64
Gentex Corporation	0.95	1.05	1.00	10.42	2.31	12.73	12.73	12.73
Alphabet Inc.	0.90	0.88	0.89	10.42	2.31	11.59	11.87	11.73
Hershey Co.	0.85	0.83	0.84	10.42	2.31	11.07	11.48	11.27
Ingredion Inc.	0.90	0.92	0.91	10.42	2.31	11.79	12.03	11.91
Hunt (J.B.)	0.95	0.91	0.93	10.42	2.31	12.00	12.19	12.09
J & J Snack Foods Corp.	0.90	0.78	0.84	10.42	2.31	11.07	11.48	11.27
Jack Henry & Associates, Inc.	0.85	0.90	0.87	10.42	2.31	11.38	11.72	11.55
McCormick and Co.	0.85	0.69	0.77	10.42	2.31	10.34	10.93	10.64
Altria Group	0.90	0.87	0.89	10.42	2.31	11.59	11.87	11.73
MSCI Inc.	0.95	0.92	0.93	10.42	2.31	12.00	12.19	12.09
Motorola Solutions, Inc.	0.90	0.94	0.92	10.42	2.31	11.90	12.11	12.00
Maxim Integrated	0.95	1.01	0.98	10.42	2.31	12.52	12.58	12.55
NewMarket Corp.	0.80	0.55	0.68	10.42	2.31	9.40	10.23	9.81 (4)
Northrop Grumman	0.85	0.78	0.82	10.42	2.31	10.86	11.33	11.09
Omnicom Group Inc.	1.00	1.03	1.02	10.42	2.31	12.94	12.89	12.92
PerkinElmer, Inc.	0.95	0.85	0.90	10.42	2.31	11.69	11.95	11.82
Pool Corp.	0.90	0.94	0.92	10.42	2.31	11.90	12.11	12.00
Rollins, Inc.	0.85	0.67	0.76	10.42	2.31	10.23	10.86	10.54
Starbucks Corporation	0.95	1.07	1.01	10.42	2.31	12.84	12.81	12.82
The Sherwin-Williams Company	0.95	1.02	0.98	10.42	2.31	12.52	12.58	12.55
Selective Ins. Group	0.85	0.97	0.91	10.42	2.31	11.79	12.03	11.91
Synopsys, Inc.	1.00	1.00	1.00	10.42	2.31	12.73	12.73	12.73
Sensient Technologies Corporation	0.90	0.95	0.92	10.42	2.31	11.90	12.11	12.00
Tetra Tech	0.90	1.02	0.96	10.42	2.31	12.32	12.42	12.37
Texas Instruments	0.85	0.91	0.88	10.42	2.31	11.48	11.79	11.64
AMERCO	0.95	1.09	1.02	10.42	2.31	12.94	12.89	12.92
UniFirst Corporation	0.95	1.11	1.03	10.42	2.31	13.05	12.97	13.01
Verisign	0.95	0.81	0.88	10.42	2.31	11.48	11.79	11.64
Waters Corp.	0.95	0.84	0.90	10.42	2.31	11.69	11.95	11.82
Watsco, Inc.	0.85	0.80	0.82	10.42	2.31	10.86	11.33	11.09
Western Union	0.85	1.05	0.95	10.42	2.31	12.21	12.34	12.28
Mean			<u>0.92</u>			<u>11.89 %</u>	<u>12.10 %</u>	<u>11.99 %</u>
Median			<u>0.92</u>			<u>11.90 %</u>	<u>12.11 %</u>	<u>12.00 %</u>
Average of Mean and Median			<u>0.92</u>			<u>11.90 %</u>	<u>12.11 %</u>	<u>12.00 %</u>

Notes:

- (1) From note 1 of page 2 of Document No. 6.
- (2) From note 2 of page 2 of Document No. 6.
- (3) Average of CAPM and ECAPM cost rates.
- (4) NEU's CAPM results were excluded from the final average and median as they were more than 2 standard deviations below the proxy group's mean.

Tampa Electric Company, Inc.
Derivation of the Flotation Cost Adjustment to the Cost of Common Equity

Date	Equity Issuances (Company Provided)										
	[Column 1]	[Column 2]	[Column 3]	[Column 4]	[Column 5]	[Column 6]	[Column 7]	[Column 8]	[Column 9]	[Column 10]	
	Issuing Company	Shares Issued (1)	Market Price per Share (1)	Average Offering Price per Share (1)	Underwriting Discount (1)	Total Offering Expense per Share (1)	Net Proceeds per Share (2)	Total Flotation Costs (3)	Gross Equity Issue before Costs (4)	Net Proceeds (5)	Flotation Cost Percentage (6)
At-The-Market 7/11/2019	Emera Incorporated	2,782,982	NA	NA	NA	\$ 0.755	\$ 56.307	\$ 2,100,000	\$ 158,800,000	\$ 156,700,000	1.322%
12/18/2017	Emera Incorporated	15,659,000	47.980	47.900	1.916	0.029	45.955	31,705,364	751,318,820	719,613,456	4.220%
12/8/2016	Emera Incorporated	7,624,500	44.260	45.250	1.810	0.059	43.381	6,702,090	337,460,370	330,758,280	1.986%
	Total Public Issuances							\$ 40,507,454	\$ 1,247,579,190	\$ 1,207,071,736	3.247%

Flotation Cost Adjustment

[Column 11]	[Column 12]	[Column 13]	[Column 14]	[Column 15]	[Column 16]
Average Dividend Yield (7)	Average Projected EPS Growth Rate (7)	Adjusted Dividend Yield (8)	Average DCF Cost Rate Unadjusted for Flotation (9)	DCF Cost Rate Adjusted for Flotation (10)	Flotation Cost Adjustment (11)
3.78 %	5.16 %	3.88 %	9.04 %	9.17 %	0.13 %

Proxy Group of Thirteen Electric Companies

- Notes:
- (1) From Company prospectuses or annual filings.
 - (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) From Document No. 4.
 - (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.

Tampa Electric Company, Inc.
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 29, 2021 (1) (millions)	[2] NYSE/AMEX/ NASDAQ (2)	[3] Applicable Size Premium (3)	[4] Spread from Applicable Size Premium (4)
1.	\$ 7,780.290	3	0.73%	
2.	\$ 15,616.160	2	0.50%	0.23%
	[A]	[B]	[C]	[D]

Decile	Market Capitalization of Smallest Company (millions)		Market Capitalization of Largest Company (millions)		Size Premium (Return in Excess of CAPM)*
	1	2	3	4	
Largest	\$ 31,090.379	\$ 13,142.606	\$ 1,061,355.011	\$ 30,542.936	-0.28%
	6,618.604	4,312.546	13,100.225	6,614.962	0.50%
	2,688.889	1,669.856	6,614.962	4,311.252	0.73%
	993.855	515.621	2,685.865	1,668.282	1.10%
	230.024	1.973	1,668.282	993.847	1.34%
Smallest	1.973	229.748	515.603	229.748	1.47%
			229.748		1.59%
					2.22%
					4.99%

*From 2020 Duff & Phelps Cost of Capital Navigator

Notes:

- (1) From page 2 of Document No. 10.
- (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 0.23% in Line No. 2, Column [4] is derived as follows: 0.23% = 0.73% - 0.50%.

Tampa Electric Company, Inc.
Market Capitalization of Tampa Electric Company, Inc. 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 29, 2021	(5) Market-to- Book Ratio on January 29, 2021 (2)	(6) Market Capitalization on January 29, 2021 (3) (millions)
Tampa Electric Company, Inc.		NA	NA	4,358,706 (4)	NA		
Based upon Proxy Group of Thirteen Electric Companies						178.5 (5)	\$ 7,780,290 (6)
Proxy Group of Thirteen Electric Companies							
ALLETE, Inc.	NYSE	51,696	\$ 43.173	\$ 2,231,900	\$ 62,840	145.6 %	\$ 3,248,608
Alliant Energy Corporation	NASDAQ	245,023	21,243	5,205,100	48,650	229.0	11,920,359
Ameren Corporation	NYSE	246,232	32,729	8,059,000	72,720	222.2	17,905,970
Duke Energy Corporation	NYSE	733,321,965	63,849	46,822,000	94,000	147.2	68,932,265
Edison International	NYSE	361,985	36,750	13,303,000	58,160	158.3	21,053,055
Energy Corporation	NYSE	199,727	51,188	10,223,675	95,330	186.2	19,039,950
IDACORP, Inc.	NYSE	50,410	48,892	2,464,628	88,300	180.6	4,451,194
NorthWestern Corporation	NASDAQ	53,999	37,762	2,039,094	54,470	144.2	2,941,336
OGE Energy Corporation	NYSE	200,177	20,679	4,139,500	30,520	147.6	6,109,413
Otter Tail Corporation	NASDAQ	40,158	19,460	781,482	39,690	204.0	1,593,855
Pinnacle West Capital Corporation	NYSE	112,540	48,255	5,430,648	75,250	155.9	8,468,644
Portland General Electric Company	NYSE	89,387	28,986	2,591,000	42,290	145.9	3,780,181
Xcel Energy, Inc.	NASDAQ	524,539	25,239	13,239,000	63,990	253.5	33,565,251
Average		223,784	\$ 36,785	\$ 8,963,848	\$ 63,555	178.5 %	\$ 15,616,160

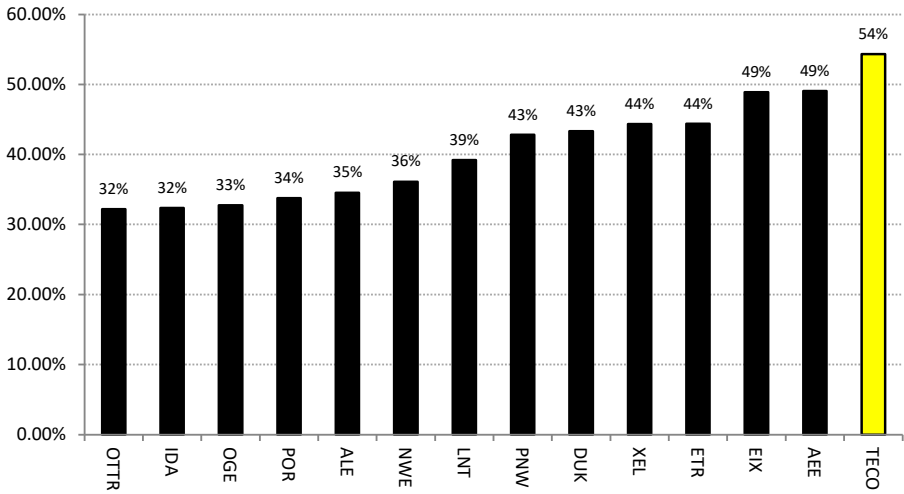
NA= Not Available

- 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 Tampa Electric Company, Inc. on January 29, 2021 is assumed to be equal to the market-to-book ratio of Proxy Group of Thirteen Electric Companies on January 29, 2021 as appropriate.
(6) Column [3] multiplied by Column [5].

Sources of Information: 2019 Annual Forms 10-K
yahoo.finance.com
Bloomberg Professional Service

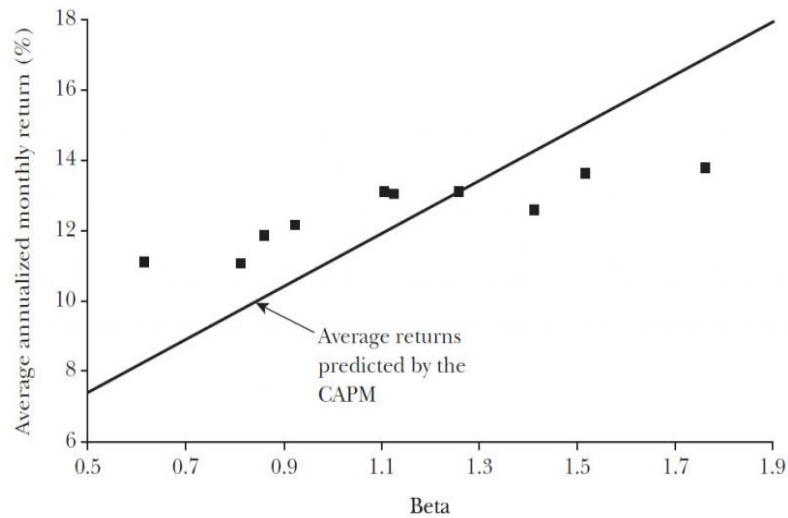
Tampa Electric Company, Inc.
Comparison of Projected Capital Expenditures Relative to Net Plant



Sources of Information: Value Line
Tampa Electric Company, Inc., 2019 FERC Form 1
Company provided data

Fama and French's Figure 2¹

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



¹ 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").

REFERENCED ENDNOTES
FOR THE
PREPARED DIRECT TESTIMONY
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DYLAN W. D'ASCENDIS

- ¹ 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.
- ² See, Tampa Electric Company, SEC Form 10-K, at 5 (Dec. 31, 2020). The Company's operations include electricity sold at the wholesale level to municipalities, electric cooperative utilities, power marketers, and other load-serving entities.
- ³ Source: S&P Global Market Intelligence.
- ⁴ See, Emera Incorporated, SEC Form 40-F, at 7-8 (Dec. 31, 2019).
- ⁵ Source: Tampa Electric Company, FERC Form 1.
- ⁶ Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management, Concise 4th Ed., Thomson South-Western, 2004, at 574.
- ⁷ 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.
- ⁸ Autoregressive conditional heteroscedasticity; see also, www.nobelprize.org/prizes/economic-sciences/2003/engle/facts/.
- ⁹ Annualized Return = $(1 + \text{Monthly Return})^{12} - 1$.
- ¹⁰ See, *Blue Chip Financial Forecasts*, December 1, 2020 at 14; and February 3, 2021 at 2.
- ¹¹ See, SBBI - 2020, Appendix A Tables: Morningstar Stocks, Bonds, Bills, & Inflation 1926-2019.
- ¹² See, SBBI - 2020, at 10-22.
- ¹³ Data from January 1928 to December 2019 is from SBBI - 2020. Data from January 2020 to January 2021 is from Bloomberg Professional Services.

14 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.

15 Roger A. Morin, New Regulatory Finance, at 175 ("Morin").

16 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").

17 Morin, at 175.

18 Morin, at 190.

19 Fama and French, at 32.

20 Fama and French, at 33.

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

22 *Blue Chip Financial Forecasts*, December 1, 2020, at 14; and February 3,
2021, at 2.

23 Morin, at 321.

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

25 Morin, at 327-30.

26 Duff & Phelps, *Valuation Handbook - U.S. Guide to Cost of Capital*,
Wiley 2020, at 4-1.

27 Fama and French, at 25-43.

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

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

30 See, S&P Global Ratings, RatingsDirect: Tampa Electric Co., April 17,
2020; and Moody's Investor Service, Credit Opinion: Tampa Electric
Company, December 22, 2020.

31 Source: Company provided data.

32 Source: Company provided data.

33 Source: Tampa Electric Company, 2019 FERC Form 1, at 110.

DOCKET NO. 20210034-EI
EXHIBIT NO. DWD-1
WITNESS: D'ACSENDIS
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FILED: 04/09/2021

- ³⁴ Standard & Poor's, *Industry Report Card: Utility Sectors in the Americas Remain Stable, While Challenges Beset European, Australian, and New Zealand Counterparts*, RatingsDirect, June 27, 2008, at 4.
- ³⁵ Standard & Poor's, *Industry Top Trends 2017: Utilities*, RatingsDirect, February 16, 2017, at 4.