BEFORE THE

COUNCIL OF THE CITY OF NEW ORLEANS

REVISED APPLICATION OF ENTERGY)	
NEW ORLEANS, LLC FOR A CHANGE)	
IN ELECTRIC AND GAS RATES)	**DOCKET NO. UD-18-07**
PURSUANT TO COUNCIL RESOLUTIONS)	
R-15-194 AND R-17-504 AND)	
FOR RELATED RELIEF)	

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DIRECT TESTIMONY

AND EXHIBITS

OF

RICHARD A. BAUDINO

</div>

ON BEHALF OF THE

CRESCENT CITY POWER USERS' GROUP

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

FEBRUARY 2019

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DIRECT TESTIMONY OF RICHARD A. BAUDINO

I. QUALIFICATIONS AND SUMMARY

1 **Q.**   **Please state your name and business address.**

2 A.   My name is Richard A. Baudino. My business address is J. Kennedy and Associates,

3   Inc. ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell,

4   Georgia 30075.

5 **Q.**   **What is your occupation and by whom are you employed?**

6 A.   I am a consultant with Kennedy and Associates.

7 **Q.**   **Please describe your education and professional experience.**

8 A.   I received my Master of Arts degree with a major in Economics and a minor in

9   Statistics from New Mexico State University in 1982. I also received my Bachelor of

10   Arts Degree with majors in Economics and English from New Mexico State in 1979.

11

12   I began my professional career with the New Mexico Public Service Commission Staff

13   in October 1982 and was employed there as a Utility Economist. During my

14   employment with the Staff, my responsibilities included the analysis of a broad range

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1   of issues in the ratemaking field. Areas in which I testified included cost of service,

2   rate of return, rate design, revenue requirements, analysis of sale/leasebacks of

3   generating plants, utility finance issues, and generating plant phase-ins.

4

5   In October 1989, I joined the utility consulting firm of Kennedy and Associates as a

6   Senior Consultant where my duties and responsibilities covered substantially the same

7   areas as those during my tenure with the New Mexico Public Service Commission

8   Staff. I became Manager in July 1992 and was named Director of Consulting in

9   January 1995. Currently, I am a consultant with Kennedy and Associates.

10

11   Exhibit ____(RAB-1) summarizes my expert testimony experience.

12   **Q.**   **On whose behalf are you testifying?**

13   A.   I am testifying on behalf of the Crescent City Power Users Group ("CCPUG"), a group

14   of commercial and government customers taking electric service at retail from Entergy

15   New Orleans, LLC ("ENO" or "Company").

16   **Q.**   **What is the purpose of your Direct Testimony?**

17   A.   The purpose of my Direct Testimony is to address the allowed return on equity for

18   ENO. I will also respond to the Revised Direct Testimony of Mr. Robert Hevert,

19   witness for the Company.

20

21   In addition to rate of return, I have reviewed the Company's proposed Gas

22   Infrastructure Replacement Program ("GIRP") rider, its proposed Reliability Incentive

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1   Mechanism ("RIM"), and its proposed Distribution Grid Modernization ("DGM")

2   rider.

3 **Q.   Please summarize your conclusions and recommendations.**

4 A.   I recommend that the Council adopt a return on equity ("ROE") of 9.35% for the base

5   electric and gas revenue requirements, as well as for use in the Electric Formula Rate

6   Plan ("EFRP") and Gas Formula Rate Plan ("GFRP") if they are adopted. I performed

7   a Discounted Cash Flow ("DCF") analysis using the same proxy group of companies

8   used by ENO witness Hevert. I also performed two Capital Asset Pricing Model

9   ("CAPM") analyses, one based on expected returns for the stock market and one based

10   on a risk premium using historical market returns. I relied on the DCF result for my

11   ROE   recommendation,   although   my   CAPM   analyses   support   my   9.35%

12   recommendation as being reasonable.

13

14   In Section IV of my testimony I will respond to ENO witness Hevert's Revised Direct

15   Testimony and his ROE recommendation of 10.75%. I will demonstrate to the Council

16   that Mr. Hevert's recommended ROE of 10.75% grossly overstates a fair rate of return

17   for ENO and that his recommendation should be rejected.

18

19   In Section V, I recommend that the Council reject the proposed RIM. Given ENO's

20   recent poor reliability performance, ENO should not be given incentives in its allowed

21   return on equity for performance that New Orleans ratepayers should expect from their

22   regulated provider of electric service.

23

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1   In Section VI, I recommend that the Council reject ENO's proposed GIRP and DGM

2   riders.   The GIRP and DGM are not needed if the Council adopts CCPUG's

3   recommended EFRP and GFRP.

4

5   **II. REVIEW OF ECONOMIC AND FINANCIAL CONDITIONS**

6   **Q.   Mr. Baudino, what has the trend been in long-term capital costs over the last 10**
7   **years?**

8   A.   Since 2007 and 2008, the overall trend in interest rates in the U.S. and the world

9   economy has been sharply lower. This trend was precipitated by the 2007 financial

10   crisis and severe recession that followed in December 2007. In response to this

11   economic crisis, the Federal Reserve ("Fed") undertook an unprecedented series of

12   steps to stabilize the economy, ease credit conditions, and lower unemployment and

13   interest rates. These steps are commonly known as Quantitative Easing ("QE") and

14   were implemented in three distinct stages: QE1, QE2, and QE3. The Fed's stated

15   purpose of QE was "to support the liquidity of financial institutions and foster

16   improved conditions in financial markets."[1]

17   **Q.   Mr. Baudino, before you continue please provide a brief explanation of how the**
18   **Fed uses interest rates to improve conditions in the financial markets.**

19   A.   Generally, the Fed uses monetary policy to implement certain economic goals. The

20   Fed explained its monetary policy as follows:

21   Monetary policy in the United States comprises the Federal Reserve's actions and
22   communications to promote maximum employment, stable prices, and moderate long-

---

[1]   (http://www.federalreserve.gov/monetarypolicy/bst_crisisresponse.htm).

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1 term interest rates--the three economic goals the Congress has instructed the Federal
2 Reserve to pursue.
3
4 The Federal Reserve conducts the nation's monetary policy by managing the level of
5 short-term interest rates and influencing the overall availability and cost of credit in
6 the economy.[2]
7

8 One of the Fed's primary tools for conducting monetary policy is setting the federal

9 funds rate. The federal funds rate is the interest rate set by the Fed that banks and

10 credit unions charge each other for overnight loans of reserve balances. Traditionally

11 the federal funds rate directly influences short-term interest rates, such as the Treasury

12 bill rate and interest rates on savings and checking accounts. The federal funds rate

13 has a more indirect effect on long-term interest rates, such as the 30-Year Treasury

14 bond and private and corporate long-term debt. Long-term interest rates are set more

15 by market forces that influence the supply and demand of loanable funds.

16 **Q.** **Please continue with your discussion of the Fed's quantitative easing programs.**

17 A. QE1 was implemented from November 2008 through approximately March 2010.

18 During this time, the Fed cut its key Federal Funds Rate to nearly 0% and purchased

19 $1.25 trillion of mortgage-backed securities and $175 billion of agency debt

20 purchases. QE2 was implemented in November 2010 with the Fed announcing that it

21 would purchase an additional $600 billion of Treasury securities by the second quarter

22 of 2011.[3] Beginning in September 2011, the Fed initiated a "maturity extension

23 program" in which it sold or redeemed $667 billion of shorter-term Treasury securities

---

[2] From the Federal Reserve's web site and the section entitled "Monetary Policy".

[3] (http://www.federalreserve.gov/newsevents/press/monetary/20101103a.htm)
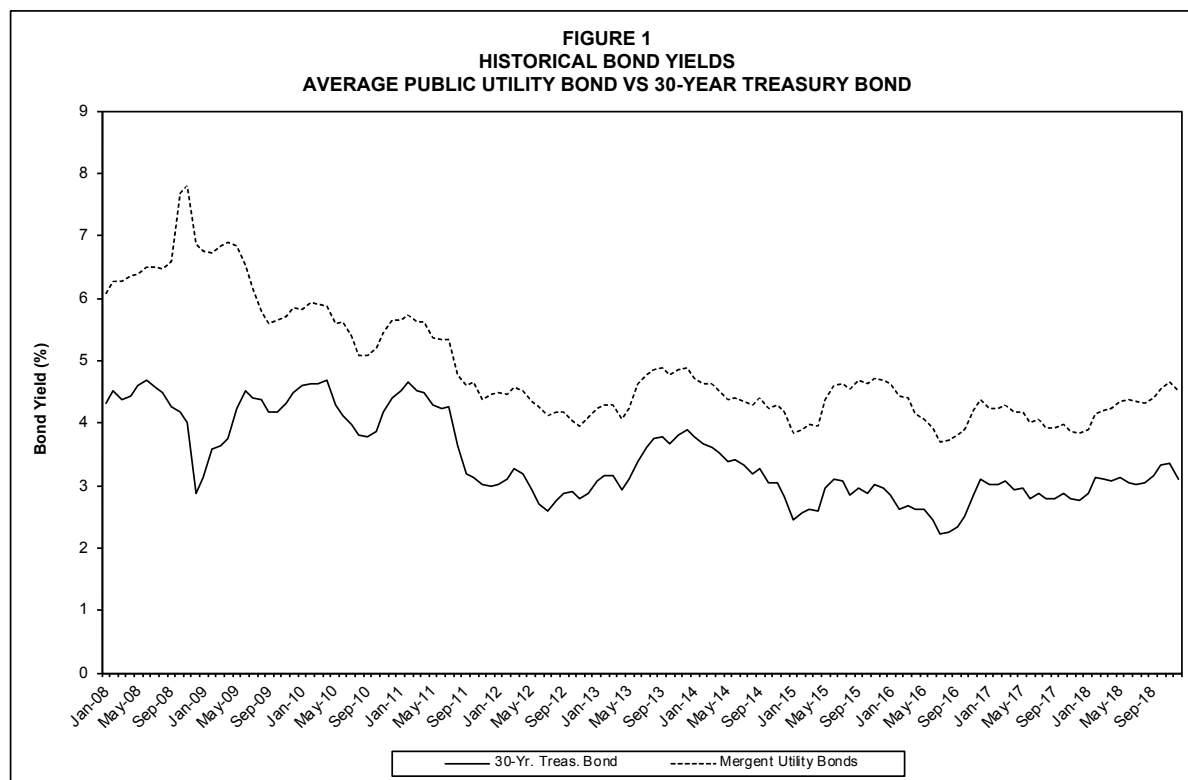
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1   and used the proceeds to buy longer-term Treasury securities. This program, also

2   known as "Operation Twist," was designed by the Fed to lower long-term interest rates

3   and support the economic recovery. Finally, QE3 began in September 2012 with the

4   Fed announcing an additional bond purchasing program of $40 billion per month of

5   agency mortgage backed securities.

6

7   The Fed began to pare back its purchases of securities in the last few years. On January

8   29, 2014 the Fed stated that beginning in February 2014 it would reduce its purchases

9   of long-term Treasury securities to $35 billion per month. The Fed continued to reduce

10   these purchases throughout the year and in a press release issued October 29, 2014

11   announced that it decided to close this asset purchase program in October.[4]

12

13   Figure 1 below presents a graph that tracks the 30-Year Treasury Bond yield and the

14   Mergent average utility bond yield.

---

[4]   (http://www.federalreserve.gov/newsevents/press/monetary/20141029a.htm)

1

FIGURE 1
HISTORICAL BOND YIELDS
AVERAGE PUBLIC UTILITY BOND VS 30-YEAR TREASURY BOND

2

3

4   The Fed's QE program and federal funds rate cuts were effective in lowering the long-

5   term cost of borrowing in the United States. The 30-Year Treasury Bond yield

6   declined from 5.11% in July 2007 to a low of 2.59% in July 2012. The average utility

7   bond yield also fell substantially, from 6.28% in July 2007 to 4.12% in July 2012.

8 **Q.**   **Has the Fed recently indicated any important changes to its monetary policy?**

9 A.   Yes. In March 2016, the Fed began to raise its target range for the federal funds rate,

10   increasing it to 1/4% to 1/2% from 0% to 1/4%. Since that time, the Fed increased the

11   federal funds rate several more times, with the most recent increase announced on

12   December 19, 2018. The federal funds rate now stands in the range of 2.25% - 2.50%.

13   In its press release dated December 19, 2018 the Fed stated the following:

1 "Consistent with its statutory mandate, the Committee seeks to foster maximum
2 employment and price stability. The Committee judges that some further gradual
3 increases in the target range for the federal funds rate will be consistent with sustained
4 expansion of economic activity, strong labor market conditions, and inflation near the
5 Committee's symmetric 2 percent objective over the medium term. The Committee
6 judges that risks to the economic outlook are roughly balanced, but will continue to
7 monitor global economic and financial developments and assess their implications for
8 the economic outlook.
9
10 In view of realized and expected labor market conditions and inflation, the Committee
11 decided to raise the target range for the federal funds rate to 2-1/4 to 2-1/2 percent.
12
13 In determining the timing and size of future adjustments to the target range for the
14 federal funds rate, the Committee will assess realized and expected economic
15 conditions relative to its maximum employment objective and its symmetric 2 percent
16 inflation objective. This assessment will take into account a wide range of information,
17 including measures of labor market conditions, indicators of inflation pressures and
18 inflation expectations, and readings on financial and international developments."
19
20 The Fed also provided certain economic projections that accompanied its December

21 19, 2018 press release showing the following:

22 • Projected federal funds rate of 2.4% for 2018, 2.9% for 2019, 3.1% for 2020,

23 and 2.8% for the longer run.

24 • Inflation running at 1.9% for 2018 and 2.0% for 2019 and 2020.

25 The Fed has signaled that it will likely continue increasing the federal funds rate this

26 year.

27 **Q.** **Mr. Baudino, why is it important to understand the Fed's actions over the last 10**
28 **years?**

29 A. The Fed's monetary policy actions since 2008 were deliberately undertaken to lower

30 interest rates and support economic recovery. Even with several recent increases in

31 the federal funds rate, the U.S. economy is still in a relatively low interest rate

32 environment. This environment has affected the common stocks of regulated utilities,

33 which are interest rate sensitive due to their high concentration of fixed assets. Thus,

1   as interest rates increase in the general economy, the prices of utility common stocks

2   fall and their dividend yields rise. Alternatively, as interest rates fall, the dividend

3   yields on utility common stocks tend to fall as their prices rise.

4 Q. **Are current interest rates indicative of investor expectations regarding the future**
5   **direction of interest rates?**

6 A. Yes. Securities markets are efficient and most likely reflect investors' expectations

7   about future interest rates. As Dr. Roger Morin pointed out in *New Regulatory*

8   *Finance:*

9   "A considerable body of empirical evidence indicates that U.S. capital markets
10   are efficient with respect to a broad set of information, including historical and
11   publicly available information."[5]
12
13   Dr. Morin also noted the following:

14   "There is extensive literature concerning the prediction of interest rates. From
15   this evidence, it appears that the no-change model of interest rates frequently
16   provides the most accurate forecasts of future interest rates while at other
17   times, the experts are more accurate. Naïve extrapolations of current interest
18   rates frequently outperform published forecasts. The literature suggests that on
19   balance, the bond market is very efficient in that it is difficult to consistently
20   forecast interest rates with greater accuracy than a no-change model. The latter
21   model provides similar, and in some cases, superior accuracy than professional
22   forecasts."[6]
23
24   Despite recent increases in the general level of short-term interest rates since the

25   second half of 2016, the U.S. economy continues to operate in a relatively low interest

26   rate environment. It is important to realize that investor expectations of higher future

27   interest rates, if any, are already likely already embodied in current securities prices,

28   which include debt securities and stock prices.

---

[5]   Morin, Roger A., *New Regulatory Finance,* Public Utilities Reports, Inc. (2006) at 279.

[6]   *Ibid* at 172.

1

2   Moreover, the current low interest rate environment still favors lower risk regulated

3   utilities. Although the Fed anticipates raising the federal funds rate later this year, I

4   still firmly believe that it would not be advisable for utility regulators to raise ROEs

5   in anticipation of higher forecasted long-term interest rates that may or may not occur.

6   Q.   **How has the increase in the federal funds rate since 2016 affected utility stocks in**
7   **terms of bond yields and stock prices?**

8   A.   Table 1 shows the federal funds rate, the yield on the 30-Year Treasury bond, the yield

9   on the average utility bond, and the Dow Jones Utility Average from January 2016

10   through December 2018.

TABLE 1 Bond Yields and DJUA			
	Federal Funds Rate %	30-Year Treasury %	Avg. Utility Bond %	DJUA

	Federal Funds Rate %	30-Year Treasury %	Avg. Utility Bond %	DJUA
2016				
January	0.34	2.86	4.62	611.35
February	0.38	2.62	4.44	620.70
March	0.36	2.68	4.40	668.57
April	0.37	2.62	4.16	654.44
May	0.37	2.63	4.06	659.44
June	0.38	2.45	3.93	716.52
July	0.39	2.23	3.70	711.42
August	0.40	2.26	3.73	666.87
September	0.40	2.35	3.80	668.13
October	0.40	2.50	3.90	675.23
November	0.41	2.86	4.21	632.67
December	0.54	3.11	4.39	645.86
2017				
January	0.65	3.02	4.24	668.87
February	0.66	3.03	4.25	703.16
March	0.79	3.08	4.30	697.28
April	0.90	2.94	4.19	704.35
May	0.91	2.96	4.19	726.62
June	1.04	2.80	4.01	706.91
July	1.15	2.88	4.06	726.48
August	1.16	2.80	3.92	743.24
September	1.15	2.78	3.93	723.60
October	1.15	2.88	3.97	753.20
November	1.16	2.80	3.88	770.39
December	1.30	2.77	3.85	723.37
2018				
January	1.41	2.88	3.91	699.25
February	1.42	3.13	4.15	668.81
March	1.51	3.09	4.21	692.63
April	1.69	3.07	4.24	707.01
May	1.70	3.13	4.36	695.21
June	1.82	3.05	4.37	711.64
July	1.91	3.01	4.38	724.24
August	1.91	3.04	4.33	726.41
September	1.95	3.15	4.41	720.60
October	2.19	3.34	4.56	733.84
November	2.20	3.36	4.65	741.92
December	2.27	3.10	4.51	712.93

Source: Federal Reserve, Mergent Bond Record, Yahoo! Finance

1

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1   Note that as the federal funds rate rose significantly from January through December

2   2017, the 30-Year Treasury yield declined. The DJUA rose throughout 2017, declined

3   sharply in December and through February 2018, then began to rise again through

4   November 2018. Although the federal funds rate steadily increased from 2016, the

5   30-Year Treasury yield was not much different in December 2018 than it was in

6   January 2017. The average utility bond yield was slightly lower in December 2018

7   (4.51%) than it was is January 2016 (4.62%), despite the steep increases in the federal

8   funds rate.

9   **Q.** **How does the investment community regard the electric utility industry**
10   **currently?**

11   A.   The Value Line Investment Survey's December 14, 2018 report on the Electric Utility

12   (Central) Industry concluded as follows:

13   "Stocks in the Electric Utility Industry have had a mixed performance so far in 2018,
14   but (as a group) have outpaced the broader market averages. *Utility equities attract*
15   *income-oriented investors for their above average dividend yields, and their defensive*
16   *characteristics are appealing to many investors in times of market turbulence.* Among
17   utility issues reviewed in Issue 5, the prices of OGE Energy and Ameren are up 22%
18   and 18%, respectively, year to date. Vectren stock has performed well, too (up 11%),
19   thanks to the pending takeover of the company by CenterPoint Energy.
20
21   Most equities in this Industry have a high valuation. Most are trading within their
22   2021-2023 Target Price Range, and some recent quotations are even near the upper
23   end of this range. The average dividend yield of stocks in the Electric Utility Industry
24   is 3.3%, which is low, by historical standards. Total return potential over the 3- to 5-
25   year period is just 3%, on average." (italics added)

26   **Q.** **Please provide an overview of the electric utility industry's credit ratings and**
27   **current authorized ROEs.**

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1 A.   The Edison Electric Institute ("EEI") assembles and publishes a quarterly credit

2   ratings and rate review of the electric industry on its web site.[7] For the third quarter

3   of 2018, EEI's analysis showed that for the 47 electric utilities included in its survey

4   analysis, the average Standard and Poor's credit rating was BBB+, with 55% of the

5   companies having credit ratings of BBB+/BBB. Entergy Corporation was one of the

6   17 companies in the survey with a BBB+ credit rating. Through the third quarter of

7   2018, 42% of the ratings actions were credit upgrades and 58% were downgrades.

8   This was a change from 2017, during which 73.6% of ratings actions were upgrades.

9   However, the average credit rating for the industry was unchanged from the 2017

10   rating of BBB+.

11

12   With respect to requested and allowed ROEs, EEI's rate review reported the following.

13

TABLE 2

2018
QUARTERLY REQUESTED
AND ALLOWED ROES

	Requested	Allowed
Quarter 1	10.02	9.58
Quarter 2	9.86	9.51
Quarter 3	10.25	9.53
Average	10.04	9.54

14

---

[7]   Please refer to EEI's web site and the page entitled *Electric Utility Industry Financial Data And Trend Analysis* and the 2018 Q3 – Financial Updates.

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1 **Q. What are the current credit ratings and bond ratings for ENO?**

2 A.   Standard and Poor's ("S&P") current issuer credit rating for ENO is BBB+, with a

3   senior secured bond rating of A. ENO's issuer credit rating from S&P is consistent

4   with the average electric utility credit rating reported by EEI above. Moody's long

5   term issuer rating for the Company is Ba1, with a first mortgage bond rating of Baa2.

6   Both Moody's and S&P have a stable credit outlook for ENO.

7

8   ENO provided S&P's September 21, 2018 credit rating report in response to discovery

9   in this case.[8] S&P's report noted the following with respect to ENO's business risk:

10   • Low-risk, fully rate-regulated utility concentrated in the city of New Orleans.

11   • Generally stable regulatory framework.

12   • Susceptible to weather-related disasters.

13   • Small customer base with modest growth.

14   • Limited regulatory or business diversity.

15

16   S&P also noted that ENO had "modestly negative cash flow resulting from tax reform

17   impacts."   With respect to the Company's ongoing operating revenues, S&P stated

18   that "[a]bout 80% of operating revenues are from residential and commercial

19   customers, providing a measure of stability to revenue and cash flow."

20

---

[8]   See ENO response to APC 2-4.

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1   Moody's October 13, 2017 credit opinion, also provided by ENO in response to

2   discovery, stated that ENO's "low lying service territory will continue to constrain its

3   credit rating going forward, despite the strength of the credit profile."

4 **Q.**   **Considering the credit reports from Moody's and S&P, what are your**
5   **conclusions and recommendations to the Council with respect to the approach to**
6   **estimating the allowed ROE for ENO in this proceeding?**

7 A.   I recommend that the Council approach its allowed ROE using a proxy group of

8   investment grade regulated electric and gas companies. Given that ENO's BBB+ S&P

9   credit rating is equivalent to the average electric industry credit rating, it is reasonable

10   to assume that equity investors would view the Company as having a similar

11   risk/return relationship as the industry in general. For purposes of this case, I have

12   adopted the proxy group used by ENO witness Hevert to estimate the Company's cost

13   of equity in this proceeding.

14   **III. DETERMINATION OF FAIR RATE OF RETURN**

15 **Q.**   **Please describe the methods you employed in estimating a fair rate of return for**
16   **ENO.**

17 A.   I employed a Discounted Cash Flow ("DCF") analysis using the proxy group of 22

18   regulated electric utilities used by Mr. Hevert in the ROE analysis he submitted on

19   behalf of the Company. My DCF analysis is the standard constant growth form of the

20   model that employs four different growth rate forecasts from the Value Line

21   Investment Survey, Yahoo! Finance, and Zacks. I also employed Capital Asset Pricing

22   Model ("CAPM") analyses using both historical and forward-looking data. The results

23   from the CAPM tend to support the reasonableness of my DCF results as well as my

24   ROE recommendation for ENO.

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1 **Q.** **What are the main guidelines to which you adhere in estimating the cost of equity**
2 **for a firm?**

3 A. The estimated cost of equity should be comparable to the returns of other firms with

4 similar risk structures and should be sufficient for the firm to attract capital. These are

5 the basic standards set out by the United States Supreme Court in Federal Power

6 Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944) and Bluefield W.W. & Improv.

7 Co. v. Public Service Comm'n, 262 U.S. 679 (1922).

8

9 From an economist's perspective, the notion of "opportunity cost" plays a vital role in

10 estimating the return on equity. One measures the opportunity cost of an investment

11 equal to what one would have obtained in the next best alternative. For example, let

12 us suppose that an investor decides to purchase the stock of a publicly traded electric

13 utility. That investor made the decision based on the expectation of dividend payments

14 and perhaps some appreciation in the stock's value over time; however, that investor's

15 opportunity cost is measured by what she or he could have invested in as the next best

16 alternative. That alternative could have been another utility stock, a utility bond, a

17 mutual fund, a money market fund, or any other number of investment vehicles.

18

19 The key determinant in deciding whether to invest, however, is based on comparative

20 levels of risk. Our hypothetical investor would not invest in a particular electric

21 company stock if it offered a return lower than other investments of similar risk. The

22 opportunity cost simply would not justify such an investment. Thus, the task for the

23 rate of return analyst is to estimate a return that is equal to the return being offered by

24 other risk-comparable firms.

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1 **Q.** **What are the major types of risk faced by utility companies?**

2 A. In general, risk associated with the holding of common stock can be separated into

3 three major categories: business risk, financial risk, and liquidity risk. Business risk

4 refers to risks inherent in the operation of the business. Volatility of the firm's sales,

5 long-term demand for its product(s), the amount of operating leverage, and quality of

6 management are all factors that affect business risk. The quality of regulation at the

7 state and federal levels also plays an important role in business risk for regulated utility

8 companies.

9

10 Financial risk refers to the impact on a firm's future cash flows from the use of debt in

11 the capital structure. Interest payments to bondholders represent a prior call on the

12 firm's cash flows and must be met before income is available to the common

13 shareholders. Additional debt means additional variability in the firm's earnings,

14 leading to additional risk.

15

16 Liquidity risk refers to the ability of an investor to quickly sell an investment without

17 a substantial price concession. The easier it is for an investor to sell an investment for

18 cash, the lower the liquidity risk will be. Stock markets, such as the New York and

19 American Stock Exchanges, help ease liquidity risk substantially. Investors who own

20 stocks that are traded in these markets know on a daily basis what the market prices of

21 their investments are and that they can sell these investments fairly quickly. Many

22 electric utility stocks are traded on the New York Stock Exchange and are considered

23 liquid investments.

1 Q. **Are there any sources available to investors that quantify the total risk of a**
2   **company?**

3 A. Bond and credit ratings are tools that investors use to assess the risk comparability of

4   firms. Bond rating agencies such as Moody's and Standard and Poor's perform

5   detailed analyses of factors that contribute to the risk of an investment. The result of

6   their analyses is a bond and/or credit rating that reflect these risks.

7 **Discounted Cash Flow ("DCF") Model**

8 Q. **Please describe the basic DCF approach.**

9 A. The basic DCF approach is rooted in valuation theory. It is based on the premise that

10   the value of a financial asset is determined by its ability to generate future net cash

11   flows. In the case of a common stock, those future cash flows generally take the form

12   of dividends and appreciation in stock price. The value of the stock to investors is the

13   discounted present value of future cash flows. The general equation then is:

14
$$V = \frac{R}{(1+r)} + \frac{R}{(1+r)^2} + \frac{R}{(1+r)^3} + \cdots \frac{R}{(1+r)^n}$$

15   *Where:*   *V = asset value*
16   *R = yearly cash flows*
17   *r = discount rate*

18   This is no different from determining the value of any asset from an economic point

19   of view; however, the commonly employed DCF model makes certain simplifying

20   assumptions. One is that the stream of income from the equity share is assumed to be

21   perpetual; that is, there is no salvage or residual value at the end of some maturity date

22   (as is the case with a bond). Another important assumption is that financial markets

23   are reasonably efficient; that is, they correctly evaluate the cash flows relative to the

24   appropriate discount rate, thus rendering the stock price efficient relative to other

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1   alternatives. Finally, the model I typically employ also assumes a constant growth rate

2   in dividends. The fundamental relationship employed in the DCF method is described

3   by the formula:

4    $$k = {D_1}/{P_0} + g$$

5   *Where:* D_1 = *the next period dividend*
6   P_0 = *current stock price*
7   g = *expected growth rate*
8   k = *investor-required return*

9   Under the formula, it is apparent that "k" must reflect the investors' expected return.

10   Use of the DCF method to determine an investor-required return is complicated by the

11   need to express investors' expectations relative to dividends, earnings, and book value

12   over an infinite time horizon. Financial theory suggests that stockholders purchase

13   common stock on the assumption that there will be some change in the rate of dividend

14   payments over time. We assume that the rate of growth in dividends is constant over

15   the assumed time horizon, but the model could easily handle varying growth rates if

16   we knew what they were. Finally, the relevant time frame is prospective rather than

17   retrospective.

18   **Q.**   **What was your first step in conducting your DCF analysis for ENO?**

19   A.   My first step was to choose a proxy group of companies with a risk profile that is

20   reasonably similar to ENO. For purposes of this case, it is reasonable to proceed with

21   the proxy group of 22 companies shown by Mr. Hevert on page 14, Table 2 of his

22   Revised Direct Testimony.

23   **Q.**   **What was your first step in determining the DCF return on equity for the proxy**
24   **group?**

1   A.   I first determined the current dividend yield, D_1/P_0, from the basic equation. My

2   general practice is to use six months as the most reasonable period over which to

3   estimate the dividend yield. The six-month period I used covered the months from

4   July through December 2018. I obtained historical prices and dividends from Yahoo!

5   Finance. The annualized dividend divided by the average monthly price represents

6   the average dividend yield for each month in the period.

7

8   The resulting average dividend yield for the comparison group is 3.26%. These

9   calculations are shown in Exhibit ____(RAB-2).

10

11   Exhibit ____(RAB-2) also shows the monthly dividend yield for the proxy group. The

12   monthly average dividend yield ranged from 3.23% (December) to 3.30% (July), so

13   there was not significant variation in the average proxy group dividend yield over the

14   six-month period.

15   Q.   **Having established the average dividend yield, how did you determine the**
16   **investors' expected growth rate for the electric comparison group?**

17   A.   The investors' expected growth rate, in theory, correctly forecasts the constant rate of

18   growth in dividends. The dividend growth rate is a function of earnings growth and

19   the payout ratio, neither of which is known precisely for the future. We refer to a

20   perpetual growth rate since the DCF model has no arbitrary cut-off point. We must

21   estimate the investors' expected growth rate because there is no way to know with

22   absolute certainty what investors expect the growth rate to be in the short term, much

23   less in perpetuity.

24

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1   For my analysis in this proceeding, I used three major sources of analysts' forecasts

2   for growth. These sources are The Value Line Investment Survey, Zacks, and Yahoo!

3   Finance. These are the sources I typically use for estimating growth for my DCF

4   calculations.

5   **Q.   Please briefly describe Value Line, Zacks, and Yahoo! Finance.**

6   A.   The Value Line Investment Survey is a widely used and respected source of investor

7   information that covers approximately 1,700 companies in its Standard Edition and

8   several thousand in its Plus Edition. It is updated quarterly and probably represents

9   the most comprehensive of all investment information services. It provides both

10   historical and forecasted information on a number of important data elements. Value

11   Line neither participates in financial markets as a broker nor works for the utility

12   industry in any capacity of which I am aware.

13

14   Zacks gathers opinions from a variety of analysts on earnings growth forecasts for

15   numerous firms including regulated electric utilities. The estimates of the analysts

16   responding are combined to produce consensus average estimates of earnings growth.

17   I obtained Zacks' earnings growth forecasts from its web site.

18

19   Like Zacks, Yahoo! Finance also compiles reports consensus analysts' forecasts of

20   earnings growth.

21   **Q.   Why did you rely on analysts' forecasts in your analysis?**

22   A.   Return on equity analysis is a forward-looking process. Five-year or ten-year

23   historical growth rates may not accurately represent investor expectations for dividend

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1   growth. Analysts' forecasts for earnings and dividend growth provide better proxies

2   for the expected growth component in the DCF model than historical growth rates.

3   Analysts' forecasts are also widely available to investors and one can reasonably

4   assume that they influence investor expectations.

5 **Q.**   **Please explain how you used analysts' dividend and earnings growth forecasts in**
6   **your constant growth DCF analysis.**

7 Q.   Page 1, Columns (1) through (4) of Exhibit ___(RAB-3) shows the forecasted dividend

8   and earnings growth rates from Value Line and the earnings growth forecasts from

9   Zacks and Yahoo! Finance. It is important to include dividend growth forecasts in the

10   DCF model since the model calls for forecasted cash flows received by the investor.

11   Value Line is the only source of which I am aware that forecasts dividend growth and

12   my approach gives this forecast equal weight with the three earnings growth forecasts.

13 **Q.**   **How did you proceed to determine the DCF return of equity for the comparison**
14   **group?**

15 A.   To estimate the expected dividend yield (D_1), the current dividend yield must be

16   moved forward in time to account for dividend increases over the next twelve months.

17   I estimated the expected dividend yield by multiplying the current dividend yield by

18   one plus one-half the expected growth rate.

19

20   Page 2 of Exhibit ____(RAB-3) presents my standard method of calculating dividend

21   yields, growth rates, and return on equity for the proxy group of companies. The DCF

22   Return on Equity Calculation section shows the application of each of four growth

23   rates I used in my analysis to the current group dividend yield of 3.26% to calculate

24   the expected dividend yield. I then added the expected growth rates to the expected

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1   dividend yield. In evaluating investor expected growth rates, I use both the average

2   and the median values for the group under consideration. Method 1 uses the group

3   average expected growth rate and Method 2 uses the group median expected growth

4   rate.

5 **Q.**   **What are the results of your constant growth DCF model?**

6 A.   For the average growth rates in Method 1, the results range from 8.71% to 9.36%, with

7   the average of these results being 9.05%. Using the median growth rates in Method 2,

8   the results range from 8.52% to 9.36%, with the average of these results being 8.97%.

9 **Capital Asset Pricing Model**

10 **Q.**   **Briefly summarize the Capital Asset Pricing Model ("CAPM") approach.**

11 A.   The theory underlying the CAPM approach is that investors, through diversified

12   portfolios, may combine assets to minimize the total risk of the portfolio.

13   Diversification allows investors to diversify away all risks specific to a particular

14   company and be left only with market risk that affects all companies. Thus, the CAPM

15   theory identifies two types of risks for a security: company-specific risk and market

16   risk. Company-specific risk includes such events as strikes, management errors,

17   marketing failures, lawsuits, and other events that are unique to a particular firm.

18   Market risk includes inflation, business cycles, war, variations in interest rates, and

19   changes in consumer confidence. Market risk tends to affect all stocks and cannot be

20   diversified away. The idea behind the CAPM is that diversified investors are rewarded

21   with returns based on market risk.

22

1   Within the CAPM framework, the expected return on a security is equal to the risk-

2   free rate of return plus a risk premium that is proportional to the security's market, or

3   non-diversifiable, risk. Beta is the factor that reflects the inherent market risk of a

4   security and measures the volatility of a security relative to the overall market for

5   securities. For example, a stock with a beta of 1.0 indicates that if the market rises by

6   15%, that stock will also rise by 15%. This stock moves in tandem with movements

7   in the overall market. Stocks with a beta of 0.5 will only rise or fall 50% as much as

8   the overall market. So with an increase in the market of 15%, this stock will only rise

9   7.5%. Stocks with betas greater than 1.0 will rise and fall more than the overall market.

10   Thus, beta is the measure of the relative risk of individual securities vis-à-vis the

11   market.

12

13   Based on the foregoing discussion, the equation for determining the return for a

14   security in the CAPM framework is:

15

16    $$K = Rf + \beta(MRP)$$

17   *Where:*   *K*   *= Required Return on equity*
18   *Rf*   *= Risk-free rate*
19   *MRP = Market risk premium*
20   *β*   *= Beta*

21

22   This equation tells us about the risk/return relationship posited by the CAPM.

23   Investors are risk averse and will only accept higher risk if they expect to receive

24   higher returns. These returns can be determined in relation to a stock's beta and the

25   market risk premium. The general level of risk aversion in the economy determines

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1		the market risk premium. If the risk-free rate of return is 3.0% and the required return

1   the market risk premium. If the risk-free rate of return is 3.0% and the required return

2   on the total market is 15%, then the risk premium is 12%. Any stock's required return

3   can be determined by multiplying its beta by the market risk premium. Stocks with

4   betas greater than 1.0 are considered riskier than the overall market and will have

5   higher required returns. Conversely, stocks with betas less than 1.0 will have required

6   returns lower than the market.

7 **Q.** **In general, are there concerns regarding the use of the CAPM in estimating the**
8   **return on equity?**

9 A. Yes. There is some controversy surrounding the use of the CAPM.[9] There is evidence

10   that beta is not the primary factor in determining the risk of a security. For example,

11   Value Line's "Safety Rank" is a measure of total risk, not its calculated beta

12   coefficient. Beta coefficients usually describe only a small amount of total investment

13   risk.

14

15   There is also substantial judgment involved in estimating the required market return.

16   In theory, the CAPM requires an estimate of the return on the total market for

17   investments, including stocks, bonds, real estate, etc. It is nearly impossible for the

18   analyst to estimate such a broad-based return. Often in utility cases, a market return

19   is estimated using the S&P 500 or the return on Value Line's stock market composite.

20   However, these are limited sources of information with respect to estimating the

21   investor's required return for all investments. In practice, the total market return

---

[9] For a more complete discussion of some of the controversy surrounding the use of the CAPM, refer to *A Random Walk Down Wall Street* by Burton Malkiel, pp. 219-223, 11th edition.

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1   estimate faces significant limitations to its estimation and, ultimately, its usefulness in

2   quantifying the investor required ROE.

3

4   In the final analysis, a considerable amount of judgment must be employed in

5   determining the risk-free rate and market return portions of the CAPM equation. The

6   analyst's application of judgment can significantly influence the results obtained from

7   the CAPM. My experience with the CAPM indicates that it is prudent to use a wide

8   variety of data in estimating investor-required returns. Of course, the range of results

9   may also be wide, indicating the difficulty in obtaining a reliable estimate from the

10   CAPM.

11   **Q.   How did you estimate the market return portion of the CAPM?**

12   A.   The first source I used was the Value Line Investment Analyzer Plus Edition, for

13   December 27, 2018. This edition covers several thousand stocks. The Value Line

14   Investment Analyzer provides a summary statistical report detailing, among other

15   things, forecasted growth rates for earnings and book value for the companies Value

16   Line follows as well as the projected total annual return over the next 3 to 5 years. I

17   present these growth rates and Value Line's projected annual return on page 2 of

18   Exhibit ____(RAB-4). I included median earnings and book value growth rates. The

19   estimated market returns using Value Line's market data range from 11.50% to

20   16.00%. The average of these market returns is 13.75%.

21   **Q.   Why did you use median growth rate estimates rather than the average growth**
22   **rate estimates for the Value Line companies?**

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1   A.   Using median growth rates is likely a more accurate approach to estimating the central

2   tendency of Value Line's large data set compared to the average growth rates. Average

3   earnings and book value growth rates may be unduly influenced by very high or very

4   low 3 - 5-year growth rates that are unsustainable in the long run. For example, Value

5   Line's Statistical Summary shows both the highest and lowest value for earnings and

6   book value growth forecasts. For earnings growth, Value Line showed the highest

7   earnings growth forecast to be 93.5% and the lowest growth rate to be -31%. With

8   respect to book value, the highest growth rate was 85.5% and the lowest was a -30%.

9   None of these growth rate projections is compatible with long-run growth prospects

10   for the market as a whole. The median growth rate is not influenced by such extremes

11   because it represents the middle value of a very wide range of earnings growth rates.

12   **Q.**   **Please continue with your market return analysis.**

13   A.   I also considered a supplemental check to the Value Line projected market return

14   estimates. Duff and Phelps compiled a study of historical returns on the stock market

15   in its 2018 SBBI Yearbook. Some analysts employ this historical data to estimate the

16   market risk premium of stocks over the risk-free rate. The assumption is that a risk

17   premium calculated over a long period of time is reflective of investor expectations

18   going forward. Exhibit ____(RAB-5) presents the calculation of the market returns

19   using the historical data.

20   **Q.**   **Please explain how this historical risk premium is calculated.**

21   A.   Exhibit ____(RAB-5) shows both the geometric and arithmetic average of yearly

22   historical stock market returns over the historical period from 1926 - 2017. The

23   average annual income return for 20-year Treasury bond is subtracted from these

1   historical stocks returns to obtain the historical market risk premium of stock returns

2   over long-term Treasury bond income returns. The historical market risk premium

3   range is 5.2% - 7.1%.

4 **Q.   Did you add an additional measure of the historical risk premium in this case?**

5 A.   Yes. Duff and Phelps reported the results of a study by Dr. Roger Ibbotson and Dr.

6   Peng Chen indicating that the historical risk premium of stock returns over long-term

7   government bond returns has been significantly influenced upward by substantial

8   growth in the price/earnings ("P/E") ratio for stocks from 1980 through 2001.[10] Duff

9   and Phelps noted that this growth in the P/E ratio for stocks was subtracted out of the

10   historical risk premium because "it is not believed that P/E will continue to increase

11   in the future." The adjusted historical arithmetic market risk premium is 6.04%, which

12   I have also included in Exhibit ____(RAB-5). This risk premium estimate falls near

13   the middle of the market risk premium range.

14 **Q.   How did you determine the risk free rate?**

15 A.   I used the average yields on the 30-year Treasury bond and five-year Treasury note

16   over the six-month period from July through December 2018. The 30-year Treasury

17   bond is often used by rate of return analysts as the risk-free rate, but it contains a

18   significant amount of interest rate risk. The five-year Treasury note carries less

19   interest rate risk than the 30-year bond and is more stable than short-term Treasury

20   bills. Therefore, I have employed both securities as proxies for the risk-free rate of

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[10]   *2018 SBBI Yearbook,* Duff and Phelps, pp. 10-28 through 10-30.

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1   return. This approach provides a reasonable range over which the CAPM return on

2   equity may be estimated.

3   **Q.   How did you determine the value for beta?**

4   A.   I obtained the betas for the companies in the electric company comparison group from

5   most recent Value Line reports. The average of the Value Line betas for the

6   comparison group is 0.60.

7   **Q.   Please summarize the CAPM results.**

8   A.   From Exhibit ____(RAB-4), my forward-looking CAPM return on equity estimates

9   are 9.34% - 9.47%. Using historical risk premiums in Exhibit ____(RAB-5), the

10   CAPM results are 6.26% - 7.39%.

11 **Conclusions and Recommendations**

12 **Q.   Please summarize the cost of equity results for your DCF and CAPM analyses.**

13 A.   Table 3 below summarizes my return on equity results using the DCF and CAPM for

14   my comparison group of companies.

15

16

17

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21

TABLE 3
SUMMARY OF ROE ESTIMATES

DCF Methodology:	
Average Growth Rates	
- High	9.36%
- Low	8.71%
- Average	9.05%
Median Growth Rates:	
- High	9.36%
- Low	8.52%
- Average	8.97%
CAPM:	
- 5-Year Treasury Bond	9.34%
- 30-Year Treasury Bond	9.47%
- Historical Returns	6.26% - 7.39%

1

2 **Q. What is your recommended return on equity for ENO?**

3 A. My independent analyses of the return on equity for ENO indicate a reasonable

4   investor required return on equity ("ROE") in the range of 8.70% - 9.35% based on

5   the DCF analyses I performed. My recommended ROE for ENO in this proceeding

6   would be 9.35%. My 9.35% ROE recommendation represents the top of the range of

7   DCF estimates and is also reasonably consistent with my CAPM results as well.

8

9   ENO's S&P credit rating of BBB+ is consistent with the average credit rating for

10   regulated electric utilities at this time. Given recent concerns with increasing interest

11   rates near the end of 2018 and for this year as well, I chose to place my recommended

12   ROE at the top of the DCF range for purposes of this case. Moreover, given ENO's

13   split credit rating from S&P and Moody's, it is my view that placing my recommended

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1   ROE at the top of the DCF range more than compensates for Moody's lower credit

2   rating.

3 **Q.** **On page 44, lines 10 through 14 of his Revised Direct Testimony Mr. Hevert**
4   **testified that S&P's BBB+ rating reflects ENO's affiliation with Entergy**
5   **Corporation and that its stand-alone credit rating would be two notches lower**
6   **(BBB-). Is this a valid reason for setting ENO's allowed ROE higher than the**
7   **proxy group average in this proceeding?**

8 A. No. ENO's lower stand-alone credit rating does not justify a higher ROE than the

9   proxy group average ROE. ENO's credit and risk profiles benefit from its affiliation

10   with Entergy Corporation and its ROE should fully reflect that relationship. ENO is

11   not, in fact, a stand-alone entity and should not be treated as such for purposes of the

12   Council's allowed ROE in this proceeding.

13 **Q.** **Did you review ENO's requested cost of long-term debt?**

14 A. Yes. I reviewed the components of ENO's requested long-term debt cost and find that

15   ENO's requested cost of debt is reasonable and should be adopted by the Council.

16 **Q.** **Did you address the Company's requested capital structure?**

17 A. No. Mr. Kollen addresses ENO's capital structure and the inclusion of short-term debt

18   in his Direct Testimony. Mr. Kollen also quantifies the effect of including short-term

19   debt in ENO's capital structure and the revenue requirement impact of my

20   recommended 9.35% ROE.

21   **IV. RESPONSE TO ENO ROE TESTIMONY**

22 **Q.** **Have you reviewed the Revised Direct Testimony of Mr. Robert Hevert?**

23 A. Yes.

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1 Q. **Please summarize Mr. Hevert's testimony and approach to return on equity.**

2 A. Mr. Hevert employed four methods to estimate the investor required rate of return for

3   ENO: (1) the constant growth DCF model, (2) two multi-stage DCF models, (3) the

4   CAPM, and (4) the bond yield plus risk premium model.

5

6   For his constant growth DCF approach, he used Value Line, First Call, and Zacks for

7   the investor expected growth rate. For the proxy group, Mr. Hevert's mean growth

8   rate ROE results ranged from 9.16% to 9.29%.

9

10   Regarding his multi-stage DCF analyses, Mr. Hevert's models are comprised of three

11   distinct stages with assumptions regarding growth rates and payout ratio changes. Mr.

12   Hevert used his own forecast of growth in nominal Gross Domestic Product ("GDP")

13   for his long-term growth rate.   The mean ROE results for Mr. Hevert's multi-stage

14   DCF methods ranged from 9.67% to 10.02%.

15

16   With respect to the CAPM, Mr. Hevert utilized a current and projected yield on the

17   30-Year Treasury bond for his risk-free rate. He also used beta values from both Value

18   Line and Bloomberg. Using the current Treasury bond yield of 3.11%, his CAPM

19   results ranged from 10.13% to 11.91%. Using the near-term projected Treasury yield

20   of 3.48%, his CAPM results ranged from 10.5% to 12.28%.

21

22   Finally, Mr. Hevert's bond yield plus risk premium analyses employed current and

23   long-term projected 30-Year Treasury bond yields ranging from 3.11% to 4.30% and

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1   commission authorized returns on equity from January 1980 through June 15, 2018.

2   Mr. Hevert's ROE results using this method were 9.96% - 10.28%.

3 **Q.** **Before you proceed to the particulars of your review of Mr. Hevert's testimony,**
4   **what is your overall conclusion with respect to Mr. Hevert's recommended ROE**
5   **range?**

6 A. Mr. Hevert's recommended ROE range of 10.25% - 11.00% fails to reflect the full

7   range of results from his analyses. His mean DCF results, which are fairly consistent

8   with mine, were completely excluded from his range of recommendations. This means

9   that Mr. Hevert rejected the results from two of his four ROE methodologies, choosing

10   instead to mainly rely on the results from the CAPM. To put this another way, consider

11   the following:

12   • Mr. Hevert effectively rejected the average (mean) results from the constant

13   growth DCF in total.

14   • Mr. Hevert effectively rejected the mean results from his multi-stage DCF

15   models in total.

16   • Mr. Hevert effectively rejected two of the three bond yield plus risk premium

17   results (9.96% - 10.03%).

18

19   Mr. Hevert also apparently rejected the CAPM results that used the average Value

20   Line beta, which ranged from 11.66% - 12.28%. Indeed, these results are so

21   unreasonably high that they should be rejected out of hand. Mr. Hevert's own

22   historical data presented in his Exhibit RBH-7 show that more recent allowed returns

23   are far below these calculated returns, making them extreme outliers. I will explain

24   this in more detail later in my response to Mr. Hevert.

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1

2   What we are left with to understand the basis for Mr. Hevert's ROE range, then, is the

3   CAPM results from the average Bloomberg beta (10.13% - 10.71%) and the upper end

4   of the bond yield plus risk premium result of 10.28% using a forecasted Treasury bond

5   yield. I was not able to determine how he obtained the 11.0% high end of his

6   recommended ROE range. Mr. Hevert's recommended ROE of 10.75% for ENO is

7   slightly higher than the upper bound of his CAPM results using the Bloomberg beta.

8

9   In conclusion, although Mr. Hevert presented four different approaches to ROE

10   analysis, he primarily relied on the results of one method, the CAPM.

11   Q.   **Is it appropriate for Mr. Hevert to reject the mean results from his constant**
12   **growth and multi-stage DCF analyses?**

13   A.   No, definitely not. It is incorrect for Mr. Hevert to exclude the mean results of all of

14   the DCF models in his recommended ROE for ENO. The constant growth DCF model

15   utilizes verifiable public information with respect to investor return requirements for

16   electric utilities. Current stock prices are the best indicators we have of investor

17   expectations and analysts' earnings and dividend growth forecasts may reasonably be

18   assumed to influence investors' required ROEs. Simply discarding this important

19   publicly available information, as Mr. Hevert has done, serves to significantly

20   overstate his recommended investor required return for the average regulated utility

21   company.   The DCF model currently shows that investor required returns are

22   considerably lower for utility stocks given their safety and security relative to the stock

23   market as a whole.

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1   **Q.**   **Is using the high mean results from the DCF models appropriate?**

2   A.   No. Mr. Hevert's high mean results simply use the highest ROE for each company in

3   the proxy group, which is driven by the highest expected growth rate. There is no

4   basis for assuming that investors are more likely to expect the highest growth rate from

5   the three sources used by Mr. Hevert. The average of the three sources is a far more

6   likely and reasonable assumption. Further, the proxy group high mean is unduly

7   influenced by Avangrid, which has a high ROE result of over 16%.

8

9   Referring to Mr. Hevert's Tables 3 and 4, there is not one DCF mean ROE result that

10   supports the low end of Mr. Hevert's recommended range of 10.25%. In addition, the

11   high mean results for Mr. Hevert's multi-stage DCF models cannot be used because

12   they are greatly overstated due to an excessively high GDP growth forecast that Mr.

13   Hevert developed himself. I will address this in more detail later in my testimony.

14   **Q.**   **On page 23 of his Revised Direct Testimony, Mr. Hevert described two DCF**
15   **model assumptions that he claimed "are not consistent with current market**
16   **conditions." Please summarize the assumptions addressed by Mr. Hevert.**

17   A.   Mr. Hevert addressed the following assumptions:

18   • A constant payout ratio

19   • A constant price/earnings ("P/E") ratio

20   • Constant required return on equity

21   These are three of the basic assumptions that underlie the DCF model. The payout

22   ratio refers to the percentage of earnings that are paid out in dividends. For example,

23   if a utility company earns $1.00 per share and pays out $0.80 per share in dividends,

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1   then the payout ratio is 0.80. The constant growth DCF analysis assumes that this ratio

2   is constant over time and is a very reasonable simplifying assumption.

3

4   The DCF model also assumes that the investor has a constant required return on equity

5   over time. This is a logical assumption given that investors base their investment

6   decisions on assessing expectations of the future outcomes using a current market

7   required return on equity.

8 **Q.** **Did Mr. Hevert provide sufficient basis for the Council to question the DCF**
9   **results?**

10 A. No, he did not. Before I proceed to a more detailed response to Mr. Hevert's criticisms

11   of the DCF model's assumptions, it is important to realize that none of the models Mr.

12   Hevert and I use to estimate the investor required ROE strictly adhere to their

13   underlying assumptions 100% of the time. The DCF, CAPM, and risk premium

14   models all operate with certain simplifying assumptions. Earlier in my testimony I

15   pointed out the limitations of the CAPM that must be considered in assessing its

16   effectiveness relative to the DCF model.   One of those limitations is estimating the

17   market required rate of return. Estimating the market required rate of return requires

18   considerable judgment on the part of the analyst, judgment that may result in a wide

19   range of possible returns. And in fact, Mr. Hevert and I used very different estimates

20   of the market rate of return that caused our CAPM results to differ considerably.   I

21   will address the serious underlying problems with Mr. Hevert's CAPM later in my

22   testimony.

23

1   I suggest that the Council keep in mind that no ROE estimation model strictly adheres

2   to its underlying assumptions all the time.

3 **Q.**   **Please continue with your response to Mr. Hevert's criticism of the DCF model's**
4   **assumptions.**

5 A.   With respect to the assumption of a constant payout ratio, simply because the industry's

6   current payout ratio may be above or below the long-term average payout ratio does

7   not mean that the DCF results based on current data are questionable and should be

8   thrown out completely. This is also the case with respect to the industry's

9   price/earnings ("P/E") ratio and the assumption of a constant expected future return.

10   As I have stated previously in my testimony, capital markets are efficient and can be

11   assumed to reflect investor preferences in the prices they are willing and able to pay

12   for a regulated utility's common stock. This includes publicly available information

13   to which investors have access including payout and P/E ratios. The current stock

14   price, then, is reflective of the discounted future cash flows to the investor in the form

15   of dividends as well as the expected price of the stock when it is sold. It does not make

16   sense for a rational investor to expect a capital loss in the future based on the price that

17   investor pays today. What this means is that it is reasonable to assume that current

18   stock prices are reflective of investors' required ROE and that the DCF model can

19   provide valid information to the Council in its determination of the allowed ROE for

20   regulated utilities generally. Similarly, payout ratios will also vary around their long-

21   term historical averages based on current market conditions, but this by no means

22   invalidates the DCF model results.

23 **Q.**   **On page 23 of his Revised Direct Testimony, Mr. Hevert testified that the**
24   **"Federal Reserve's process of policy normalization, including the uncertainty**

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1   surrounding the "unwinding" of the approximately $4 trillion of assets put on its
2   balance sheet during its "Quantitative Easing" initiative introduce a degree of
3   risk and a likelihood of increasing interest rates not present in the current
4   market." Do you agree with this statement?

5   A. No. Instead, it is more likely than not that investors have taken this information into

6   account since it is already public knowledge given the Federal Reserve's statements

7   regarding its plans for unwinding its Quantitative Easing program and increasing

8   short-term interest rates. In fact, Mr. Hevert referred to these statements on page 72

9   of his Revised Direct Testimony.

10 Q. On pages 23 and 24 of his Revised Direct Testimony, Mr. Hevert testified that
11   since 1980 only eight utility rate cases included an authorized ROE of less than
12   9.0% and that for vertically integrated utilities there were no authorized ROEs
13   less than 9.0%. Please respond to Mr. Hevert's testimony on this point.

14 A. Including rate cases since 1980 is, quite frankly, an irrelevant exercise because it

15   places too much emphasis on stale data. In the 1980s and 1990s interest rates and

16   allowed ROEs were far higher than they have been in the last few years. Consider the

17   following information I developed using the information in Mr. Hevert's Exhibit RBH-

18   7:

19   • From 1980 through 1989, the average awarded ROE was 14.80% and the

20   average 30-Year Treasury bond yield was 11.35%.

21   • From 1990 through 1999, the average awarded ROE was 11.91% and the

22   average 30-Year Treasury bond yield was 7.51%.

23   • From 2000 through 2009, the average awarded ROE was 10.62% and the

24   average 30-Year Treasury bond yield was 4.81%.

25   Note that this data includes all ROE awards since 1980, not just those for vertically

26   integrated companies. Nonetheless, these averages give the Council a general picture

1   of the interest rate and ROE levels from the 1980s, 1990s, and 2000s and represent

2   1,218 of the 1,556 observations in Mr. Hevert's data set in Exhibit RBH-7. They are

3   in no way indicative of investor required returns today given how much higher interest

4   rates were during these prior periods. According to Mr. Hevert's data, since January

5   2016 the average awarded ROE was 9.63% and in 2018 the average allowed ROE was

6   9.58%. These more recent ROE awards show how grossly overstated Mr. Hevert's

7   10.75% ROE recommendation is in today's environment.

8 **Q.   Considering the foregoing discussion, please summarize your conclusions with**
9   **respect to Mr. Hevert's recommended ROE range and his ROE recommendation**
10   **for ENO.**

11 A.   I strongly recommend that the Council reject Mr. Hevert's recommended ROE range

12   and his recommended ROE of 10.75%. Mr. Hevert's ROE range omits critically

13   important information from the DCF model and, as a result, greatly overstates the

14   investor required ROE for investment grade regulated electric utilities.

15 **Q.   Would Mr. Hevert's recommended ROE of 10.75% harm New Orleans**
16   **ratepayers?**

17 A.   Yes, it certainly would. Although Entergy, Corporation shareholders would benefit

18   from the excessive ROE of 10.75%, New Orleans ratepayers would have to shoulder

19   the burden of an excessive revenue requirement to support it. Mr. Kollen calculated

20   that lowering the Company's extreme ROE request to 9.35% would provide $6.268

21   million per year of rate relief to New Orleans customers.

22

23   **Multi-stage DCF Model**

24 **Q.   Please summarize the components of Mr. Hevert's multi-stage DCF model.**

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1   A.   Mr. Hevert described the structure and the inputs for his multi-stage DCF model on

2   pages 25 through 28 of his Revised Direct Testimony. The main elements of Mr.

3   Hevert's multi-stage DCF analyses are as follows:

4   • 30, 90, and 180 average stock prices.

5   • First stage of growth based on the average earnings growth rates from Value

6   Line, Zacks, and First Call.

7   • A transition period from near-term to long-term growth.

8   • Long-term growth estimated using GDP growth based on historical real GDP

9   growth from 1929 through 2017 (3.21%) and a forecasted inflation rate. The

10   total nominal GDP growth rate was 5.45%.

11   • Expected dividend in the final year divided by solved cost of equity less long-

12   term growth rate.

13   • Payout ratio assumptions based on Value Line for the first stage, a transition

14   period, and a long-term expected payout ratio.

15 **Q.   In your opinion, did Mr. Hevert overstate expected GDP growth?**

16 A.   Yes. There are two publicly available forecasts of GDP growth that have been relied

17   upon by the Federal Energy Regulatory Commission ("FERC") in the determination

18   of the second stage of the two-stage growth rate in its DCF return on equity formula.

19   These forecasts come from the Energy Information Administration ("EIA"), and the

20   Social Security Administration's ("SSA") Trustees Report.[11] The latest EIA GDP

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[11]   Please see the Energy Information Administration, *Annual Energy Outlook 2018* and Social Security
       Administration, 2018 OASDI Trustees Report, Table VI.G6 - Selected Economic Variables.

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1   forecast shows expected growth in nominal GDP of 4.39%. The SSA Report forecasts

2   nominal growth in GDP of 4.38%. I included the calculation of these two GDP growth

3   rates on Exhibit ____(RAB-6). My calculations are based on my understanding of

4   how the FERC Staff used the data contained in the EIA and SSA documents to

5   calculate long-term GDP growth for the second stage of its two-stage DCF model.

6

7   These independent sources are forecasting nominal GDP growth to be substantially

8   lower than the forecast developed by Mr. Hevert (4.38% vs. Mr. Hevert's forecast of

9   5.45%). In conclusion, Mr. Hevert's GDP forecast contributes to a significant

10   overstatement of his multi-stage DCF results.

11 **Q.**   **Did you recalculate Mr. Hevert's multi-stage DCF model with the lower GDP**
12   **forecasts from EAI and the SSA?**

13 A.   Yes. Exhibit ____(RAB-7), pages 1 and 2 show the revised results from Mr. Hevert's

14   multi-stage DCF models using the 180-day average prices and a long-term GDP

15   growth forecast of 4.4%, which is the rounded average of the GDP forecasts from EAI

16   and the SSA. *The revised mean results from the two multi-stage DCF methods are*

17   *8.28% and 9.15%.*

18

19   If the Council considers a multi-stage DCF approach in this case, then it should use

20   the publicly available independent GDP forecasts I have provided, not the one

21   developed by Mr. Hevert.

22

23   **CAPM**

1   **Q.   Briefly summarize the main elements of Mr. Hevert's CAPM approach.**

2   A.   On page 32 of his Direct Testimony, Mr. Hevert testified that he used two different

3   measures of the risk-free interest rate: the current 30-day average yield on the 30-year

4   Treasury bond (3.11%) and a projected 30-year Treasury bond yield (3.48%). Mr.

5   Hevert did not consider any shorter maturity bonds, such as the 5-year Treasury note.

6

7   Mr. Hevert then calculated ex-ante measures of total market returns using data from

8   Bloomberg and Value Line. Total market returns from these two sources were 15.73%

9   using Bloomberg data and a 16.10% return using Value Line data. Mr. Hevert also

10   used two different estimates for beta from Bloomberg and Value Line.

11   **Q.   Is it appropriate to use forecasted or projected bond yields in the CAPM?**

12   A.   No. Current interest rates and bond yields embody all the relevant market data and

13   expectations of investors, including expectations of changing future interest rates. The

14   forecasted bond yield used by Mr. Hevert is speculative at best and may never come

15   to pass. Current interest rates provide tangible and verifiable market evidence of

16   investor return requirements today, and these are the interest rates and bond yields that

17   should be used in both the CAPM and in the bond yield plus risk premium analyses.

18   To the extent that investors give forecasted interest rates any weight at all, they are

19   already incorporated in current securities prices.

20   **Q.   You noted earlier that Mr. Hevert used a forecasted 30-year Treasury bond yield**
21   **of 3.48%, while the current yield was 3.11%. What does this suggest with respect**
22   **to investors currently holding 30-year treasury bonds?**

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1   A.   It suggests that investors today should expect to incur huge losses in the value of their

2   investments in long-term Treasury bonds, which suggests economic irrationality on

3   their part. There is no sound basis for such an assumption.

4

5   The price of a bond moves in the opposite direction of its yield. In other words, given

6   a certain current bond coupon and price, if the required yield on that bond increases

7   then the price of the bond goes down. Alternatively, if the required yield declines then

8   the price of the bond increases. This relationship can be illustrated with the following

9   simplified example. Assume a current 30-year Treasury bond has a coupon of $3.00

10   and a price of $100, resulting in a current yield of 3.00%. If interest rates were to rise

11   in the economy such that the required yield on the 30-year Treasury increased to

12   3.50%, then the price of our existing 30-year Treasury bond would fall to $85.71 from

13          $100, given the coupon of $3.00. This represents a loss to our current bond investor

14   of 14.30%.

15

16   The point here is that if investors were certain that there would soon be a substantial

17   increase in interest rates, the rational response would be to immediately discount what

18   they were willing to pay currently for the 30-year Treasury bond rather than pay $100

19   and suffer certain significant losses to the value of their bonds.

20   Q.   **Should Mr. Hevert have considered shorter-term Treasury yields in his CAPM**
21   **analyses?**

22   A.   Yes. In theory, the risk-free rate should have no interest rate risk. 30-year Treasury

23   bonds do tend to face interest rate risk, which is the risk that interest rates could rise

24   in the future and lead to a capital loss for the bondholder. Typically, the longer the

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1   duration of the bond, the greater the interest rate risk. The 5-year Treasury note has

2   much less interest rate risk than the 30-year Treasury bond and may be considered one

3   reasonable proxy for a risk-free security.

4   **Q.**   **Please comment on Mr. Hevert's use of Bloomberg and Value Line earnings**
5   **growth estimates for the S&P 500.**

6   A.   Mr. Hevert used earnings growth estimates from these two sources to estimate the

7   expected market return for his CAPM. According to the data contained in Exhibit

8   RBH-4, the average Value Line growth rate is 11.79% and the average Bloomberg

9   growth rate is 12.33%. These are by no means long-run sustainable growth rates.

10   They are well over double the long-term GDP forecast of 5.45% that Mr. Hevert used

11   in his multi-stage DCF analysis. If forecasted GDP growth were used as the long-term

12   growth rate for the S&P 500, then both Mr. Hevert's and my own market return

13   estimates would fall significantly.

14 **Q.**   **HOW DO MR. HEVERT'S ESTIMATES OF THE OVERALL MARKET**

15   **RETURN COMPARE TO YOURS?**

16 A.   My estimates of the market required return are as follows:

17   • Value Line 3-5 Year Total Return: 16.0%

18   • Value Line Growth Rates: 11.50%

19   • S&P Average Historical Returns: 10.2% - 12.1%

20   Mr. Hevert's market returns of 15.73% - 16.10% are extraordinarily high compared to

21   historical norms. I recommend that the Council give Mr. Hevert's inflated market

22   returns very little weight in this proceeding.

23 **Q.**   **How do the Value Line beta values used by Mr. Hevert compare to those you used**
24   **in your CAPM analyses?**

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1	A.	My updated Value Line betas are generally lower than the dated beta values in Mr.
2		Hevert's Exhibit RBH-5. His average proxy group beta was 0.667, while my updated
3		proxy group beta is 0.60. Using the updated beta value in Mr. Hevert's CAPM analysis
4		would lower the results to the range of 10.69% - 11.27%. However, these revised
5		results are still excessively high and should be rejected by the Council.
6		

7 **Risk Premium**

8	Q.	**Please summarize Mr. Hevert's risk premium approach.**
9	A.	Mr. Hevert developed a historical risk premium using Commission-allowed returns
10		for regulated electric utility companies and 30-year Treasury bond yields from January
11		1980 through June 15, 2018. He used regression analysis to estimate the value of the
12		inverse relationship between interest rates and risk premiums during that period.
13		Applying the regression coefficients to the average risk premium and using current
14		and projected 30-year Treasury yields I discussed earlier, Mr. Hevert's risk premium
15		ROE estimate range is 9.96% - 10.28%.

16	Q.	**Please respond to Mr. Hevert's risk premium analysis.**
17	A.	First, the bond yield plus risk premium approach is imprecise and can only provide
18		very general guidance on the current authorized ROE for a regulated electric utility.
19		Risk premiums can change substantially over time. As such, this approach is a "blunt
20		instrument," if you will, for estimating the ROE in regulated proceedings. In my view,
21		a properly formulated DCF model using current stock prices and growth forecasts is
22		far more reliable and accurate than the bond yield plus risk premium approach, which
23		relies on a historical risk premium analysis over a certain period of time.

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1

2   Second, I recommend that the Council reject the use of the forecasted Treasury bond

3   yield for the same reasons I described in my response to Mr. Hevert's CAPM

4   approach. Using a forecasted Treasury bond yield, rather than the current yield, will

5   overestimate the investor required return.

6

7   **Business Risks and Other Considerations**

8   **Q.   Beginning on page 38 of his Revised Direct Testimony, Mr. Hevert presented a**
9   **discussion of business risks and other considerations that informed his judgement**
10   **regarding his recommended ROE range. Please summarize your understanding**
11   **of these considerations.**

12   A.   On page 38 of his Revised Direct Testimony, Mr. Hevert presented the risks and other

13   considerations that he believes should be taken into account in setting the allowed cost

14   of equity for ENO. These considerations include:

15   • Planned capital expenditure program

16   • ENO's credit profile

17   • Geographic risk associated with severe weather

18   • Lack of customer diversity

19   • ENO's small size relative to the proxy group

20   • Flotation costs

21   • Effect of the Tax Cut and Jobs Act ("TCJA")

22   **Q.   Were many of these risks considered by the credit rating agencies in the reports**
23   **on ENO that you reviewed?**

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1   A.   Based on my reading of the credit reports, I believe they were. Moody's and S&P

2   mentioned these risks in various places in the reports I reviewed. These reports

3   evaluated ENO's credit profile, its risk associated with severe weather, its small size,

4   and the effect of the TCJA. Regarding customer diversity, the S&P report I cited

5   earlier noted that ENO's customer mix was a credit strength, not a weakness.

6

7   After assessing these risks, as well as credit strengths possessed by ENO, S&P

8   assigned credit ratings to ENO that were consistent with the proxy group and with the

9   electric utility industry in general. From this perspective, I do not recommend any

10   additional risk premium for ENO relative to the proxy group.

11   Q.   **Mr. Hevert presented a 101 basis point small size premium for ENO on page 54**
12   **of his Revised Direct Testimony. Should the Council consider a size premium for**
13   **ENO in its determination of the allowed ROE in this proceeding?**

14   A.   No, definitely not. The data that Mr. Hevert relied on to quantify this adjustment came

15   from the *2018 Cost of Capital: Annual U.S. Guidance and Examples* by Duff and

16   Phelps. The group of companies from which Mr. Hevert calculated this significant

17   upward adjustment more likely than not contains many small unregulated companies.

18   Mr. Hevert thus assumes, without any foundation whatsoever, that a return premium

19   for higher risk unregulated companies would apply to ENO. Given the fact that the

20   Company engages in low-risk regulated electric and gas operations, it is incorrect to

21   assume that ENO would be as risky as a group of unregulated companies simply on

22   the basis of its size. Mr. Hevert's small size premium should be rejected.

23   Q.   **Will CCPUG's proposed Formula Rate Plans ("FRP") reduce ENO's risk with**
24   **respect to recouping costs associated with its future capital expenditure**
25   **program?**

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1   A.   Yes, it will. I have not evaluated the reasonableness or prudence of ENO's proposed

2   capital expenditure program, including the level of yearly investments. Nevertheless,

3   ENO currently operates without the benefit of a FRP for its regulated electric and gas

4   operations. CCPUG witness Kollen supports the adoption of a 3-year FRP for both

5   electric and gas operations. The FRPs will enable ENO to collect its yearly prudently

6   incurred investments associated with its capital expenditure program that have closed

7   to plant-in-service without the regulatory lag associated with traditional rate cases.

8   This will be an ongoing future benefit to ENO and will be supportive to its credit

9   profile.

10 **Q.**   **Mr. Hevert provided a detailed discussion of his concerns relating to the TCJA**
11   **on pages 58 through 66 of his Revised Direct Testimony. What is your response**
12   **to Mr. Hevert's testimony regarding the TCJA as it affects ENO?**

13 A.   The effect of the TCJA on ENO has already been settled and implemented by the

14   Council. ENO's Tax Reform Plan and its associated benefits was described by ENO

15   witness Joshua Thomas on pages 31 and 32 of his Revised Direct Testimony. ENO's

16   stable credit outlook from S&P and Moody's already reflects the implementation of

17   this plan and warrants no further consideration in determining ENO allowed ROE in

18   this proceeding.

19 **Q.**   **Beginning on page 55 of his Direct Testimony Mr. Hevert discusses flotation costs.**
20   **Please respond to Mr. Hevert's testimony on this issue.**

21 A.   In my opinion, it is likely that flotation costs are already accounted for in current stock

22   prices and that adding an adjustment for flotation costs amounts to double counting.

23   A DCF model using current stock prices should already account for investor

24   expectations regarding the collection of flotation costs. Multiplying the dividend yield

25   by a 4% flotation cost adjustment, for example, essentially assumes that the current

1   stock price is wrong and that it must be adjusted downward to increase the dividend

2   yield and the resulting cost of equity. I do not believe that this is an appropriate

3   assumption. Current stock prices most likely already account for flotation costs, to the

4   extent that such costs are even accounted for by investors.

5   **V. ENO PROPOSED RELIABILITY INCENTIVE MECHANISM (RIM) PLAN**

6   **Q.   Briefly summarize ENO's proposed RIM Plan.**

7   A.   The mechanics of the Company's proposed RIM Plan were presented in the Revised

8   Direct Testimony of Mr. Joshua B. Thomas beginning on page 23. Mr. Thomas

9   testified that the goal of the RIM Plan "is to align the earnings component of ENO's

10   base rates to its distribution reliability performance." The primary components of the

11   proposed RIM Plan are:

12   • The adjusted ROE in the Electric FRP would be the sum of the baseline ROE

13   approved in this case plus a reliability adjustment in the range of +/- 25 basis

14   points (0.25%).

15   • The electric base revenue requirement in this proceeding would include Mr.

16   Hevert's recommended ROE of 10.75% less a downward 0.25% adjustment

17   for an adjusted ROE of 10.50%.

18   • ENO would need to demonstrate an improvement in its service reliability to

19   achieve rates through the operation of the Electric FRP to achieve the 10.75%

20   ROE.

21   • Reliability performance would be measured by the System Average

22   Interruption Frequency Index ("SAIFI"). If ENO's SAIFI improves to 1.24,

23   then the Reliability Adjustment is zero, and the baseline ROE is unaffected. If

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1   ENO's SAIFI is more than 1.24, the Reliability Adjustment reduces the

2   baseline ROE, and at a SAIFI of 1.40 or greater, the Reliability Adjustment

3   reduces the baseline ROE by the maximum 25 basis points. If ENO's SAIFI is

4   less than 1.24, the Reliability Adjustment increases the baseline ROE, and at a

5   SAIFI of 1.05 or less, the Reliability Adjustment increases the baseline ROE

6   by the maximum 25 basis points.

7 **Q.   Should the proposed RIM Plan be approved by the Council?**

8 A.   No. The proposed RIM should be rejected by the Council.

9 **Q.   Please explain why the RIM Plan should be rejected.**

10 A.   Given ENO's unacceptably poor electric system reliability over the last few years, the

11   Council should not under any circumstances approve a regulatory incentive

12   mechanism that provides the possibility of ENO earning a higher ROE for improved

13   system reliability. Reliable service is part and parcel of every utility company's duty,

14   including ENO, under the Regulatory Compact. In other words, in return for its

15   monopoly status and the absence of competition, its power of eminent domain, and the

16   opportunity to earn an almost guaranteed rate of return, the utility's service must be

17   reliable.

18

19   Company witnesses admitted problems with ENO's system reliability. Mr. Thomas

20   stated: "The Company is proposing the RIM Plan because the Company recognizes

21   that its reliability performance has not met the expectations of ENO, its customers,

22   and the Council." Thomas Revised Direct Testimony, page 23, lines 4 through 6.

23   Likewise, Ms. Melonie Stewart testified: "While ENO's reliability performance

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1   metrics, which I discuss later, reflect reasonably reliable service during the early

2   portion of the last five years, those performance metrics began to decline over the last

3   couple of years." Steward Revised Direct Testimony, page 9, lines 19 through 22.

4 **Q.   Please summarize ENO's reliability performance metrics over the last few years.**

5 A.   Table 4 presents System Average Interruption Frequency Index ("SAIFI") and the

6   System Average Interruption Duration Index ("SAIDI") statistics from Ms. Stewart's

7   Revised Direct Testimony as well as ENO's earned ROEs that were provided in

8   response to a discovery request from CCPUG. SAIDI is a measure of the length of

9   time (duration) during a year that the average customer experienced an outage. SAIDI

10   is a measure of how frequently customers were interrupted during the year. Table 4

11   below presents ENO's SAIDI and SAIFI values for the years 2013- 2017 and the 3-

12   year average for the period 2013 - 2015.

13

TABLE 4

**ENO SAIFI, SAIDI,
And Earned ROE**

	2013	2014	2015	2016	2017	Avg. 2013 - 2015
SAIFI	1.04	1.209	1.234	1.61	1.584	1.161
SAIDI	92	121.3	128	167.9	179.8	113.767
Earned ROE	5.64%	13.18%	12.56%	11.22%	10.52%	

Earned ROE Source: ENO response to CCPUG 1-13

14

15   For 2017, ENO's SAIDI was 179.8, which means that the average customer

16   experienced 179.8 minutes of interrupted service during the year. For 2017, ENO's

17   SAIFI was 1.584, meaning that the average customer was interrupted 1.584 times

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1   during 2017. Lower SAIDI and SAIFI number indicate interruptions of shorter

2   duration and fewer interruptions, respectively.

3

4   Compare the 2017 SAIFI and SAIDI values with the 3-year average from 2013 – 2015.

5   The average SAIFI during this period was 1.161 and the average SAIDI was 113.767.

6   Table 4 clearly shows the significant deterioration of system reliability for New

7   Orleans customers over the last two years.

8

9   Finally, it is useful to examine ENO's earned ROEs over the 5-year period covered in

10   Table 4. ENO earned healthy, even excessive ROE's during this period, including

11   2016 and 2017 when service had markedly declined.

12 **Q.** **How do you recommend that the Council move forward regarding ENO's**
13   **accountability for improving service quality to the ratepayers of New Orleans?**

14 A.   First, ENO needs to demonstrate a track record of improved service quality as

15   measured by significant improvements to its SAIFI and SAIDI numbers. The

16   Company should in no way be rewarded with an excessive ROE for providing safe

17   and reliable service that customers are entitled to expect from their regulated

18   monopoly provider of electric service.

19

20   Second, the Council should set base level performance attainment levels for ENO in

21   this proceeding. I recommend that these base levels be set at the 3-year average SAIFI

22   and SAIDI levels for the 2013 – 2015 period shown in my Table 4. These base service

23   levels would be 1.16 for SAIFI and 113.8 for SAIDI.

24

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1   ENO should be required to report its yearly SAIFI and SAIDI levels with its yearly

2   Electric FRP filings. If ENO falls below either of the base service level SAIFI or

3   SAIDI values, the Council should consider a penalty of a 25 basis point reduction in

4   the baseline ROE approved by the Council in this case. Mr. Thomas indicated in his

5   Revised Direct Testimony that ENO's expected SAIFI for 2018 is 1.65. Therefore, I

6   also recommend that the Council waive the 25 basis point penalty in the first year of

7   the Electric FRP to allow ENO to continue making investments in its system to enable

8   its service reliability to catch up with the 2013 – 2015 average SAIFI and SAIDI

9   values.

10   **Q.   Is your service reliability proposal fair to both ENO and its ratepayers?**

11   A.   Yes. My service reliability proposal is a fair balancing of the interests between ENO

12   and its ratepayers. It bears repeating that ENO should not be allowed to earn an extra

13   incentive ROE for making investments in its system to improve its poor reliability.

14   Instead, the Council should reaffirm ENO's obligation under the Regulatory Company

15   I mentioned earlier to improve its service quality measures to levels that reflects the

16   safe and reliable service to which New Orleans customers are entitled.

17   **Q.   Has ENO increased spending to improve reliability in recent years?**

18   A.   Yes. Ms. Stewart provided the additional spending undertaken by ENO to address

19   system reliability in Figures 5 and 6 of her Direct Testimony. In 2017, for example,

20   the Company increased its spending on routine reliability to $7.3 million from $3.363

21   million in 2016. Reliability Blitz and Storm Hardening spending were increased from

22         $10.47 million in 2016 to $15.68 million in 2017. CCPUG does not oppose the costs

23   included in the historic test year to improve ENO's electric system reliability.

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1   However, CCPUG is vigorously opposed to any ROE bonuses for making system

2   reliability improvements.

3   **VI. ENO'S PROPOSED GRID MODERNIZATION AND GIRP RIDERS**

4   **Q.   Please describe the Grid Modernization Rider.**

5   A.   The mechanics of the Grid Modernization Rider were provided in the Revised Direct

6   Testimony of Mr. Gillam beginning of page 52. Mr. Gillam testified that Rider DGM

7   was proposed by the Company "in order to recover the capital investment costs

8   associated with Council-approved grid modernization projects not recovered in base

9   rates from this proceeding …" Rider DGM functions in a similar fashion to Rider

10   GIRP in that it would initially collect costs associated with these projects that are

11   placed into service from January 1, 2020 through March 31, 2020 assuming the

12   Council includes plant in service through December 31, 2019 in the electric base

13   revenue requirement. Otherwise the Initial Service Period will depend on the plant in

14   service date approved in this rate case.   The proposed Rider DGM includes quarterly

15   filings with quarterly rate redeterminations as additional plant in service is added to

16   accumulated plant included in Rider DGM. Rider DGM also includes an annual

17   reconciliation of the difference between the revenue requirement and actual revenue

18   collected through the rider. The proposed term of Rider DGM would be until the next

19   base rate case filing unless it is terminated by order of the Council.

20   **Q.   Please summarize the proposed GIRP Rider.**

21   A.   The mechanics of the GIRP are described by Mr. Phillip Gillam beginning on page 48

22   of his Revised Direct Testimony. Rider GIRP was proposed by the Company "in order

23   to recover the costs associated with replacing aging infrastructure to improve the safety

1   and reliability of the gas distribution system." Gillam Revised Direct Testimony, page

2   48, lines 8 through 9.

3

4   Rider GIRP would initially collect costs associated with these projects that are placed

5   into service from January 1, 2020 through March 31, 2020 assuming the Council

6   includes plant in service through December 31, 2019 in the gas base revenue

7   requirement. Otherwise the Initial Service Period will depend on the plant in service

8   date approved in this rate case.   The proposed Rider GIRP includes quarterly filings

9   with quarterly rate redeterminations as additional plant in service is added to

10   accumulated plant included in Rider GIRP. Rider GIRP also includes an annual

11   reconciliation of the difference between the revenue requirement and actual revenue

12   collected through the rider. The proposed term of Rider DGM would be until the next

13   base rate case filing unless it is terminated by order of the Council.

14

15 Q.   **What is the Company's policy justification for proposed Riders GIRP and DGM?**

16 A.   Mr. Thomas provided the policy reasons for approval of the GIRP and DGM riders

17   beginning on page 53 of his Revised Direct Testimony. One of the main reasons cited

18   by Mr. Thomas is: "A regulatory environment that provides for contemporaneous cost

19   recovery of large investments outside of the traditional rate case provides the utility

20   the necessary opportunity to earn its allowed return while continuing to invest in the

21   system and mitigate operational risks." Mr. Thomas also noted the Council's prior

22   approval of contemporaneous cost recovery for Ninemile 6 and Union Power Block 1

23   and testified that customers' "contemporaneous receipt of benefits further justified

J. Kennedy and Associates, Inc.

1   contemporaneous cost recovery in those instances." Mr. Thomas also asserted that

2   absent the recovery afforded to the Company from the proposed riders "ENO's cash

3   flow will deteriorate and capital will be lost and will not be available for reinvestment

4   in investment in improvements in the Company's infrastructure at a time when cash

5   flow and capital is critical to the Company."

6 **Q.   Should the Council approve ENO's proposed Riders DGM and GIRP?**

7 A.   No. The Council should reject ENO's proposed Riders DGM and GIRP.

8 **Q.   Please explain why the Council should reject these proposed riders.**

9 A.   The primary reason for rejecting these riders is that they overlap with the proposed

10   EFRP and GFRP. There is no reason to carve out certain electric and gas plant costs

11   and include them in separate riders when these costs can be included in and recovered

12   through the EFRP and GFRP along with all other and in the same manner as all other

13   prudently incurred costs. These FRPs will provide ENO the opportunity to collect its

14   increased costs and investments in plant in service, including grid modernization and

15   gas infrastructure replacement and improvements, using an historic 12-month period.

16   The FRP approach is similar to a regular base rate case that employs an historical test

17   year, but will eliminate much of the regulatory lag and the expenses associated with

18   filing a full base rate proceeding. The Electric and Gas FRP will provide ENO an

19   enhanced opportunity for increased cash flow and return on new plant in service to

20   serve New Orleans customers. It will also provide for a reasonable review process for

21   the Council to ensure just and reasonable rates.

22

1   ENO's proposed Riders GIRP and DGM would carve out certain electric and gas plant

2   costs and provide accelerated and increased recovery through the use of a forecast test

3   year instead of including these costs in the EFRP and GFRP on a historic test year

4   basis. It is unnecessary and inequitable to provide these forms of recovery when the

5   EFRP and GFRP are specifically designed to provide timely rate relief to the Company

6   after rates are reset in this proceeding. It would be a far better balancing of the interests

7   of ENO and its customers to have these proposed eligible investments collected

8   through the FRPs. Note that the FRPs would include the following:

9   • Seventy-five day review period.

10   • Three-year term.

11   • Specified dispute resolution procedure.

12   These terms provide additional protections to ratepayers and additional assurance to

13   the Council and intervenors that costs being passed through the FRPs are reasonable

14   and prudently incurred. The proposed Riders GIRP and DGM do not contain these

15   provisions.

16 **Q.** **On page 55, lines 3 through 7 of his Revised Direct Testimony Mr. Thomas**
17   **testified that if "customers receive benefits contemporaneous with the placing of**
18   **assets in service, it is reasonable and equitable for the Council to permit**
19   **contemporaneous recovery of the costs incurred to provide those benefits."**
20   **Should the Council accept this statement as a sound basis for ratemaking?**

21 A.   No. Mr. Thomas' statement suggests a process that is neither reasonable nor equitable.

22   I believe that Mr. Thomas' reasoning would result in the elimination of regulatory lag

23   and any sort of review of the prudence and reasonableness of costs being collected

24   from New Orleans customers. Taken to its logical end, contemporaneous cost

25   recovery would eliminate rate cases as well as Council and intervenor review of a

J. Kennedy and Associates, Inc.

1   utility's revenue requirement. Indeed, it would eliminate a utility company's burden

2   of proving that its costs are just and reasonable. I strongly recommend that the Council

3   reject Mr. Thomas' statement in support of contemporaneous cost recovery.

4 **Q.   Does this complete your Direct Testimony?**

5 A.   Yes.

BEFORE THE

COUNCIL OF THE CITY OF NEW ORLEANS

REVISED APPLICATION OF ENTERGY	)	
NEW ORLEANS, LLC FOR A CHANGE	)	
IN ELECTRIC AND GAS RATES	)	DOCKET NO. UD-18-07
PURSUANT TO COUNCIL RESOLUTIONS	)	
R-15-194 AND R-17-504 AND	)	
FOR RELATED RELIEF	)	

EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF THE

CRESCENT CITY POWER USERS' GROUP

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

FEBRUARY 2019

AFFIDAVIT
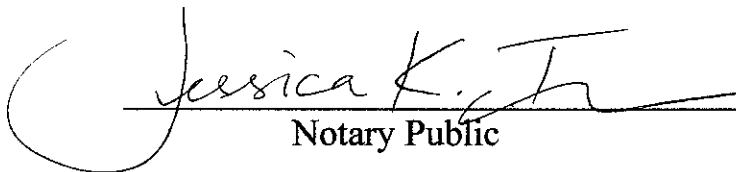
STATE OF GEORGIA   )

COUNTY OF FULTON   )

RICHARD A. BAUDINO, being duly sworn, deposes and states: that the attached is his sworn testimony and that the statements contained are true and correct to the best of his knowledge, information and belief.

(signature)

Richard A. Baudino

Sworn to and subscribed before me on this
1st day of *February* 20*19*.
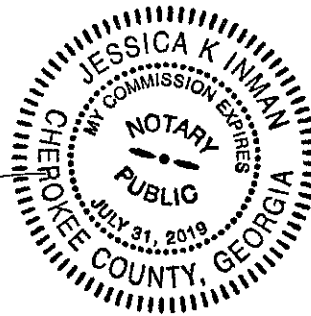
(signature)

Notary Public

(Notary seal: JESSICA K INMAN, MY COMMISSION EXPIRES, NOTARY PUBLIC, JULY 31, 2019, CHEROKEE COUNTY, GEORGIA)

RESUME OF RICHARD A. BAUDINO

EDUCATION

New Mexico State University, M.A.
Major in Economics
Minor in Statistics

New Mexico State University, B.A.
Economics
English

Thirty-six years of experience in utility ratemaking and the application of principles of economics to the regulation of electric, gas, and water utilities. Broad based experience in revenue requirement analysis, cost of capital, rate of return, cost and revenue allocation, and rate design.

REGULATORY TESTIMONY

Preparation and presentation of expert testimony in the areas of:

Cost of Capital for Electric, Gas and Water Companies
Electric, Gas, and Water Utility Cost Allocation and Rate Design
Revenue Requirements
Gas and Electric industry restructuring and competition
Fuel cost auditing
Ratemaking Treatment of Generating Plant Sale/Leasebacks

RESUME OF RICHARD A. BAUDINO

EXPERIENCE

1989 to Present: **Kennedy and Associates:** **Director of Consulting, Consultant** - Responsible for consulting assignments in revenue requirements, rate design, cost of capital, economic analysis of generation alternatives, electric and gas industry restructuring/competition and water utility issues.

1982 to 1989: **New Mexico Public Service Commission Staff: Utility Economist** - Responsible for preparation of analysis and expert testimony in the areas of rate of return, cost allocation, rate design, finance, phase-in of electric generating plants, and sale/leaseback transactions.

CLIENTS SERVED

Regulatory Commissions

Louisiana Public Service Commission
Georgia Public Service Commission
New Mexico Public Service Commission

Other Clients and Client Groups

Ad Hoc Committee for a Competitive
  Electric Supply System
Air Products and Chemicals, Inc.
Arkansas Electric Energy Consumers
Arkansas Gas Consumers
AK Steel
Armco Steel Company, L.P.
Aqua Large Users Group
Assn. of Business Advocating
  Tariff Equity
Atmos Cities Steering Committee
Canadian Federation of Independent Businesses
CF&I Steel, L.P.
Cities of Midland, McAllen, and Colorado City
Cities Served by Texas-New Mexico Power Co.
Climax Molybdenum Company
Connecticut Industrial Energy Consumers
Crescent City Power Users Group
Cripple Creek & Victor Gold Mining Co.
General Electric Company
Holcim (U.S.) Inc.
IBM Corporation
Industrial Energy Consumers
Kentucky Industrial Utility Consumers
Kentucky Office of the Attorney General
Lexington-Fayette Urban County Government
Large Electric Consumers Organization
Newport Steel
Northwest Arkansas Gas Consumers

Maryland Energy Group
Occidental Chemical
PSI Industrial Group
Large Power Intervenors (Minnesota)
Tyson Foods
West Virginia Energy Users Group
The Commercial Group
Wisconsin Industrial Energy Group
South Florida Hospital and Health Care Assn.
PP&L Industrial Customer Alliance
Philadelphia Area Industrial Energy Users Gp.
Philadelphia Large Users Group
West Penn Power Intervenors
Duquesne Industrial Intervenors
Met-Ed Industrial Users Gp.
Penelec Industrial Customer Alliance
Penn Power Users Group
Columbia Industrial Intervenors
U.S. Steel & Univ. of Pittsburg Medical Ctr.
Multiple Intervenors
Maine Office of Public Advocate
Missouri Office of Public Counsel
University of Massachusetts - Amherst
WCF Hospital Utility Alliance
West Travis County Public Utility Agency
Steering Committee of Cities Served by Oncor
Utah Office of Consumer Services
Healthcare Council of the National Capital Area
Vermont Department of Public Service

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2019

Date	Case	Jurisdict.	Party	Utility	Subject
10/83	1803, 1817	NM	New Mexico Public Service Commission	Southwestern Electric Coop.	Rate design.
11/84	1833	NM	New Mexico Public Service Commission Palo Verde	El Paso Electric Co.	Service contract approval, rate design, performance standards for nuclear generating system
1983	1835	NM	New Mexico Public Service Commission	Public Service Co. of NM	Rate design.
1984	1848	NM	New Mexico Public Service Commission	Sangre de Cristo Water Co.	Rate design.
02/85	1906	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
09/85	1907	NM	New Mexico Public Service Commission	Jornada Water Co.	Rate of return.
11/85	1957	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
04/86	2009	NM	New Mexico Public Service Commission	El Paso Electric Co.	Phase-in plan, treatment of sale/leaseback expense.
06/86	2032	NM	New Mexico Public Service Commission	El Paso Electric Co.	Sale/leaseback approval.
09/86	2033	NM	New Mexico Public Service Commission	El Paso Electric Co.	Order to show cause, PVNGS audit.
02/87	2074	NM	New Mexico Public Service Commission	El Paso Electric Co.	Diversification.
05/87	2089	NM	New Mexico Public Service Commission	El Paso Electric Co.	Fuel factor adjustment.
08/87	2092	NM	New Mexico Public Service Commission	El Paso Electric Co.	Rate design.
10/87	2146	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Financial effects of restructuring, reorganization.
07/88	2162	NM	New Mexico Public Service Commission	El Paso Electric Co.	Revenue requirements, rate design, rate of return.

J. KENNEDY AND ASSOCIATES, INC.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2019

Date	Case	Jurisdict.	Party	Utility	Subject
01/89	2194	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Economic development.
1/89	2253	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Financing.
08/89	2259	NM	New Mexico Public Service Commission	Homestead Water Co.	Rate of return, rate design.
10/89	2262	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Rate of return.
09/89	2269	NM	New Mexico Public Service Commission	Ruidoso Natural Gas Co.	Rate of return, expense from affiliated interest.
12/89	89-208-TF	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Rider M-33.
01/90	U-17282	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
09/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Cost of equity.
09/90	90-004-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Cost of equity, transportation rate.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
04/91	91-037-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Transportation rates.
12/91	91-410-EL-AIR	OH	Air Products & Chemicals, Inc., Armco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Cost of equity.
05/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Cost of equity, rate of return.
09/92	92-032-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost of equity, rate of return, cost-of-service.
09/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost of equity, rate of return.

J. KENNEDY AND ASSOCIATES, INC.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2019

Date	Case	Jurisdict.	Party	Utility	Subject
09/92	92-009-U	AR	Tyson Foods	General Waterworks	Cost allocation, rate design.
01/93	92-346	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Cost allocation.
01/93	39498	IN	PSI Industrial Group	PSI Energy	Refund allocation.
01/93	U-10105	MI	Association of Businesses Advocating Tariff Equality (ABATE)	Michigan Consolidated Gas Co.	Return on equity.
04/93	92-1464-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Return on equity.
09/93	93-189-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Transportation service terms and conditions.
09/93	93-081-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost-of-service, transportation rates, rate supplements; return on equity; revenue requirements.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Historical reviews; evaluation of economic studies.
03/94	10320	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Trimble County CWIP revenue refund.
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Evaluation of the cost of equity, capital structure, and rate of return.
5/94	R-00942993	PA	PG&W Industrial Intervenors	Pennsylvania Gas & Water Co.	Analysis of recovery of transition costs.
5/94	R-00943001	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania charge proposals.	Evaluation of cost allocation, rate design, rate plan, and carrying
7/94	R-00942986	PA	Armco, Inc., West Penn Power Industrial Intervenors	West Penn Power Co.	Return on equity and rate of return.
7/94	94-0035-E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Return on equity and rate of return.

J. KENNEDY AND ASSOCIATES, INC.

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2019**

Date	Case	Jurisdict.	Party	Utility	Subject
8/94	8652	MD	Westvaco Corp. Co.	Potomac Edison	Return on equity and rate of return.
9/94	930357-C	AR	West Central Arkansas Gas Consumers	Arkansas Oklahoma Gas Corp.	Evaluation of transportation service.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Return on equity.
9/94	8629	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Transition costs.
11/94	94-175-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Cost-of-service, rate design, rate of return.
3/95	RP94-343-000	FERC	Arkansas Gas Consumers	NorAm Gas Transmission	Rate of return.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Return on equity.
6/95	U-10755	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Revenue requirements.
7/95	8697	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost allocation and rate design.
8/95	95-254-TF U-2811	AR	Tyson Foods, Inc.	Southwest Arkansas Electric Cooperative	Refund allocation.
10/95	ER95-1042-000	FERC	Louisiana Public Service Commission	Systems Energy Resources, Inc.	Return on Equity.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Investigation into Electric Power Competition.
5/96	96-030-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Revenue requirements, rate of return and cost of service.
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.,Potomac Electric Power Co. and Constellation Energy Corp.	Return on Equity.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Return on equity, rate of return.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.

J. KENNEDY AND ASSOCIATES, INC.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2019

Date	Case	Jurisdict.	Party	Utility	Subject
1/97	RP96-199-000	FERC	The Industrial Gas Users Conference	Mississippi River Transmission Corp.	Revenue requirements, rate of return and cost of service.
3/97	96-420-U	AR	West Central Arkansas Gas Corp.	Arkansas Oklahoma Gas Corp.	Revenue requirements, rate of return, cost of service and rate design.
7/97	U-11220	MI	Association of Business Advocating Tariff Equity	Michigan Gas Co. and Southeastern Michigan Gas Co.	Transportation Balancing Provisions.
7/97	R-00973944	PA	Pennsylvania American Water Large Users Group	Pennsylvania-American Water Co.	Rate of return, cost of service, revenue requirements.
3/98	8390-U	GA	Georgia Natural Gas Group and the Georgia Textile Manufacturers Assoc.	Atlanta Gas Light	Rate of return, restructuring issues, unbundling, rate design issues.
7/98	R-00984280	PA	PG Energy, Inc. Intervenors	PGE Industrial	Cost allocation.
8/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric Co.	Return on equity, rate of return.
10/98	U-23327	LA	Louisiana Public Service Commission	SWEPCO, CSW and AEP	Analysis of proposed merger.
12/98	98-577	ME	Maine Office of the Public Advocate	Maine Public Service Co.	Return on equity, rate of return.
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity, rate of return.
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co	Return on equity.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Return on equity.
4/99	R-984554	PA	T. W. Phillips Users Group	T. W. Phillips Gas and Oil Co.	Allocation of purchased gas costs.
6/99	R-0099462	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Balancing charges.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States,Inc.	Cost of debt.

J. KENNEDY AND ASSOCIATES, INC.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2019

Date	Case	Jurisdict.	Party	Utility	Subject
10/99	R-00994782	PA	Peoples Industrial Intervenors	Peoples Natural Gas Co.	Restructuring issues.
10/99	R-00994781	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Restructuring, balancing charges, rate flexing, alternate fuel.
01/00	R-00994786	PA	UGI Industrial Intervenors	UGI Utilities, Inc.	Universal service costs, balancing, penalty charges, capacity Assignment.
01/00	8829	MD	Maryland Industrial Gr.	Baltimore Gas & Electric Co.	Revenue requirements, cost allocation, rate design.
02/00	R-00994788	PA	Penn Fuel Transportation	PFG Gas, Inc., and	Tariff charges, balancing provisions.
05/00	U-17735	LA	Louisiana Public Service Comm.	Louisiana Electric Cooperative	Rate restructuring.
07/00	2000-080	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric Co.	Cost allocation.
07/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket E)	LA	Louisiana Public Service Commission	Southwestern Electric Power Co.	Stranded cost analysis.
09/00	R-00005654	PA	Philadelphia Industrial And Commercial Gas Users Group.	Philadelphia Gas Works	Interim relief analysis.
10/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring, Business Separation Plan.
11/00	R-00005277 (Rebuttal)	PA	Penn Fuel Transportation Customers	PFG Gas, Inc. and North Penn Gas Co.	Cost allocation issues.
12/00	U-24993	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/01	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Stranded cost analysis.
04/01	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B) (Addressing Contested Issues)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring issues.
04/01	R-00006042	PA	Philadelphia Industrial and Commercial Gas Users Group	Philadelphia Gas Works	Revenue requirements, cost allocation and tariff issues.

J. KENNEDY AND ASSOCIATES, INC.

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2019**

Date	Case	Jurisdict.	Party	Utility	Subject
11/01	U-25687	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/02	14311-U	GA	Georgia Public Service Commission	Atlanta Gas Light	Capital structure.
08/02	2002-00145	KY	Kentucky Industrial Utility Customers	Columbia Gas of Kentucky	Revenue requirements.
09/02	M-00021612	PA	Philadelphia Industrial And Commercial Gas Users Group	Philadelphia Gas Works	Transportation rates, terms, and conditions.
01/03	2002-00169	KY	Kentucky Industrial Utility Customers	Kentucky Power	Return on equity.
02/03	02S-594E	CO	Cripple Creek & Victor Gold Mining Company	Aquila Networks – WPC	Return on equity.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
10/03	CV020495AB	GA	The Landings Assn., Inc.	Utilities Inc. of GA	Revenue requirement & overcharge refund
03/04	2003-00433	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric	Return on equity, Cost allocation & rate design
03/04	2003-00434	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Return on equity
4/04	04S-035E	CO	Cripple Creek & Victor Gold Mining Company, Goodrich Corp., Holcim (U.S.) Inc., and The Trane Co.	Aquila Networks – WPC	Return on equity.
9/04	U-23327, Subdocket B	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Fuel cost review
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on Equity
06/05	050045-EI	FL	South Florida Hospital and HeallthCare Assoc.	Florida Power & Light Co.	Return on equity
08/05	9036	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Revenue requirement, cost allocation, rate design, Tariff issues.
01/06	2005-0034	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity.

J. KENNEDY AND ASSOCIATES, INC.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2019

Date	Case	Jurisdict.	Party	Utility	Subject
03/06	05-1278-E-PC-PW-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Return on equity.
04/06	U-25116 Commission	LA	Louisiana Public Service	Entergy Louisiana, LLC	Transmission Issues
07/06	U-23327 Commission	LA	Louisiana Public Service	Southwestern Electric Power Company	Return on equity, Service quality
08/06	ER-2006-0314	MO	Missouri Office of the Public Counsel	Kansas City Power & Light Co.	Return on equity, Weighted cost of capital
08/06	06S-234EG	CO	CF&I Steel, L.P. & Climax Molybdenum	Public Service Company of Colorado	Return on equity, Weighted cost of capital
01/07	06-0960-E-42T	WV	West Virginia Energy Users Group	Monongahela Power & Potomac Edison	Return on Equity
01/07	43112	AK	AK Steel, Inc.	Vectren South, Inc.	Cost allocation, rate design
05/07	2006-661	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric	Return on equity, weighted cost of capital.
09/07	07-07-01	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power	Return on equity, weighted cost of capital
10/07	05-UR-103	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Return on equity
11/07	29797	LA	Louisiana Public Service Commission	Cleco Power :LLC & Southwestern Electric Power	Lignite Pricing, support of settlement
01/08	07-551-EL-AIR	OH	Ohio Energy Group	Ohio Edison, Cleveland Electric, Toledo Edison	Return on equity
03/08	07-0585, 07-0585, 07-0587, 07-0588, 07-0589, 07-0590, (consol.)	IL	The Commercial Group	Ameren	Cost allocation, rate design
04/08	07-0566	IL	The Commercial Group	Commonwealth Edison	Cost allocation, rate design
06/08	R-2008-2011621	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Cost and revenue allocation, Tariff issues
07/08	R-2008-2028394	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy	Cost and revenue allocation, Tariff issues

J. KENNEDY AND ASSOCIATES, INC.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2019

Date	Case	Jurisdict.	Party	Utility	Subject
07/08	R-2008-2039634	PA	PPL Gas Large Users Group	PPL Gas	Retainage, LUFG Pct.
08/08	6680-UR-116	WI	Wisconsin Industrial Energy Group	Wisconsin P&L	Cost of Equity
08/08	6690-UR-119	WI	Wisconsin Industrial Energy Group	Wisconsin PS	Cost of Equity
09/08	ER-2008-0318	MO	The Commercial Group	AmerenUE	Cost and revenue allocation
10/08	R-2008-2029325	PA	U.S. Steel & Univ. of Pittsburgh Med. Ctr.	Equitable Gas Co.	Cost and revenue allocation
10/08	08-G-0609	NY	Multiple Intervenors	Niagara Mohawk Power	Cost and Revenue allocation
12/08	27800-U	GA	Georgia Public Service Commission	Georgia Power Company	CWIP/AFUDC issues, Review financial projections
03/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Capital Structure
04/09	E002/GR-08-1065	MN	The Commercial Group	Northern States Power	Cost and revenue allocation and rate design
05/09	08-0532	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation
07/09	080677-EI	FL	South Florida Hospital and Health Care Association	Florida Power & Light	Cost of equity, capital structure, Cost of short-term debt
07/09	U-30975	LA	Louisiana Public Service Commission	Cleco LLC, Southwestern Public Service Co.	Lignite mine purchase
10/09	4220-UR-116	WI	Wisconsin Industrial Energy Group	Northern States Power	Class cost of service, rate design
10/09	M-2009-2123945	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Smart Meter Plan cost allocation
10/09	M-2009-2123944	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Company	Smart Meter Plan cost allocation
10/09	M-2009-2123951	PA	West Penn Power Industrial Intervenors	West Penn Power	Smart Meter Plan cost allocation
11/09	M-2009-2123948	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Smart Meter Plan cost allocation
11/09	M-2009-2123950	PA	Met-Ed Industrial Users Group Penelec Industrial Customer Alliance, Penn Power Users Group	Metropolitan Edison, Pennsylvania Electric Co., Pennsylvania Power Co.	Smart Meter Plan cost allocation

J. KENNEDY AND ASSOCIATES, INC.

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2019**

Date	Case	Jurisdict.	Party	Utility	Subject
03/10	09-1352-E-42T	WV	West Virginia Energy Users Group	Monongahela Power	Return on equity, rate of return Potomac Edison
03/10	E015/GR-09-1151	MN	Large Power Intervenors	Minnesota Power	Return on equity, rate of return
04/10	2009-00459	KY	Kentucky Industrial Utility Consumers	Kentucky Power	Return on equity
04/10	2009-00548 2009-00549	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
05/10	10-0261-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co./ Wheeling Power Co.	EE/DR Cost Recovery, Allocation, & Rate Design
05/10	R-2009-2149262	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Class cost of service & cost allocation
06/10	2010-00036	KY	Lexington-Fayette Urban County Government	Kentucky American Water Company	Return on equity, rate of return, revenue requirements
06/10	R-2010-2161694	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Rate design, cost allocation
07/10	R-2010-2161575	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Return on equity
07/10	R-2010-2161592	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Cost and revenue allocation
07/10	9230	MD	Maryland Energy Group	Baltimore Gas and Electric	Electric and gas cost and revenue allocation; return on equity
09/10	10-70	MA	University of Massachusetts-Amherst	Western Massachusetts Electric Co.	Cost allocation and rate design
10/10	R-2010-2179522	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Cost and revenue allocation, rate design
11/10	P-2010-2158084	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Transmission rate design
11/10	10-0699-E-42T	WV	West Virginia Energy Users Group	Appalachian Power Co. & Wheeling Power Co.	Return on equity, rate of Return
11/10	10-0467	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation and rate design
04/11	R-2010-2214415	PA	Central Pen Gas Large Users Group	UGI Central Penn Gas, Inc.	Tariff issues, revenue allocation
07/11	R-2011-2239263	PA	Philadelphia Area Energy Users Group	PECO Energy	Retainage rate

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08/11	R-2011-2232243	PA	AK Steel	Pennsylvania-American Water Company	Rate Design
08/11	11AL-151G	CO	Climax Molybdenum	PS of Colorado	Cost allocation
09/11	11-G-0280	NY	Multiple Intervenors	Corning Natural Gas Co.	Cost and revenue allocation
10/11	4220-UR-117	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
02/12	11AL-947E	CO	Climax Molybdenum, CF&I Steel	Public Service Company of Colorado	Return on equity, weighted cost of capital
07/12	120015-EI	FL	South Florida Hospitals and Health Care Association	Florida Power and Light Co,	Return on equity, weighted cost of capital
07/12	12-0613-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal for Century Aluminum
07/12	R-2012-2290597	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities Corp.	Cost allocation
09/12	05-UR-106	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Class cost of service, cost and revenue allocation, rate design
09/12	2012-00221 2012-00222	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
10/12	9299	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design Cost of equity, weighted cost of capital
10/12	4220-UR-118	WI	Wisconsin Industrial Energy Group	Northern States Power Company	Class cost of service, cost and revenue allocation, rate design
10/12	473-13-0199	TX	Steering Committee of Cities Served by Oncor	Cross Texas Transmission, LLC	Return on equity, capital structure
01/13	R-2012-2321748 et al.	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation
02/13	12AL-1052E	CO	Cripple Creek & Victor Gold Mining, Holcim (US) Inc.	Black Hills/Colorado Electric Utility Company	Cost and revenue allocations
06/13	8009	VT	IBM Corporation	Vermont Gas Systems	Cost and revenue allocation, rate design
07/13	130040-EI	FL	WCF Hospital Utility Alliance	Tampa Electric Co.	Return on equity, rate of return
08/13	9326	MD	Maryland Energy Group	Baltimore Gas and Electric	Cost and revenue allocation, rate design, special rider

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08/13	P-2012-2325034	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities, Corp.	Distribution System Improvement Charge
09/13	4220-UR-119	WI	Wisconsin Industrial Energy Group	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
11/13	13-1325-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal, Felman Production
06/14	R-2014-2406274	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation, rate design
08/14	05-UR-107	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Cost and revenue allocation, rate design
10/14	ER13-1508 et al.	FERC	Louisiana Public Service Comm.	Entergy Services, Inc.	Return on equity
11/14	14AL-0660E	CO	Climax Molybdenum Co. and CFI Steel, LP	Public Service Co. of Colorado	Return on equity, weighted cost of capital
11/14	R-2014-2428742	PA	AK Steel	West Penn Power Company	Cost and revenue allocation
12/14	42866	TX	West Travis Co. Public Utility Agency	Travis County Municipal Utility District No. 12	Response to complain of monopoly power
3/15	2014-00371 2014-00372	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
3/15	2014-00396	KY	Kentucky Industrial Utility Customers	Kentucky Power Co.	Return on equity, weighted cost of capital
6/15	15-0003-G-42T	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Cost and revenue allocation, Infrastructure Replacement Program
9/15	15-0676-W-42T	WV	West Virginia Energy Users Gp.	West Virginia-American Water Company	Appropriate test year, Historical vs. Future
9/15	15-1256-G-390P	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Rate design for Infrastructure Replacement and Expansion Program
10/15	4220-UR-121	WI	Wisconsin Industrial Energy Gp.	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
12/15	15-1600-G-390P	WV	West Virginia Energy Users Gp.	Dominion Hope	Rate design and allocation for Pipeline Replacement & Expansion Prog.
12/15	45188	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring-fence protections for cost of capital

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Date	Case	Jurisdict.	Party	Utility	Subject
2/16	9406	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design, proposed Rider 5
3/16	39971	GA	GA Public Service Comm. Staff	Southern Company / AGL Resources	Credit quality and service quality issues
04/16	2015-00343	KY	Kentucky Office of the Attorney General	Atmos Energy	Cost of equity, cost of short-term debt, capital structure
05/16	16-G-0058 16-G-0059	NY	City of New York	Brooklyn Union Gas Co., KeySpan Gas East Corp.	Cost and revenue allocation, rate design, service quality issues
06/16	16-0073-E-C	WV	Constellium Rolled Products Ravenswood, LLC	Appalachian Power Co.	Complaint; security deposit
07/16	9418	MD	Healthcare Council of the National Capital Area	Potomac Electric Power Co.	Cost of equity, cost of service, Cost and revenue allocation
07/16	160021-EI	FL	South Florida Hospital and Health Care Association	Florida Power and Light Co.	Return on equity, cost of debt, capital structure
07/16	16-057-01	UT	Utah Office of Consumer Svcs.	Dominion Resources, Questar Gas Co.	Credit quality and service quality issues
08/16	8710	VT	Vermont Dept. of Public Service	Vermont Gas Systems	Return on equity, cost of debt, cost of capital
08/16	R-2016-2537359	PA	AK Steel Corp.	West Penn Power Co.	Cost and revenue allocation
09/16	2016-00162	KY	Kentucky Office of the Attorney General	Columbia Gas of Ky.	Return on equity, cost of short-term debt
09/16	16-0550-W-P	WV	West Va. Energy Users Gp.	West Va. American Water Co.	Infrastructure Replacement Program Surcharge
01/17	46238	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring fencing and other conditions for acquisition, service quality and reliability
02/17	45414	TX	Cities of Midland, McAllen, and Colorado City	Sharyland Utilities, LP and Sharyland Dist. and Transmission Services, LLC	Return on equity
02/17	2016-00370 2016-00371	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
03/17	10580	TX	Atmos Cities Steering Committee	Atmos Pipeline Texas	Return on equity, capital structure, weighted cost of capital
03/17	R-3867-2013	Quebec, Canada	Canadian Federation of Independent Businesses	Gaz Metro	Marginal Cost of Service Study

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Date	Case	Jurisdict.	Party	Utility	Subject
05/17	R-2017-2586783	PA	Philadelphia Industrial and Commercial Gas Users Gp.	Philadelphia Gas Works	Cost and revenue allocation, rate design, Interruptible tariffs
08/17	R-2017-2595853	PA	AK Steel	Pennsylvania American Water Co.	Cost and revenue allocation, rate design
8/17	17-3112-INV	VT	Vt. Dept. of Pubic Service	Green Mountain Power	Return on equity, cost of debt, weighted cost of capital
9/17	4220-UR-123	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
10/17	2017-00179	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity, cost of short-term debt
12/17	2017-00321	KY	Office of the Attorney General	Duke Energy Kentucky, Inc.	Return on equity
1/18	2017-00349	KY	Office of the Attorney General	Atmos Energy	Return on equity, cost of debt, weighted cost of capital
5/18	Fiscal Years 2019-2021 Rates	PA	Philadelphia Large Users Group	Philadelphia Water Department	Cost and revenue allocation
8/18	18-0974-TF	VT	Vt. Dept. of Public Service	Green Mountain Power	Return on equity, cost of debt, weighted cost of capital
8/18	48401	TX	Cities Served by Texas-New Mexico Power Company	Texas-New Mexico Power Co.	Return on equity, capital structure
8/18	18-05-16	CT	Connecticut Industrial Energy Consumers	Connecticut Natural Gas Co.	Cost and revenue allocation
9/18	9484	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design
9/18	2017-370-E	SC	South Carolina Office of Regulatory Staff	South Carolina Electric & Gas, Dominion Resources, SCANA	Return on equity, service quality standards, credit quality conditions
10/18	18-1115-G-390P	WV	West Va. Energy Users Group	Mountaineer Gas Company	Customer protections for Infrastructure Replacement and Expansion Program
12/18	R-2018-3003558, R-2018-3003561	PA	Aqua Large Users Group	Aqua Pennsylvania, Inc.	Cost and revenue allocation
02/19	UD-18-07	CCNO	Crescent City Power Users' Gp.	Entergy New Orleans, LLC	Return on equity, Reliability Incentive Mechanism, other proposed riders

J. KENNEDY AND ASSOCIATES, INC.

ENTERGY NEW ORLEANS
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
ALLETE	High Price ($)	80.780	79.420	77.330	78.600	81.590	82.820
	Low Price ($)	75.850	74.470	73.390	73.490	72.750	72.420
	Avg. Price ($)	78.315	76.945	75.360	76.045	77.170	77.620
	Dividend ($)	0.560	0.560	0.560	0.560	0.560	0.560
	Mo. Avg. Div.	2.86%	2.91%	2.97%	2.95%	2.90%	2.89%
	6 mos. Avg.	2.91%					
Alliant Energy	High Price ($)	43.950	43.840	44.180	44.700	46.050	46.580
	Low Price ($)	41.410	41.390	41.730	42.010	42.220	40.680
	Avg. Price ($)	42.680	42.615	42.955	43.355	44.135	43.630
	Dividend ($)	0.335	0.335	0.335	0.335	0.335	0.335
	Mo. Avg. Div.	3.14%	3.14%	3.12%	3.09%	3.04%	3.07%
	6 mos. Avg.	3.10%					
Ameren Corp.	High Price ($)	62.410	65.090	66.110	67.230	70.680	70.950
	Low Price ($)	59.150	60.780	62.060	62.700	62.320	62.510
	Avg. Price ($)	60.780	62.935	64.085	64.965	66.500	66.730
	Dividend ($)	0.458	0.458	0.458	0.458	0.458	0.475
	Mo. Avg. Div.	3.01%	2.91%	2.86%	2.82%	2.75%	2.85%
	6 mos. Avg.	2.87%					
American Electric Power	High Price ($)	71.890	72.910	73.740	76.050	78.470	81.050
	Low Price ($)	68.130	69.320	68.920	69.310	72.070	72.530
	Avg. Price ($)	70.010	71.115	71.330	72.680	75.270	76.790
	Dividend ($)	0.620	0.620	0.620	0.620	0.670	0.670
	Mo. Avg. Div.	3.54%	3.49%	3.48%	3.41%	3.56%	3.49%
	6 mos. Avg.	3.49%					
Avangrid, Inc.	High Price ($)	54.180	51.210	50.670	49.550	51.110	53.470
	Low Price ($)	48.750	49.000	46.960	45.810	46.920	48.040
	Avg. Price ($)	51.465	50.105	48.815	47.680	49.015	50.755
	Dividend ($)	0.432	0.432	0.440	0.440	0.440	0.440
	Mo. Avg. Div.	3.36%	3.45%	3.61%	3.69%	3.59%	3.47%
	6 mos. Avg.	3.53%					
Black Hills Corp.	High Price ($)	64.140	61.460	59.980	63.090	66.240	68.230
	Low Price ($)	59.010	58.620	56.420	57.070	59.330	59.490
	Avg. Price ($)	61.575	60.040	58.200	60.080	62.785	63.860
	Dividend ($)	0.475	0.475	0.475	0.475	0.505	0.505
	Mo. Avg. Div.	3.09%	3.16%	3.26%	3.16%	3.22%	3.16%
	6 mos. Avg.	3.18%					

ENTERGY NEW ORLEANS
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
CMS Energy Corp.	High Price ($)	48.680	50.120	50.810	51.910	52.250	53.820
	Low Price ($)	46.250	47.180	47.700	48.130	47.920	47.630
	Avg. Price ($)	47.465	48.650	49.255	50.020	50.085	50.725
	Dividend ($)	0.358	0.358	0.358	0.358	0.358	0.358
	Mo. Avg. Div.	3.01%	2.94%	2.90%	2.86%	2.86%	2.82%
	6 mos. Avg.	2.90%					
DTE Energy Co.	High Price ($)	109.660	114.120	114.310	118.220	121.000	120.760
	Low Price ($)	101.880	106.270	106.410	107.390	110.410	107.220
	Avg. Price ($)	105.770	110.195	110.360	112.805	115.705	113.990
	Dividend ($)	0.883	0.883	0.883	0.883	0.883	0.945
	Mo. Avg. Div.	3.34%	3.20%	3.20%	3.13%	3.05%	3.32%
	6 mos. Avg.	3.21%					
Duke Energy Corp.	High Price ($)	81.750	82.720	83.770	85.080	89.230	91.350
	Low Price ($)	77.900	79.510	78.000	78.520	80.890	82.770
	Avg. Price ($)	79.825	81.115	80.885	81.800	85.060	87.060
	Dividend ($)	0.890	0.928	0.928	0.928	0.928	0.928
	Mo. Avg. Div.	4.46%	4.58%	4.59%	4.54%	4.36%	4.26%
	6 mos. Avg.	4.47%					
El Paso Electric Co.	High Price ($)	62.700	64.350	63.050	60.220	59.270	57.330
	Low Price ($)	58.250	60.950	56.880	55.950	54.450	48.380
	Avg. Price ($)	60.475	62.650	59.965	58.085	56.860	52.855
	Dividend ($)	0.360	0.360	0.360	0.360	0.360	0.360
	Mo. Avg. Div.	2.38%	2.30%	2.40%	2.48%	2.53%	2.72%
	6 mos. Avg.	2.47%					
Hawaiian Electric Ind.	High Price ($)	36.200	36.030	36.330	37.690	38.380	39.350
	Low Price ($)	34.140	34.160	34.780	34.880	36.580	35.150
	Avg. Price ($)	35.170	35.095	35.555	36.285	37.480	37.250
	Dividend ($)	0.310	0.310	0.310	0.310	0.310	0.310
	Mo. Avg. Div.	3.53%	3.53%	3.49%	3.42%	3.31%	3.33%
	6 mos. Avg.	3.43%					
IDACORP	High Price ($)	95.350	99.280	101.490	101.890	101.410	102.440
	Low Price ($)	90.920	92.030	96.810	92.940	93.060	89.910
	Avg. Price ($)	93.135	95.655	99.150	97.415	97.235	96.175
	Dividend ($)	0.590	0.590	0.590	0.590	0.630	0.630
	Mo. Avg. Div.	2.53%	2.47%	2.38%	2.42%	2.59%	2.62%
	6 mos. Avg.	2.50%					

ENTERGY NEW ORLEANS
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
NextEra Energy, Inc.	High Price ($)	171.500	175.650	174.810	176.830	183.650	184.200
	Low Price ($)	163.510	165.450	164.250	166.190	166.750	164.780
	Avg. Price ($)	167.505	170.550	169.530	171.510	175.200	174.490
	Dividend ($)	1.110	1.110	1.110	1.110	1.110	1.110
	Mo. Avg. Div.	2.65%	2.60%	2.62%	2.59%	2.53%	2.54%
	6 mos. Avg.	2.59%					
Northwestern Corp.	High Price ($)	59.920	62.160	60.970	62.190	64.760	65.740
	Low Price ($)	55.980	58.030	56.930	56.230	58.330	57.280
	Avg. Price ($)	57.950	60.095	58.950	59.210	61.545	61.510
	Dividend ($)	0.550	0.550	0.550	0.550	0.550	0.550
	Mo. Avg. Div.	3.80%	3.66%	3.73%	3.72%	3.57%	3.58%
	6 mos. Avg.	3.68%					
OGE Energy Corp.	High Price ($)	36.590	37.690	37.740	38.130	39.970	41.800
	Low Price ($)	34.130	35.580	35.290	35.910	35.550	37.670
	Avg. Price ($)	35.360	36.635	36.515	37.020	37.760	39.735
	Dividend ($)	0.333	0.333	0.333	0.365	0.365	0.365
	Mo. Avg. Div.	3.76%	3.63%	3.64%	3.94%	3.87%	3.67%
	6 mos. Avg.	3.75%					
Otter Tail Corp.	High Price ($)	49.750	49.750	49.350	48.740	49.140	51.880
	Low Price ($)	47.000	47.350	46.850	44.820	44.220	46.260
	Avg. Price ($)	48.375	48.550	48.100	46.780	46.680	49.070
	Dividend ($)	0.335	0.335	0.335	0.335	0.335	0.335
	Mo. Avg. Div.	2.77%	2.76%	2.79%	2.86%	2.87%	2.73%
	6 mos. Avg.	2.80%					
Pinnacle West Capital	High Price ($)	83.050	82.830	81.120	86.710	90.060	92.640
	Low Price ($)	77.560	78.270	77.190	78.110	81.510	83.140
	Avg. Price ($)	80.305	80.550	79.155	82.410	85.785	87.890
	Dividend ($)	0.695	0.695	0.695	0.738	0.738	0.738
	Mo. Avg. Div.	3.46%	3.45%	3.51%	3.58%	3.44%	3.36%
	6 mos. Avg.	3.47%					
PNM Resources	High Price ($)	39.900	40.950	40.750	40.590	43.290	45.350
	Low Price ($)	37.170	38.250	38.150	37.900	37.670	39.520
	Avg. Price ($)	38.535	39.600	39.450	39.245	40.480	42.435
	Dividend ($)	0.265	0.265	0.265	0.265	0.265	0.265
	Mo. Avg. Div.	2.75%	2.68%	2.69%	2.70%	2.62%	2.50%
	6 mos. Avg.	2.66%					

ENTERGY NEW ORLEANS
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Portland General Electric	High Price ($)	46.000	47.560	47.540	47.530	49.210	50.400
	Low Price ($)	42.100	44.380	44.440	43.940	44.400	43.730
	Avg. Price ($)	44.050	45.970	45.990	45.735	46.805	47.065
	Dividend ($)	0.363	0.363	0.363	0.363	0.363	0.363
	Mo. Avg. Div.	3.29%	3.15%	3.15%	3.17%	3.10%	3.08%
	6 mos. Avg.	3.16%					
Southern Company	High Price ($)	48.650	49.430	45.980	46.330	47.690	47.980
	Low Price ($)	46.020	43.630	42.570	42.510	44.330	42.500
	Avg. Price ($)	47.335	46.530	44.275	44.420	46.010	45.240
	Dividend ($)	0.600	0.600	0.600	0.600	0.600	0.600
	Mo. Avg. Div.	5.07%	5.16%	5.42%	5.40%	5.22%	5.31%
	6 mos. Avg.	5.26%					
WEC Energy Group	High Price ($)	66.500	68.480	69.520	72.090	72.630	75.480
	Low Price ($)	63.190	64.920	64.960	66.160	66.460	66.750
	Avg. Price ($)	64.845	66.700	67.240	69.125	69.545	71.115
	Dividend ($)	0.553	0.553	0.553	0.553	0.553	0.553
	Mo. Avg. Div.	3.41%	3.31%	3.29%	3.20%	3.18%	3.11%
	6 mos. Avg.	3.25%					
Xcel Energy	High Price ($)	47.150	48.720	49.490	50.530	52.490	54.110
	Low Price ($)	44.540	45.870	46.010	46.520	47.440	48.160
	Avg. Price ($)	45.845	47.295	47.750	48.525	49.965	51.135
	Dividend ($)	0.380	0.380	0.380	0.380	0.380	0.380
	Mo. Avg. Div.	3.32%	3.21%	3.18%	3.13%	3.04%	2.97%
	6 mos. Avg.	3.14%					
Monthly Avg. Dividend Yield		3.30%	3.26%	3.29%	3.28%	3.24%	3.22%
6-month Avg. Dividend Yield		3.26%					

Source: Yahoo! Finance

ENO PROXY GROUP
DCF Growth Rate Analysis

Company	(1) Value Line DPS	(2) Value Line EPS	(3) Zacks	(4) Yahoo! Finance
ALLETE, Inc.	4.50%	3.50%	6.00%	6.00%
Alliant Energy Corporation	6.00%	6.50%	5.96%	6.90%
Ameren Corp.	5.50%	7.50%	6.79%	7.75%
American Electric Power Co.	6.00%	4.50%	5.71%	5.83%
Avangrid, Inc.	5.00%	13.00%	8.70%	9.20%
Black Hills Corporation	6.00%	6.50%	4.53%	4.37%
CMS Energy Corporation	7.00%	7.00%	6.18%	7.08%
DTE Energy Company	6.50%	7.50%	6.00%	5.50%
Duke Energy	4.00%	5.50%	5.03%	4.41%
El Paso Electric Co.	7.00%	4.50%	5.08%	5.10%
Hawaiian Electric	2.00%	3.50%	6.57%	8.10%
IDACORP, Inc.	6.50%	3.00%	2.78%	2.60%
NextEra Energy, Inc.	11.00%	9.00%	8.65%	8.57%
Northwestern Corporation	4.50%	3.50%	2.27%	2.42%
OGE Energy Corp.	8.00%	6.00%	5.17%	-2.25%
Otter Tail Corporation	3.50%	9.00%	N/A	9.00%
Pinnacle West Capital Corp.	5.50%	5.00%	4.47%	4.11%
PNM Resources, Inc.	7.00%	7.50%	4.70%	4.10%
Portland General Electric Company	6.00%	4.00%	3.29%	5.10%
Southern Company	3.50%	3.00%	4.50%	1.36%
WEC Energy Group	6.00%	7.00%	4.39%	4.67%
Xcel Energy Inc.	5.50%	5.50%	5.86%	6.64%
Averages excluding negatives	5.75%	6.00%	5.36%	5.66%
Median Values excluding negatives	6.00%	5.75%	5.17%	5.50%

Sources: Value Line Investment Survey, October 26, November 16, and December 14, 2018
Yahoo! Finance growth rates retrieved December 28, 2018
Zacks growth rates retrieved December 28, 2018

ENO PROXY GROUP
DCF RETURN ON EQUITY

	(1) Value Line Dividend Gr.	(2) Value Line Earnings Gr.	(3) Zack's Earning Gr.	(4) Yahoo! Earning Gr.	(5) Average of All Gr. Rates
Method 1:					
Dividend Yield	3.26%	3.26%	3.26%	3.26%	3.26%
Average Growth Rate	5.75%	6.00%	5.36%	5.66%	5.69%
Expected Div. Yield	3.36%	3.36%	3.35%	3.36%	3.36%
DCF Return on Equity	*9.11%*	*9.36%*	*8.71%*	*9.02%*	*9.05%*
Method 2:					
Dividend Yield	3.26%	3.26%	3.26%	3.26%	3.26%
Median Growth Rate	6.00%	5.75%	5.17%	5.50%	5.61%
Expected Div. Yield	3.36%	3.36%	3.35%	3.35%	3.36%
DCF Return on Equity	*9.36%*	*9.11%*	*8.52%*	*8.85%*	*8.97%*

ENO PROXY GROUP
Capital Asset Pricing Model Analysis

30-Year Treasury Bond, Value Line Beta

Line No.		Value Line
1	Market Required Return Estimate	13.75%
2	Risk-free Rate of Return, 30-Year Treasury Bond	
3	Average of Last Six Months	3.17%
4	Risk Premium	
5	(Line 1 minus Line 3)	10.58%
6	Comparison Group Beta	0.60
7	Comparison Group Beta * Risk Premium	
8	(Line 5 * Line 6)	6.30%
9	CAPM Return on Equity	
10	(Line 3 plus Line 8)	9.47%

5-Year Treasury Bond, Value Line Beta

Line No.		Value Line
1	Market Required Return Estimate	13.75%
2	Risk-free Rate of Return, 5-Year Treasury Bond	
3	Average of Last Six Months	2.85%
4	Risk Premium	
5	(Line 1 minus Line 3)	10.91%
6	Comparison Group Beta	0.60
7	Comparison Group Beta * Risk Premium	
8	(Line 5 * Line 6)	6.49%
9	CAPM Return on Equity	
10	(Line 3 plus Line 8)	9.34%

ENO PROXY GROUP
Capital Asset Pricing Model Analysis

Supporting Data for CAPM Analyses

30 Year Treasury Bond Data | 5 Year Treasury Bond Data

	Avg. Yield		Avg. Yield
July-18	3.01%	July-18	2.78%
August-18	3.04%	August-18	2.77%
September-18	3.15%	September-18	2.89%
October-18	3.34%	October-18	3.00%
November-18	3.36%	November-18	2.95%
December-18	3.10%	December-18	2.68%
6 month average	3.17%	6 month average	2.85%

Source: www.federalreserve.gov/datadownload/

Value Line Market Return Data: | Comparison Group Betas: | Value Line

Forecasted Data:

		ALLETE, Inc.	0.65
		Alliant Energy Corporation	0.60
Value Line Median Growth Rates:		Ameren Corp.	0.55
Earnings	12.00%	American Electric Power Co.	0.55
Book Value	8.50%	Avangrid, Inc.	0.30
Average	10.25%	Black Hills Corporation	0.80
Average Dividend Yield	1.19%	CMS Energy Corporation	0.55
Estimated Market Return	11.50%	DTE Energy Company	0.55
		Duke Energy	0.50
Value Line Projected 3-5 Yr.		El Paso Electric Co.	0.70
Median Annual Total Return	16.00%	Hawaiian Electric	0.60
		IDACORP, Inc.	0.60
Average of Projected Mkt.		NextEra Energy	0.55
Returns	13.75%	Northwestern Corp.	0.60
		OGE Energy Corp.	0.85
Source: Value Line Investment Survey		Otter Tail Corp.	0.75
for Windows retrieved December 28, 2018		Pinnacle West Capital Corp.	0.60
		PNM Resources	0.65
		Portland General Electric Company	0.60
		Southern Company	0.50
		WEC Energy Group	0.50
		Xcel Energy Inc.	0.55
		Average	0.60

ENO PROXY GROUP
Capital Asset Pricing Model Analysis
Historic Market Premium

	Geometric Mean	Arithmetic Mean	Adjusted Arithmetic Mean
Long-Term Annual Return on Stocks	10.20%	12.10%	
Long-Term Annual Income Return on Long-Term Treas. Bonds	5.00%	5.00%	
Historical Market Risk Premium	5.20%	7.10%	6.04%
Comparison Group Beta, Value Line	0.60	0.60	0.60
Beta * Market Premium	3.10%	4.23%	3.60%
Current 30-Year Treasury Bond Yield	3.17%	3.17%	3.17%
CAPM Cost of Equity, Value Line Beta	**6.26%**	**7.39%**	**6.76%**

Source: *2018 SBBI Yearbook, Stocks, Bonds, Bills, and Inflation*, Duff and Phelps; pp. 6-17, 10-31

FERC GDP GROWTH RATE

	2020	2050	2070	
Energy Information Administration				
Real GDP	18,335	33,205		
GDP Deflator	1.217	2.437		
	22,314	80,921		4.39%
SSA Trustees Report	22,288		189,838	4.38%
Average GDP Growth Rate				4.38%

Sources:

Energy Information Administration, *Annual Energy Outlook 2018* (Macroeconomic Indicators).
Social Security Administration, 2018 OASDI Trustees Report, Table VI.G6

Hevert Multi-Stage Growth Discounted Cash Flow Model
180 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage, 4.40% Projected GDP Growth

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal P/E Ratio	Terminal PEG Ratio
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2018	2022	2028	Proof	IRR		
ALLETE, Inc.	ALE	$74.39	6.00%	6.00%	5.00%	5.67%	4.40%	65.00%	64.00%	65.57%	($0.00)	7.69%	20.78	4.72
Alliant Energy Corporation	LNT	$41.41	5.60%	5.85%	6.50%	5.98%	4.40%	64.00%	64.00%	65.57%	($0.00)	8.24%	17.84	4.05
Ameren Corporation	AEE	$58.05	6.50%	6.30%	7.50%	6.77%	4.40%	60.00%	59.00%	65.57%	($0.00)	8.34%	17.35	3.94
American Electric Power Company, Inc.	AEP	$69.91	5.70%	5.79%	4.50%	5.33%	4.40%	67.00%	63.00%	65.57%	($0.00)	8.37%	17.24	3.92
Avangrid, Inc.	AGR	$50.25	9.10%	10.40%	13.00%	10.83%	4.40%	76.00%	66.00%	65.57%	($0.00)	8.07%	18.68	4.25
Black Hills Corporation	BKH	$57.41	4.10%	3.86%	5.00%	4.32%	4.40%	55.00%	60.00%	65.57%	($0.00)	8.54%	16.54	3.76
CMS Energy Corporation	CMS	$45.84	6.40%	7.05%	7.00%	6.82%	4.40%	61.00%	61.00%	65.57%	$0.00	8.35%	17.34	3.94
DTE Energy Company	DTE	$105.75	5.30%	5.59%	7.00%	5.96%	4.40%	61.00%	60.00%	65.57%	$0.00	8.67%	16.05	3.65
Duke Energy Corporation	DUK	$80.74	4.70%	4.22%	5.50%	4.81%	4.40%	76.00%	80.00%	65.57%	($0.00)	8.47%	16.81	3.82
El Paso Electric	EE	$54.16	5.10%	5.20%	4.50%	4.93%	4.40%	57.00%	61.00%	65.57%	($0.00)	7.69%	20.82	4.73
Hawaiian Electric Industries, Inc.	HE	$34.70	7.10%	9.10%	3.50%	6.57%	4.40%	66.00%	59.00%	65.57%	($0.00)	8.28%	17.62	4.01
IDACORP, Inc.	IDA	$89.13	3.90%	3.10%	3.50%	3.50%	4.40%	57.00%	63.00%	65.57%	$0.00	7.57%	21.56	4.90
NextEra Energy, Inc.	NEE	$156.22	8.60%	9.79%	8.50%	8.96%	4.40%	55.00%	63.00%	65.57%	$0.00	8.37%	17.24	3.92
NorthWestern Corporation	NWE	$55.80	3.00%	3.16%	3.50%	3.22%	4.40%	64.00%	64.00%	65.57%	($0.00)	8.40%	17.10	3.89
OGE Energy Corp.	OGE	$33.47	6.00%	4.30%	6.00%	5.43%	4.40%	69.00%	71.00%	65.57%	($0.00)	8.93%	15.10	3.43
Otter Tail Corporation	OTTR	$44.07	NA	9.00%	7.50%	8.25%	4.40%	66.00%	60.00%	65.57%	$0.00	8.27%	17.69	4.02
Pinnacle West Capital Corporation	PNW	$81.85	4.50%	3.78%	5.00%	4.43%	4.40%	63.00%	63.00%	65.57%	($0.00)	8.30%	17.57	3.99
PNM Resources, Inc.	PNM	$39.36	5.10%	4.30%	7.50%	5.63%	4.40%	53.00%	50.00%	65.57%	($0.00)	8.05%	18.74	4.26
Portland General Electric Company	POR	$43.26	2.80%	2.65%	4.00%	3.15%	4.40%	64.00%	63.00%	65.57%	$0.00	7.91%	19.52	4.44
Southern Company	SO	$46.80	4.50%	2.72%	3.00%	3.41%	4.40%	80.00%	74.00%	65.57%	($0.00)	9.31%	13.95	3.17
WEC Energy Group, Inc.	WEC	$63.81	4.10%	4.43%	7.00%	5.18%	4.40%	66.00%	64.00%	65.57%	$0.00	8.14%	18.31	4.16
Xcel Energy Inc.	XEL	$46.44	5.70%	5.89%	5.50%	5.70%	4.40%	62.00%	63.00%	65.57%	($0.00)	8.27%	17.71	4.02
											Mean	8.28%	17.80	
											Max	9.31%		
											Min	7.57%		

Projected Annual
Earnings per Share

Company	Ticker	[14] 2017	[15] 2018	[16] 2019	[17] 2020	[18] 2021	[19] 2022	[20] 2023	[21] 2024	[22] 2025	[23] 2026	[24] 2027	[25] 2028	[26] 2029	[27] 2030	[28] 2031	[29] 2032
ALLETE, Inc.	ALE	$3.13	$3.31	$3.49	$3.69	$3.90	$4.12	$4.35	$4.58	$4.81	$5.04	$5.27	$5.50	$5.74	$6.00	$6.26	$6.54
Alliant Energy Corporation	LNT	$1.99	$2.11	$2.24	$2.37	$2.51	$2.66	$2.81	$2.97	$3.12	$3.27	$3.43	$3.58	$3.74	$3.90	$4.07	$4.25
Ameren Corporation	AEE	$2.77	$2.96	$3.16	$3.37	$3.60	$3.84	$4.09	$4.33	$4.57	$4.81	$5.04	$5.26	$5.50	$5.74	$5.99	$6.25
American Electric Power Company, Inc.	AEP	$3.62	$3.81	$4.02	$4.23	$4.46	$4.69	$4.94	$5.18	$5.44	$5.69	$5.95	$6.21	$6.49	$6.77	$7.07	$7.38
Avangrid, Inc.	AGR	$1.67	$1.85	$2.05	$2.27	$2.52	$2.79	$3.07	$3.33	$3.59	$3.82	$4.03	$4.21	$4.39	$4.59	$4.79	$5.00
Black Hills Corporation	BKH	$3.38	$3.53	$3.68	$3.84	$4.00	$4.18	$4.36	$4.54	$4.74	$4.95	$5.17	$5.40	$5.63	$5.88	$6.14	$6.41
CMS Energy Corporation	CMS	$2.17	$2.32	$2.48	$2.64	$2.82	$3.02	$3.21	$3.40	$3.60	$3.78	$3.96	$4.14	$4.32	$4.51	$4.71	$4.92
DTE Energy Company	DTE	$5.73	$6.07	$6.43	$6.82	$7.22	$7.65	$8.09	$8.53	$8.97	$9.42	$9.85	$10.29	$10.74	$11.21	$11.71	$12.22
Duke Energy Corporation	DUK	$4.22	$4.42	$4.64	$4.86	$5.09	$5.34	$5.59	$5.85	$6.12	$6.40	$6.68	$6.98	$7.28	$7.60	$7.94	$8.29
El Paso Electric	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.38	$3.54	$3.70	$3.87	$4.04	$4.22	$4.40	$4.59	$4.80
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.75	$1.86	$1.98	$2.12	$2.25	$2.39	$2.53	$2.67	$2.81	$2.94	$3.07	$3.21	$3.35	$3.50	$3.65
IDACORP, Inc.	IDA	$4.21	$4.36	$4.51	$4.67	$4.83	$5.00	$5.18	$5.38	$5.59	$5.82	$6.07	$6.34	$6.61	$6.91	$7.21	$7.53
NextEra Energy, Inc.	NEE	$6.50	$7.08	$7.72	$8.41	$9.16	$9.98	$10.80	$11.61	$12.38	$13.12	$13.79	$14.40	$15.03	$15.69	$16.39	$17.11
NorthWestern Corporation	NWE	$3.34	$3.45	$3.56	$3.67	$3.79	$3.91	$4.05	$4.19	$4.35	$4.53	$4.72	$4.93	$5.14	$5.37	$5.60	$5.85
OGE Energy Corp.	OGE	$1.92	$2.02	$2.13	$2.25	$2.37	$2.50	$2.63	$2.77	$2.90	$3.04	$3.18	$3.32	$3.47	$3.62	$3.78	$3.94
Otter Tail Corporation	OTTR	$1.86	$2.01	$2.18	$2.36	$2.55	$2.76	$2.98	$3.18	$3.38	$3.58	$3.76	$3.92	$4.09	$4.27	$4.46	$4.66
Pinnacle West Capital Corporation	PNW	$4.43	$4.63	$4.83	$5.04	$5.27	$5.50	$5.74	$6.00	$6.26	$6.54	$6.83	$7.13	$7.44	$7.77	$8.11	$8.47
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.66	$2.80	$2.94	$3.08	$3.23	$3.37	$3.52	$3.67	$3.83	$4.00
Portland General Electric Company	POR	$2.29	$2.36	$2.44	$2.51	$2.59	$2.67	$2.76	$2.86	$2.97	$3.09	$3.22	$3.36	$3.51	$3.66	$3.82	$3.99
Southern Company	SO	$3.21	$3.32	$3.43	$3.55	$3.67	$3.80	$3.93	$4.08	$4.24	$4.41	$4.60	$4.80	$5.01	$5.23	$5.46	$5.70
WEC Energy Group, Inc.	WEC	$3.14	$3.30	$3.47	$3.65	$3.84	$4.04	$4.25	$4.45	$4.67	$4.88	$5.11	$5.33	$5.57	$5.81	$6.07	$6.33
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.57	$2.72	$2.87	$3.03	$3.20	$3.37	$3.54	$3.71	$3.88	$4.05	$4.23	$4.42	$4.61	$4.81

Multi-Stage Growth Discounted Cash Flow Model - Terminal P/E Ratio Equals 20.54
180 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage, 4.40% Long-Term GDP Growth

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal
Company	Ticker	Price	Zacks	First Call	Value Line	Average	Growth	2018	2022	2028	Proof	IRR	P/E Ratio	PEG Ratio
ALLETE, Inc.	ALE	$74.39	6.00%	6.00%	5.00%	5.67%	4.40%	65.00%	64.00%	65.57%	($0.00)	7.63%	20.54	4.67
Alliant Energy Corporation	LNT	$41.41	5.60%	5.85%	6.50%	5.98%	4.40%	64.00%	64.00%	65.57%	($0.00)	9.07%	20.54	4.67
Ameren Corporation	AEE	$58.05	6.50%	6.30%	7.50%	6.77%	4.40%	60.00%	59.00%	65.57%	$0.00	9.35%	20.54	4.67
American Electric Power Company, Inc.	AEP	$69.91	5.70%	5.79%	4.50%	5.33%	4.40%	67.00%	63.00%	65.57%	($0.00)	9.41%	20.54	4.67
Avangrid, Inc.	AGR	$50.25	9.10%	10.40%	13.00%	10.83%	4.40%	76.00%	66.00%	65.57%	$0.00	8.64%	20.54	4.67
Black Hills Corporation	BKH	$57.41	4.10%	3.86%	5.00%	4.32%	4.40%	55.00%	60.00%	65.57%	$0.00	9.82%	20.54	4.67
CMS Energy Corporation	CMS	$45.84	6.40%	7.05%	7.00%	6.82%	4.40%	61.00%	61.00%	65.57%	($0.00)	9.35%	20.54	4.67
DTE Energy Company	DTE	$105.75	5.30%	5.59%	7.00%	5.96%	4.40%	61.00%	60.00%	65.57%	($0.00)	10.12%	20.54	4.67
Duke Energy Corporation	DUK	$80.74	4.70%	4.22%	5.50%	4.81%	4.40%	76.00%	80.00%	65.57%	($0.00)	9.63%	20.54	4.67
El Paso Electric	EE	$54.16	5.10%	5.20%	4.50%	4.93%	4.40%	57.00%	61.00%	65.57%	$0.00	7.61%	20.54	4.67
Hawaiian Electric Industries, Inc.	HE	$34.70	7.10%	9.10%	3.50%	6.57%	4.40%	66.00%	59.00%	65.57%	($0.00)	9.20%	20.54	4.67
IDACORP, Inc.	IDA	$89.13	3.90%	3.10%	3.50%	3.50%	4.40%	57.00%	63.00%	65.57%	($0.00)	7.28%	20.54	4.67
NextEra Energy, Inc.	NEE	$156.22	8.60%	9.79%	8.50%	8.96%	4.40%	55.00%	63.00%	65.57%	$0.00	9.41%	20.54	4.67
NorthWestern Corporation	NWE	$55.80	3.00%	3.16%	3.50%	3.22%	4.40%	64.00%	64.00%	65.57%	($0.00)	9.48%	20.54	4.67
OGE Energy Corp.	OGE	$33.47	6.00%	4.30%	6.00%	5.43%	4.40%	69.00%	71.00%	65.57%	($0.00)	10.70%	20.54	4.67
Otter Tail Corporation	OTTR	$44.07	NA	9.00%	7.50%	8.25%	4.40%	66.00%	60.00%	65.57%	($0.00)	9.16%	20.54	4.67
Pinnacle West Capital Corporation	PNW	$81.85	4.50%	3.78%	5.00%	4.43%	4.40%	63.00%	63.00%	65.57%	($0.00)	9.22%	20.54	4.67
PNM Resources, Inc.	PNM	$39.36	5.10%	4.30%	7.50%	5.63%	4.40%	53.00%	50.00%	65.57%	($0.00)	8.61%	20.54	4.67
Portland General Electric Company	POR	$43.26	2.80%	2.65%	4.00%	3.15%	4.40%	64.00%	63.00%	65.57%	($0.00)	8.21%	20.54	4.67
Southern Company	SO	$46.80	4.50%	2.72%	3.00%	3.41%	4.40%	80.00%	74.00%	65.57%	$0.00	11.48%	20.54	4.67
WEC Energy Group, Inc.	WEC	$63.81	4.10%	4.43%	7.00%	5.18%	4.40%	66.00%	64.00%	65.57%	($0.00)	8.82%	20.54	4.67
Xcel Energy Inc.	XEL	$46.44	5.70%	5.89%	5.50%	5.70%	4.40%	62.00%	63.00%	65.57%	($0.00)	9.15%	20.54	4.67
											Mean	9.15%	20.54	
											Max	11.48%		
											Min	7.28%		

Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
ALLETE, Inc.	ALE	$3.13	$3.31	$3.49	$3.69	$3.90	$4.12	$4.35	$4.58	$4.81	$5.04	$5.27	$5.50	$5.74	$6.00	$6.26	$6.54
Alliant Energy Corporation	LNT	$1.99	$2.11	$2.24	$2.37	$2.51	$2.66	$2.81	$2.97	$3.12	$3.27	$3.43	$3.58	$3.74	$3.90	$4.07	$4.25
Ameren Corporation	AEE	$2.77	$2.96	$3.16	$3.37	$3.60	$3.84	$4.09	$4.33	$4.57	$4.81	$5.04	$5.26	$5.50	$5.74	$5.99	$6.25
American Electric Power Company, Inc.	AEP	$3.62	$3.81	$4.02	$4.23	$4.46	$4.69	$4.94	$5.18	$5.44	$5.69	$5.95	$6.21	$6.49	$6.77	$7.07	$7.38
Avangrid, Inc.	AGR	$1.67	$1.85	$2.05	$2.27	$2.52	$2.79	$3.07	$3.33	$3.59	$3.82	$4.03	$4.21	$4.39	$4.59	$4.79	$5.00
Black Hills Corporation	BKH	$3.38	$3.53	$3.68	$3.84	$4.00	$4.18	$4.36	$4.55	$4.74	$4.95	$5.17	$5.40	$5.63	$5.88	$6.14	$6.41
CMS Energy Corporation	CMS	$2.17	$2.32	$2.48	$2.64	$2.82	$3.02	$3.21	$3.40	$3.60	$3.78	$3.96	$4.14	$4.32	$4.51	$4.71	$4.92
DTE Energy Company	DTE	$5.73	$6.07	$6.43	$6.82	$7.22	$7.65	$8.09	$8.53	$8.97	$9.42	$9.85	$10.29	$10.74	$11.21	$11.71	$12.22
Duke Energy Corporation	DUK	$4.22	$4.42	$4.64	$4.86	$5.09	$5.34	$5.59	$5.85	$6.12	$6.40	$6.68	$6.98	$7.28	$7.60	$7.94	$8.29
El Paso Electric	EE	$2.42	$2.54	$2.66	$2.80	$2.93	$3.08	$3.23	$3.38	$3.54	$3.70	$3.87	$4.04	$4.22	$4.40	$4.59	$4.80
Hawaiian Electric Industries, Inc.	HE	$1.64	$1.75	$1.86	$1.98	$2.12	$2.25	$2.39	$2.53	$2.67	$2.81	$2.94	$3.07	$3.21	$3.35	$3.50	$3.65
IDACORP, Inc.	IDA	$4.21	$4.36	$4.51	$4.67	$4.83	$5.00	$5.18	$5.38	$5.59	$5.82	$6.07	$6.34	$6.61	$6.91	$7.21	$7.53
NextEra Energy, Inc.	NEE	$6.50	$7.08	$7.72	$8.41	$9.16	$9.98	$10.80	$11.61	$12.38	$13.12	$13.79	$14.40	$15.03	$15.69	$16.39	$17.11
NorthWestern Corporation	NWE	$3.34	$3.45	$3.56	$3.67	$3.79	$3.91	$4.05	$4.19	$4.35	$4.53	$4.72	$4.93	$5.14	$5.37	$5.60	$5.85
OGE Energy Corp.	OGE	$1.92	$2.02	$2.13	$2.25	$2.37	$2.50	$2.63	$2.77	$2.90	$3.04	$3.18	$3.32	$3.47	$3.62	$3.78	$3.94
Otter Tail Corporation	OTTR	$1.86	$2.01	$2.18	$2.36	$2.55	$2.76	$2.98	$3.18	$3.38	$3.58	$3.76	$3.92	$4.09	$4.27	$4.46	$4.66
Pinnacle West Capital Corporation	PNW	$4.43	$4.63	$4.83	$5.04	$5.27	$5.50	$5.74	$6.00	$6.26	$6.54	$6.83	$7.13	$7.44	$7.77	$8.11	$8.47
PNM Resources, Inc.	PNM	$1.92	$2.03	$2.14	$2.26	$2.39	$2.53	$2.66	$2.80	$2.94	$3.08	$3.23	$3.37	$3.52	$3.67	$3.83	$4.00
Portland General Electric Company	POR	$2.29	$2.36	$2.44	$2.51	$2.59	$2.67	$2.76	$2.86	$2.97	$3.09	$3.22	$3.36	$3.51	$3.66	$3.82	$3.99
Southern Company	SO	$3.21	$3.32	$3.43	$3.55	$3.67	$3.80	$3.93	$4.08	$4.24	$4.41	$4.60	$4.80	$5.01	$5.23	$5.46	$5.70
WEC Energy Group, Inc.	WEC	$3.14	$3.30	$3.47	$3.65	$3.84	$4.04	$4.25	$4.45	$4.67	$4.88	$5.11	$5.33	$5.57	$5.81	$6.07	$6.33
Xcel Energy Inc.	XEL	$2.30	$2.43	$2.57	$2.72	$2.87	$3.03	$3.20	$3.37	$3.54	$3.71	$3.88	$4.05	$4.23	$4.42	$4.61	$4.81

SOAH DOCKET NO. 473-19-6677
PUC DOCKET NO. 49831

APPLICATION OF SOUTHWESTERN	§	BEFORE THE STATE OFFICE
PUBLIC SERVICE COMPANY FOR	§	OF
AUTHORITY TO CHANGE RATES	§	ADMINISTRATIVE HEARINGS

Revenue Requirement

DIRECT TESTIMONY AND EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF THE
TEXAS INDUSTRIAL ENERGY CONSUMERS

FEBRUARY 10, 2020

APPLICATION OF SOUTHWESTERN	§	BEFORE THE STATE OFFICE
PUBLIC SERVICE COMPANY FOR	§	OF
AUTHORITY TO CHANGE RATES	§	ADMINISTRATIVE HEARINGS

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RAB-5   Southwestern Public Service Proxy Group – Capital Asset Pricing Model Analysis Historic Market Premium

RAB-6   SPS Response to TIEC 2-5

1		**DIRECT TESTIMONY OF RICHARD A. BAUDINO**
2		**I. QUALIFICATIONS AND SUMMARY**

3 Q. **PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

4 A. My name is Richard A. Baudino. My business address is J. Kennedy and Associates,

5   Inc. ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell,

6   Georgia 30075.

7 Q. **WHAT IS YOUR OCCUPATION AND BY WHOM ARE YOU EMPLOYED?**

8 A. I am a consultant with Kennedy and Associates.

9 Q. **PLEASE DESCRIBE YOUR EDUCATION AND PROFESSIONAL**
10   **EXPERIENCE.**

11 A. I received my Master of Arts degree with a major in Economics and a minor in Statistics

12   from New Mexico State University in 1982. I also received my Bachelor of Arts

13   Degree with majors in Economics and English from New Mexico State in 1979.

14   I began my professional career with the New Mexico Public Service

15   Commission Staff in October 1982 and was employed there as a Utility Economist.

16   During my employment with the Staff, my responsibilities included the analysis of a

17   broad range of issues in the ratemaking field. Areas in which I testified included cost

18   of service, rate of return, rate design, revenue requirements, analysis of sale/leasebacks

19   of generating plants, utility finance issues, and generating plant phase-ins.

20   In October 1989, I joined the utility consulting firm of Kennedy and Associates

21   as a Senior Consultant where my duties and responsibilities covered substantially the

22   same areas as those during my tenure with the New Mexico Public Service Commission

1   Staff. I became Manager in July 1992 and was named Director of Consulting in January

2   1995. Currently, I am a consultant with Kennedy and Associates.

3   Appendix A summarizes my expert testimony experience.

4 Q. **ON WHOSE BEHALF ARE YOU TESTIFYING?**

5 A. I am testifying on behalf of the Texas Industrial Energy Consumers ("TIEC").

6 Q. **WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

7 A. The purpose of my Direct Testimony is to address the allowed return on equity, capital

8   structure, and overall rate of return on rate base for the regulated electric operations of

9   Southwestern Public Service Company ("SPS", or the "Company"). I will also respond

10   to the Direct Testimonies of SPS witnesses Ms. Ann Bulkley and Ms. Sarah Soong.

11 Q. **PLEASE   SUMMARIZE   YOUR   CONCLUSIONS   AND**
12   **RECOMMENDATIONS.**

13 A. My conclusions and recommendations are as follows.

14   Based on current financial market conditions, I recommend that the Public

15   Utility Commission of Texas ("PUCT" or the "Commission") adopt a 9.20% return on

16   equity for SPS in this proceeding. My recommendation is based primarily on the results

17   of a Discounted Cash Flow ("DCF") model analysis. My DCF analysis incorporates

18   my standard approach to estimating the investor-required return on equity and utilizes

19   the proxy group of 17 companies used by SPS witness Bulkley.

20   My cost of equity analyses also include Capital Asset Pricing Model ("CAPM")

21   analyses for additional information to inform my recommendation to the Commission.

22   I did not incorporate the results of the CAPM in my recommendation given the

1   unreasonably low cost of equity results being produced by this model at this time.

2   Nonetheless, the CAPM confirms the fact that the required ROE for regulated electric

3   utilities continues to be low, in line with the low interest rate environment that has

4   prevailed in the economy for the last 10 or so years.

5   Finally, I also reviewed recent Commission-allowed ROEs presented by Ms.

6   Bulkley and reviewed the results of her risk premium analysis using the recent yield on

7   the 30-Year Treasury bond. This review helped inform my recommended ROE of

8   9.20% to the Commission.

9   I also recommend that the Commission reject SPS's requested 54.65% equity

10   ratio. The Company's requested equity ratio is higher than the average common equity

11   ratio of the proxy group and would result in excessive rates to SPS's Texas ratepayers.

12   Instead, I recommend the Commission approve its last approved ratemaking capital

13   structure for the Company of 51%. This equity ratio is still reasonable for SPS and is

14   consistent with the 2018 equity ratios of the companies in the proxy group based on

15   Value Line's data. A 51% equity ratio also falls within the range of equity ratios for

16   the operating utilities in the proxy group as calculated by Ms. Bulkley and presented in

17   her Attachment AEB-RR-13.

18   In Section IV, I respond to the testimony and ROE recommendation of Ms.

19   Bulkley. I will demonstrate that her recommended ROE of 10.35% overstates the

20   current investor-required return for a low-risk regulated electric utility like SPS.

21   Today's financial environment of low interest rates has been deliberately and

22   methodically supported by Federal Reserve policy actions since 2009. The Fed's

1   further lowering of short-term interest rates three times in 2019 supports future

2   expectations of lower interest rates through 2020.

3   **II.   FUNDAMENTALS OF SETTING THE ALLOWED RETURN ON EQUITY**

4   **Q.   WHAT ARE THE MAIN GUIDELINES TO WHICH YOU ADHERE IN**
5   **ESTIMATING THE COST OF EQUITY FOR A FIRM?**

6   A.   Generally speaking, the estimated cost of equity should be comparable to the returns of

7   other firms with similar risk structures and should be sufficient for the firm to attract

8   capital. These are the basic standards set out by the United States Supreme Court in

9   Federal Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944) and Bluefield

10   W.W. & Improv. Co. v. Public Service Comm'n, 262 U.S. 679 (1922).

11   From an economist's perspective, the notion of "opportunity cost" plays a vital

12   role in estimating the return on equity. One measures the opportunity cost of an

13   investment equal to what one would have obtained in the next best alternative. For

14   example, let us suppose that an investor decides to purchase the stock of a publicly

15   traded electric utility. That investor made the decision based on the expectation of

16   dividend payments and perhaps some appreciation in the stock's value over time;

17   however, that investor's opportunity cost is measured by what she or he could have

18   invested in as the next best alternative. That alternative could have been another utility

19   stock, a utility bond, a mutual fund, a money market fund, or any other number of

20   investment vehicles.

21   The key determinant in deciding whether to invest, however, is based on

22   comparative levels of risk. Our hypothetical investor would not invest in a particular

23   electric company stock if it offered a return lower than other investments of similar

1   risk. The opportunity cost simply would not justify such an investment. Thus, the task

2   for the rate of return analyst is to estimate a return that is equal to the return being

3   offered by other risk-comparable firms.

4 Q.   **DOES THE LEVEL OF INTEREST RATES AFFECT THE ALLOWED COST**
5   **OF EQUITY, OR ROE, FOR REGULATED UTILITIES?**

6 A.   Yes. The common stock of regulated utilities is considered to be interest rate sensitive.

7   This means that the cost of equity for regulated utilities tends to rise and fall with

8   changes in interest rates. For example, as interest rates rise, the cost equity will also

9   rise and vice versa when interest rates fall. This relationship is due in large part to the

10   capital intensive nature of the utility industry, which relies heavily on both debt and

11   equity to finance its regulated investments.

12 Q.   **DESCRIBE THE INTEREST RATE ENVIRONMENT OVER THE LAST 10**
13   **OR SO YEARS.**

14 A.   Since 2007 and 2008, the interest rates in the U.S. and the world economy have been

15   consistently low. This trend was precipitated by the 2007 financial crisis and severe

16   recession that followed beginning in December 2007. In response to this economic

17   crisis, the Federal Reserve ("Fed") undertook an unprecedented series of steps to

18   stabilize the economy, ease credit conditions, and lower unemployment and interest

19   rates. These steps are commonly known as Quantitative Easing ("QE") and were

20   implemented in three distinct stages: QE1, QE2, and QE3. The Fed's stated purpose of

1   QE was "to support the liquidity of financial institutions and foster improved conditions

2   in financial markets."[1]

3 **Q.**   **MR. BAUDINO, BEFORE YOU CONTINUE PLEASE PROVIDE A BRIEF**
4   **EXPLANATION OF HOW THE FED USES INTEREST RATES TO IMPROVE**
5   **CONDITIONS IN THE FINANCIAL MARKETS.**

6 **A.**   Generally, the Fed uses monetary policy to implement certain economic goals. The

7   Fed explained its monetary policy as follows:

8   Monetary policy in the United States comprises the Federal Reserve's
9   actions and communications to promote maximum employment, stable
10   prices, and moderate long-term interest rates—the three economic goals
11   the Congress has instructed the Federal Reserve to pursue.

12   The Federal Reserve conducts the nation's monetary policy by managing
13   the level of short-term interest rates and influencing the overall
14   availability and cost of credit in the economy.[2]

15   One of the Fed's primary tools for conducting monetary policy is setting the

16   federal funds rate. The federal funds rate is the interest rate set by the Fed that banks

17   and credit unions charge each other for overnight loans of reserve balances.

18   Traditionally the federal funds rate directly influences short-term interest rates, such as

19   the Treasury bill rate and interest rates on savings and checking accounts. The federal

20   funds rate has a more indirect effect on long-term interest rates, such as the 30-Year

21   Treasury bond and private and corporate long-term debt. Long-term interest rates are

22   set more by market forces that influence the supply and demand of loanable funds.

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[1]   (http://www.federalreserve.gov/monetarypolicy/bst_crisisresponse.htm).
[2]   (https://www.federalreserve.gov/monetarypolicy.htm)

1   Q.   **WHAT HAS BEEN THE TREND OF BOND YIELDS SINCE THE FED**
2   **IMPLEMENTED QUANTITATIVE EASING?**

3   A.   Figure 1 below presents a graph that tracks the 30-Year Treasury Bond yield and the

4   Mergent average utility bond yield. The time period covered is January 2008 through

5   December 2019.

FIGURE 1
HISTORICAL BOND YIELDS
AVERAGE PUBLIC UTILITY BOND VS 30-YEAR TREASURY BOND

6
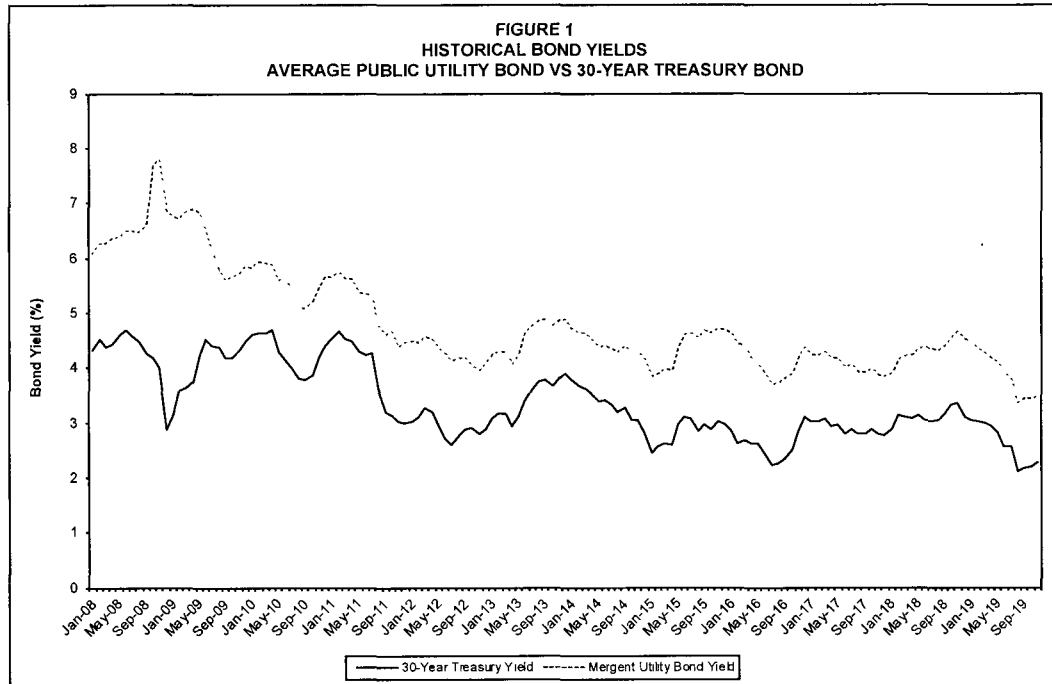
7   The Fed's QE program and federal funds rate cuts were effective in lowering

8   the long-term cost of borrowing in the United States. The 30-Year Treasury Bond yield

9   declined from 5.11% in July 2007 to a low of 2.30% in December 2019. The average

10   utility bond yield also fell substantially, from 6.28% in July 2007 to 3.45% in July

11   December 2019.

1   Q.   **PLEASE SUMMARIZE RECENT FED ACTIONS WITH RESPECT TO**
2   **MONETARY POLICY.**

3   A.   In December 2015, the Fed began to raise its target range for the federal funds rate,

4   increasing it to 1/4% to 1/2% from 0% to 1/4%. In the years following, the Fed

5   increased the federal funds rate several more times, with the most recent increase

6   announced on December 19, 2018 resulting in a federal funds rate range of 2.25% -

7   2.50%.

8   In 2019, however, the Fed reversed course and lowered the federal funds rate

9   three times, with the rate now standing at 1.5% - 1.75%. In its press release dated

10   January 29, 2020 the Fed stated the following[3]:

11   Information received since the Federal Open Market Committee met in
12   December indicates that the labor market remains strong and that
13   economic activity has been rising at a moderate rate. Job gains have
14   been solid, on average, in recent months, and the unemployment rate
15   has remained low. Although household spending has been rising at a
16   moderate pace, business fixed investment and exports remain weak. On
17   a 12-month basis, overall inflation and inflation for items other than
18   food and energy are running below 2 percent. Market-based measures
19   of inflation compensation remain low; survey-based measures of
20   longer-term inflation expectations are little changed.

21   Consistent with its statutory mandate, the Committee seeks to foster
22   maximum employment and price stability. The Committee decided to
23   maintain the target range for the federal funds rate at 1-1/2 to 1-3/4
24   percent. The Committee judges that the current stance of monetary
25   policy is appropriate to support sustained expansion of economic
26   activity, strong labor market conditions, and inflation returning to the
27   Committee's symmetric 2 percent objective. The Committee will
28   continue to monitor the implications of incoming information for the
29   economic outlook, including global developments and muted inflation
30   pressures, as it assesses the appropriate path of the target range for the
31   federal funds rate.

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[3]   https://www.federalreserve.gov/newsevents/pressreleases/monetary20200129a.htm

1   Q.   **WHAT ARE THE FED'S MOST RECENT ECONOMIC PROJECTIONS**
2   **WITH RESPECT TO THE FEDERAL FUNDS RATE AND INFLATION?**

3   A.   The Fed provided certain economic projections that accompanied its December 11,

4   2019 press release showing the following:

5   •   Projected federal funds rate of 1.6% for 2019 and 2020, 1.9% for 2021, and

6   2.1% for the longer run.

7   •   Inflation running at 1.5% for 2019, 1.9% for 2020, and 2.0% for 2021 and

8   2022.[4]

9   •   Real GDP growth of 1.9% for the longer run.

10   Q.   **WHY IS IT IMPORTANT TO UNDERSTAND THE FED'S ACTIONS SINCE**
11   **2008 AND THE EFFECT ON THE CURRENT COST OF CAPITAL IN THE**
12   **ECONOMY GENERALLY AND FOR REGULATED UTILITIES**
13   **SPECIFICALLY?**

14   A.   The Fed's monetary policy actions since 2008 were deliberately undertaken to lower

15   interest rates and support economic recovery. The U.S. economy is still in a low

16   interest rate environment. This environment has affected the common stocks of

17   regulated utilities, which, as I mentioned earlier, are interest rate sensitive. Lower

18   interest rates support lower required ROEs for regulated utilities.

19   Q.   **ARE CURRENT INTEREST RATES INDICATIVE OF INVESTOR**
20   **EXPECTATIONS REGARDING THE FUTURE DIRECTION OF INTEREST**
21   **RATES?**

22   A.   Yes. Securities markets are efficient and most likely reflect investors' expectations

23   about future interest rates. As Dr. Morin pointed out in *New Regulatory Finance:*

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[4]   https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20191211.pdf

1		A considerable body of empirical evidence indicates that U.S. capital
2		markets are efficient with respect to a broad set of information,
3		including historical and publicly available information.[5]

4   Dr. Morin also noted the following:

5   There is extensive literature concerning the prediction of interest rates.
6   From this evidence, it appears that the no-change model of interest rates
7   frequently provides the most accurate forecasts of future interest rates
8   while at other times, the experts are more accurate. Naïve extrapolations
9   of current interest rates frequently outperform published forecasts. The
10   literature suggests that on balance, the bond market is very efficient in
11   that it is difficult to consistently forecast interest rates with greater
12   accuracy than a no-change model. The latter model provides similar,
13   *and in some cases, superior accuracy than professional forecasts.*[6]

14   It is important to realize that investor expectations of changes in future interest

15 rates, if any, are likely already embodied in current securities prices, which include

16 debt securities and stock prices. Moreover, the current low interest rate environment

17 still favors lower risk regulated utilities.

18 **Q.** **YOU MENTIONED THAT THE REQUIRED COST OF EQUITY FOR**
19   **REGULATED UTILITIES TENDS TO FOLLOW THE DIRECTION OF**
20   **INTEREST RATES. COULD YOU ILLUSTRATE THIS RELATIONSHIP**
21   **FOR THE COMMISSION?**

22 **A.** Yes. Table 1 below presents data from Ms. Bulkley's Attachment AEB-RR-8 and

23 presents the average yearly yield on the 30-year Treasury Bond and the yearly average

24 allowed ROE for electric companies from 2000 through the second quarter of 2019.

25 Table 1 shows that as the long-term Treasury Bond yield has fallen since 2000, allowed

26 ROEs for electric utilities followed suit, although the decline in ROEs has been less

27 than that for the 30-year Treasury Bond. The Premium column in Table 1 shows the

---

[5]   Morin, Roger A., *New Regulatory Finance,* Public Utilities Reports, Inc. (2006) at 279.
[6]   *Ibid.* at 172.

1   difference between allowed ROE and the 30-Year Treasury yield. In 2007, for

2   example, the premium of allowed ROEs over Treasury yields was 5.44%. The

3   premium has grown significantly since 2007, rising to over 7.0% in 2012 and 2016 and

4   falling to 6.63% through the second quarter of 2019.

Table 1
Allowed ROEs and
30-Year Treasury Yields

Year	Allowed ROE	30-Year T-Bond	Premium
2000	11 60%	5.93%	5.66%
2001	11 14%	5 49%	5.65%
2002	11 07%	5 29%	5.78%
2003	10 89%	4 92%	5 97%
2004	10 82%	5 03%	5 79%
2005	10 53%	4 57%	5 96%
2006	10 36%	4 88%	5 49%
2007	10.27%	4 84%	5 44%
2008	10.36%	4 27%	6 10%
2009	10 51%	4 07%	6 44%
2010	10 29%	4 25%	6 04%
2011	10 20%	3 91%	6 29%
2012	10 02%	2 92%	7 10%
2013	9 82%	3.44%	6 37%
2014	9 74%	3 34%	6 40%
2015	9 55%	2 84%	6.71%
2016	9 60%	2 60%	7.01%
2017	9.67%	2 89%	6 78%
2018	9 57%	3 11%	6 45%
2019	9 57%	2 94%	6 63%

5

6 **Q.   HOW DOES THE INVESTMENT COMMUNITY REGARD THE**
7   **REGULATED ELECTRIC UTILITY INDUSTRY AS A WHOLE?**

8 A.   The Value Line Investment Survey noted the following in its review of the Electric

9   Utility (Central) Industry dated December 13, 2019:

10   The Federal Reserve raised interest rates in 2018. When 2019 began, the
11   expectation was that there would be additional tightening this year. Not
12   only has this not happened, the Fed has cut rates three times. This has
13   helped boost the prices of most utility stocks, as lower interest rates
14   make the dividend yields of utility issues relatively more appealing to
15   income-seeking investors. Lower interest rates also reduce borrowing
16   costs for companies. Eventually, interest expense reductions on debt
17   held at the utility level will be passed through to ratepayers, but the
18   companies will benefit from lower rates on debt held at the parent level

1		or at nonutility subsidiaries. This is a boon to companies making asset
2		acquisitions, such as DTE Energy, which should soon complete the
3		purchase of midstream gas assets in Louisiana.

4   There are some negative effects of lower interest rates, however.
5   Utilities' allowed ROEs trend in the same direction as interest rates.
6   When a utility files a general rate case, it is harder to obtain a higher
7   allowed ROE (or avoid a cut in the allowed ROE) when interest rates
8   are heading lower. In addition, most utilities have pension liabilities.
9   These liabilities (and pension expense) rise when the rate used to
10 discount them is lower.

***

11 Most stocks covered in the Electric Utility Industry have fared very well
12 in 2019. For the vast majority of these issues, the price has risen more
13 than 10%. For some stocks, including Entergy, the quotation has soared
14 35%. The aforementioned reduction in interest rates (from a level that
15 was already low) has induced income oriented investors to reach for
16 yield. This is despite the fact that the valuations of electric utility issues
17 are historically high. The group's average dividend yield is just 3.2%,
18 and the price-earnings ratios of most of these stocks is well above that
19 of the market. In fact, some recent quotations are above the 2022-2024
20 Target Price Range.

21 My position regarding the current low interest rate environment is consistent

22 with Value Line's recent report on the electric utility industry. Lower interest rates

23 mean lower allowed ROEs, although this is definitely not a negative for utility

24 ratepayers. Further, lower interest rates translate into lower debt costs and a lower cost

25 of capital applied to the utility's rate base. Again, this is a positive trend for ratepayers'

26 cost of electricity.

27 **Q.** **THE EDISON ELECTRIC INSTITUTE ("EEI") PUBLISHES QUARTERLY**
28   **REVIEWS OF THE INVESTOR-OWNED ELECTRIC UTILITY INDUSTRY.**
29   **PLEASE SUMMARIZE EEI'S FINDINGS WITH RESPECT TO CREDIT**
30   **RATINGS, RISKS, AND VALUATIONS FOR THE ELECTRIC UTILITY**
31   **INDUSTRY.**

1 A. EEI's recent 3rd Quarter 2019 summary of the Standard and Poor's Utility Credit

2   Ratings showed the following:

3   • The industry average credit rating was BBB+.

4   • 58% of the 45 utilities followed by EEI had credit ratings of BBB/BBB+.

5   • 27% had a credit rating of A-.

6   EEI's analysis shows that the investor-owned electric utility industry had strong

7 and stable credit metric through the 3rd Quarter of 2019. EEI's *Q3 2019 Financial*

8 *Update*, page 5, noted the following regarding whether electric utility valuations could

9 rise further from their present levels:

10   Wall Street analysts generally view utility stock valuations as high when
11   measured by price/earnings (PE) ratios relative to the S&P 500 and to
12   history. One reason for this is the very low level of interest rates both in
13   the U.S. and overseas. The U.S. 10-year Treasury yield was about 6%
14   in the late 1990s, more than triple today's level, while bond markets in
15   Europe and Japan sport widespread negative yields. *Another reason is*
16   *the strong fundamentals that underpin prospects for total returns in*
17   *excess of 8% (5% from earnings growth and 3% from the dividend).*
18   *Given this outlook, the view seems to be that utilities offer enough value*
19   *to lift multiples higher still, particularly if global economic growth turns*
20   *down and interest rates fall to new lows.* (emphasis added)

21   EEI's publication also noted the following with respect to interest rates:

22   A sharp rise in interest rates is widely seen as the biggest macro threat
23   facing utility investors. *Although that has been said for years and*
24   *interest rates just seem to fall.* Inflation held near 2% throughout 2018
25   even as the economy roared and hasn't moved this year either. The main
26   risk to the very long-lived economic expansion seems to be weakness
27   rather than red-hot growth.

28   Analysts note that the impact of rising rates would be on stock prices
29   rather than earnings. Higher rates can translate into higher allowed
30   ROEs and improved pension funding. Many companies have embedded
31   low-cost debt from years of low rates, and interest rates could rise while
32   remaining very low by historical standards. (emphasis added)

1   I underscore to the Commission EEI's statements regarding (1) prospects for

2   total returns in excess of 8%, and (2) the stability of the current low interest rate

3   environment despite years of predictions of higher interest rates. It also shows that the

4   strong credit ratings for regulated electric companies are fully consistent with lower

5   ROEs and lower cost of debt. In my view, these points support my recommended cost

6   of equity for SPS of 9.20% as being consistent with investor expectations and current

7   market conditions.

8   **Q.   WHAT ARE THE CURRENT CREDIT RATINGS FOR SPS?**

9   A.   Moody's long term issuer rating for SPS is Baa2, which is in the middle of the Baa

10   credit rating range (Baa1 being the highest, Baa3 being the lowest). S&P's credit rating

11   for SPS is A-, which is the lowest rating within the A rating category (A+ being the

12   highest). Fitch's credit rating for SPS is BBB, which is in the middle of that rating

13   category. Moody's, S&P, and Fitch all assign a stable credit outlook for SPS.

14   In response to discovery, SPS provided the December 20, 2019 Moody's Credit

15   Opinion on the Company, which was an update to its former credit analysis.[7] The

16   Moody's Credit Opinion cited the following credit strengths for SPS:

17   •   Vertically integrated regulated utility with rate base of around $4.9 billion by

18   year-end 2019.

19   •   Some geographic and regulatory diversity amid mixed views of their credit

20   supportiveness.

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[7]   See Exhibit SPS-AXM 5-4 (SUPP3).

1   • Dividend distributions are subject to the state commissions' indirectly imposed

2   restrictions regarding capital structure.

3   • Participation in Xcel's money pool along with separate credit facility enhance

4   SPS' liquidity profile.

5   Credit challenges enumerated by Moody's were:

6   • Moderate exposure to carbon transition risk.

7   • Pending rate case uncertainty but expectation of overall credit supportive

8   outcomes that allow SPS to record adequate credit metrics.

9   • Significant exposure to large Commercial and Industrial customers, but their

10   growing electricity demand helps SPS's cash flow.

11   This Moody's report stated that although SPS operates in Texas with a historical

12   test-year convention, HB1535 allows utilities to include actual and estimated post-test

13   year capital additions up to 30 days before the filing date.[8]

14   Moody's also noted the following with respect to SPS's capital investment

15   plans and forecast:[9]

16   For the 2020-2024 period, SPS' investment plan aggregates around $3.8
17   billion. This plan includes a $1 billion peak in 2020 (ratio of capex to
18   depreciation of around 4.0 x) as SPS completes the aforementioned
19   wind projects to allow them to qualify for 100% of the federal PTCs
20   savings. However, after 2020, the utility's capital investments are
21   expected to moderate on an absolute (annual investments ranging
22   between $529 and $800 million) and relative basis (maximum ratio of
23   capex over depreciation of around 2.3x). The relative moderation in its
24   total investments will also help the utility manage its end-users' bills.

25   During the 2020-2024 period, SPS has earmarked around $1.0 billion
26   (25%) of the investments for electric distribution operations while it
27   allotted around $1.5 billion (40%) for electric transmission as SPS

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8   Ibid, page 21 of 28.
9   Ibid, page 24 of 28.

1		expands its transmission footprint in order to serve the local oil industry.
2		For example, in November 2017, the NMPRC approved the final phase
3		of a 345-kV transmission line project which is part of the 168 miles
4		Tuco-Yoakum-Hobbs project between the Hale County (Texas) and the
5		Hobbs plant substation (New Mexico). This project (expected
6		completion- Q2 2020) is a part of SPS' overall "Power for the Plains"
7		grid expansion effort in the Texas Panhandle and eastern New Mexico
8		(expected commission 2021).

9　Q.　**DID THE COMPANY'S DIRECT TESTIMONY SHOW THAT ITS CAPITAL**
10　　**EXPENDITURE PROGRAM WOULD BE MODERATING AFTER 2019 -**
11　　**2020?**

12　A.　Yes. Ms. Soong's Table SWS-RR-2 on page 16 of her Direct Testimony shows that

13　　the Company's capital investment forecast moderates substantially after 2018 and

14　　2019, which had expenditures of $1.021 billion and $1.130 billion, respectively. The

15　　forecast shows 2020 - 2023 capital expenditures ranging from $0.46 billion to $0.77

16　　billion annually. I would note that this capital expenditures forecast does not match

17　　the forecast presented in the Moody's Credit Opinion I just cited. However, both

18　　forecasts indicate substantial moderation in SPS's forecasted capital expenditures after

19　　2019-2020.

20　Q.　**DOES SPS'S CREDIT PROFILE BENEFIT FROM THE CURRENTLY**
21　　**EFFECTIVE TRANSMISSION AND DISTRIBUTION RIDERS?**

22　　　A.　Yes, the Transmission Cost Recover Factor ("TCRF") and Distribution

23　　Cost Recovery Factor ("DCRF") are definitely credit supportive for the Company and

24　　serve to reduce regulatory lag and risk compared to the regulatory approach in New

25　　Mexico. Moreover, the Texas legislature passed and the Governor signed into law

26　　effective September 1, 2019 Section 36.213 of the Utilities Code entitled Recovery of

27　　Generation Investment by Non-ERCOT Utilities. This new law enables non-ERCOT

1		utilities such as SPS to recover their investment in new power generation facilities
2		through a rider approved by the PUCT. This rider would enable SPS and other electric
3		utilities to begin recovering the costs of a new generating facility when it begins
4		providing service to the utility's customers and without filing a traditional rate case to
5		recover such costs. It is my understanding that a rulemaking is currently taking place
6		that would implement this new law. Nevertheless, this new generation cost rider would
7		essentially eliminate regulatory lag for SPS's new generation once the rule is
8		implemented. In turn, it will also substantially reduce the Company's risk.

9　Q.　**DID XCEL ENERGY, THE HOLDING COMPANY FOR SPS, PROVIDE**
10　　　**INFORMATION TO ITS INVESTORS THAT IS RELEVANT TO THE**
11　　　**COMMISSION'S EVALUATION OF THE ALLOWED RATE OF RETURN**
12　　　**FOR SPS?**

13　A.　Yes. Please refer to Exhibit RAB-1, which contains excerpts from Xcel Energy's

14　　　presentation entitled *We're Building the Future, Evercore ISI Conference, January*

15　　　*2020.* Page 2 of Exhibit RAB-1 shows Xcel Energy's presentation of expected total

16　　　shareholder returns, which range from 8% - 10%. My recommended ROE for SPS falls

17　　　near the middle of this range.

18　Q.　**ON PAGE 32, LINES 13 THROUGH 20 OF HER DIRECT TESTIMONY, MS.**
19　　　**SOONG EXPRESSED CONCERN REGARDING THE POTENTIALLY**
20　　　**HIGHER COST OF DEBT FOR SPS DUE TO THE COMPANY'S RECENT**
21　　　**CREDIT DOWNGRADE FROM MOODY'S. PLEASE ADDRESS MS.**
22　　　**SOONG'S TESTIMONY WITH RESPECT TO SPS' CREDIT RATING AND**
23　　　**COST OF DEBT.**

24　A.　On page 33 of her Direct Testimony, Ms. Soong testified that SPS priced and settled a

25　　　new 30-Year "green" first mortgage bond in June 2019 of 3.75%. Table 2 presents the

1   public utility average and Baa bond yields from the Mergent Bond Record for January

2   through July 2019.

Table 2 Public Utilty Average and Baa Bond Yields		
	Average	Baa
January 2019	4 48%	4 91%
February 2019	4.35%	4.76%
March 2019	4 26%	4 65%
Apnl 2019	4 18%	4.55%
May 2019	4 10%	4.47%
June 2019	3.93%	4.31%
July 2019	3.79%	4.13%
Source January 2020 Mergent Bond Record		

3

4   Table 2 shows that SPS's June 2019 long-term debt issuance of 3.75% was

5   *below* the yields of the average and Baa utility bond yields shown in the Mergent Bond

6   Record. Notably, the Company's 3.75% cost was significantly below the public utility

7   Baa bond yields for the 2019 time period. The data in Table 2 show that with its current

8   credit ratings, SPS has not had any difficulty accessing the debt market at highly

9   favorable rates.

10   Q.   **WHAT IS YOUR CONCLUSION WITH RESPECT TO THE OVERALL**
11   **RISKINESS OF SPS?**

12   A.   SPS is roughly equivalent in risk to the average vertically integrated utility company.

13   My assessment considers the following:

14   •   SPS's Moody's credit rating of Baa2.

15   •   SPS's A- credit rating from S&P, which is above the EEI average of BBB+.

16   •   SPS's elevated, though moderating forecasted capital expenditures.

17   •   SPS's low-risk regulated utility business.

1   • TCRF and DCRF, which function to reduce the Company's regulatory lag.

2   • Recent favorably priced long-term debt of 3.75%.

3   • Recent passage of a generation cost recovery rider applicable to non-ERCOT

4   utilities such as SPS.

5   Q. **BEGINNING ON PAGE 62 OF HER DIRECT TESTIMONY, MS. BULKLEY**
6   **PRESENTED A DISCUSSION OF BUSINESS RISKS THAT SHE CONTENDS**
7   **SHOULD BE CONSIDERED IN DETERMINING WHERE SPS'S ROE**
8   **SHOULD FALL WITHIN HER RECOMMENDED RANGE OF RESULTS.**
9   **PLEASE   SUMMARIZE   YOUR   UNDERSTANDING   OF   THESE**
10   **CONSIDERATIONS.**

11   A. Ms. Bulkley presented the risks and other considerations that she believes should be

12   taken into account in setting the allowed cost of equity for SPS.   These risks

13   considerations include:

14   • SPS's capital expenditure program (pages 62-65)

15   • Regulatory framework (pages 65-72)

16   • Customer concentration (pages 72-75)

17   • Management performance (pages 75-77)

18   Q. **PLEASE RESPOND TO MS. BULKLEY'S DISCUSSION OF BUSINESS RISKS**
19   **AND OTHER CONSIDERATIONS IN SETTING THE ALLOWED ROE FOR**
20   **SPS IN THIS CASE.**

21   A. Overall, Ms. Bulkley devoted considerable discussion to certain of SPS's risk factors,

22   but did not fully discuss credit strengths mentioned by the credit rating agencies that

23   tend to mitigate these risks. I presented both the credit strengths as well as credit

24   challenges cited in the recent report from Moody's that contained the Company's

25   current Baa2 credit rating. To the extent that the credit rating agencies consider SPS's

1   capital expenditure program, its regulatory framework (with is rated as Average in

2   Texas), and customer concentration, these risks have already been factored into the

3   Company's credit rating.

4 **Q.**   **SHOULD THE COMMISSION CONSIDER RAISING SPS'S ROE TO**
5   **REFLECT ANY EFFECTS FROM THE TAX CUT AND JOBS ACT ("TCJA")?**

6 **A.**   No. The TCJA was discussed in the credit reports from Moody's, S&P, and Fitch and

7   is thus fully reflected in the Company's aforementioned credit ratings. No additional

8   consideration need be given for the effect of the TCJA on SPS's allowed ROE.

9   **III.**   **DETERMINATION OF RETURN ON EQUITY**

10 **Q.**   **PLEASE DESCRIBE THE METHODS YOU EMPLOYED IN ESTIMATING**
11   **YOUR RECOMMENDED RETURN ON EQUITY FOR SPS.**

12 **A.**   I employed a Discounted Cash Flow ("DCF") analysis using a proxy group of 17

13   regulated electric utilities as selected by Ms. Bulkley. In my opinion, they form a

14   reasonable basis for estimating the investor required return on equity for SPS. I also

15   employed Capital Asset Pricing Model ("CAPM") analyses using both historical and

16   forward-looking data. Although I primarily relied on the DCF results for my

17   recommended 9.20% ROE for SPS, the results from the CAPM tend to support the

18   reasonableness of my recommendation.

19 **Q.**   **DESCRIBE THE PROXY GROUP YOU EMPLOYED TO ESTIMATE THE**
20   **COST OF EQUITY FOR SPS.**

21 **A.**   In this case, I chose to use the same proxy group that Ms. Bulkley used in her ROE

22   analyses. Ms. Bulkley set forth her selection criteria for the proxy group on page 35 of

23   her Direct Testimony. Ms. Bulkley's selection criteria are generally reasonable and

| 1 | include regulated electric utilities that have investment grade credit ratings from S&P |

1 include regulated electric utilities that have investment grade credit ratings from S&P

2 and Moody's. Using the same proxy group as Ms. Bulkley also has the advantage of

3 eliminating a source of disagreement between our respective ROE analyses and

4 furnishes the PUCT with a consistent group of companies to compare and evaluate our

5 ROE results.

6 **Discounted Cash Flow ("DCF") Model**

7 **Q.** **PLEASE DESCRIBE THE BASIC DCF APPROACH.**

8 A. The basic DCF approach is rooted in valuation theory. It is based on the premise that

9 the value of a financial asset is determined by its ability to generate future net cash

10 flows. In the case of a common stock, those future cash flows generally take the form

11 of dividends and appreciation in stock price. The value of the stock to investors is the

12 discounted present value of future cash flows. The general equation then is:

13
$$V = \frac{R}{(1+r)} + \frac{R}{(1+r)^2} + \frac{R}{(1+r)^3} + \cdots \frac{R}{(1+r)^n}$$

14 *Where:*   *V = asset value*

15   *R = yearly cash flows*

16   *r = discount rate*

17   This is no different from determining the value of any asset from an economic

18 point of view; however, the commonly employed DCF model makes certain

19 simplifying assumptions. One is that the stream of income from the equity share is

20 assumed to be perpetual; that is, there is no salvage or residual value at the end of some

21 maturity date (as is the case with a bond). Another important assumption is that

22 financial markets are reasonably efficient; that is, they correctly evaluate the cash flows

1   relative to the appropriate discount rate, thus rendering the stock price efficient relative

2   to other alternatives. Finally, the model I typically employ also assumes a constant

3   growth rate in dividends. The fundamental relationship employed in the DCF method

4   is described by the formula:

5    $$k = {D_1}/{P_0} + g$$

6   *Where:* D_1 = *the next period dividend*
7   P_0 = *current stock price*
8   g = *expected growth rate*
9   k = *investor-required return*

10   Embodied in this formula, it is assumed that "k" reflects the investors' expected

11   return. Use of the DCF method to determine an investor-required return is complicated

12   by the need to express investors' expectations relative to dividends, earnings, and book

13   value over an infinite time horizon. Financial theory suggests that stockholders

14   purchase common stock on the assumption that there will be some change in the rate

15   of dividend payments over time. We assume that the rate of growth in dividends is

16   constant over the assumed time horizon, but the model could easily handle varying

17   growth rates if we knew what they were. Finally, the relevant time frame is prospective

18   rather than retrospective.

19   Q.   **WHAT WAS YOUR FIRST STEP IN DETERMINING THE DCF RETURN ON**
20   **EQUITY FOR THE PROXY GROUP?**

21   A.   I first determined the current dividend yield, D_1/P_0, from the basic equation. My

22   general practice is to use six months as the most reasonable period over which to

1	estimate the dividend yield. The six-month period I used covered the months from July
2	to December 2019. I obtained historical prices and dividends from Yahoo! Finance.
3	The annualized dividend divided by the average monthly price represents the average
4	dividend yield for each month in the period.
5	The resulting average dividend yield for the proxy group is 3.09%. These
6	calculations are shown in Exhibit RAB-2.

7   **Q.   HAVING ESTABLISHED THE AVERAGE DIVIDEND YIELD, HOW DID**
8   **YOU DETERMINE THE INVESTORS' EXPECTED GROWTH RATE FOR**
9   **THE COMPARISON GROUPS?**

10 A.   The investors' expected growth rate, in theory, correctly forecasts the constant rate of

11   growth in dividends. The dividend growth rate is a function of earnings growth and

12   the payout ratio, neither of which is known precisely for the future. We refer to a

13   perpetual growth rate since the DCF model has no cut-off point. We must estimate the

14   investors' expected growth rate because there is no way to know with absolute certainty

15   what investors expect the growth rate to be in the short term, much less in perpetuity.

16   For my analysis in this proceeding, I used three major sources of analysts'

17   forecasts for growth. These sources are The Value Line Investment Survey, Zacks, and

18   Yahoo! Finance.

19 **Q.   PLEASE BRIEFLY DESCRIBE VALUE LINE, ZACKS, AND YAHOO!**
20   **FINANCE.**

21 A.   The Value Line Investment Survey is a widely used and respected source of investor

22   information that covers approximately 1,700 companies in its Standard Edition and

23   several thousand in its Plus Edition. It provides both historical and forecasted

1   information on a number of important data elements. Value Line neither participates

2   in financial markets as a broker nor works for the utility industry in any capacity of

3   which I am aware.

4   Zacks gathers opinions from a variety of analysts on earnings growth forecasts

5   for numerous firms including regulated electric utilities. The estimates of the analysts

6   responding are combined to produce consensus average estimates of earnings growth.

7   I obtained Zacks' earnings growth forecasts from its web site.

8   Like Zacks, Yahoo! Finance also compiles and reports consensus analysts'

9   forecasts of earnings growth. I obtained these forecasts from the Yahoo! Finance web

10   site.

11   **Q.   WHY DID YOU RELY ON ANALYSTS' FORECASTS IN YOUR ANALYSIS?**

12   A.   Return on equity analysis is a forward-looking process. Five-year or ten-year historical

13   growth rates may not accurately represent investor expectations for future dividend

14   growth. Analysts' forecasts for earnings and dividend growth provide better proxies

15   for the expected growth component in the DCF model than historical growth rates.

16   Analysts' forecasts are also widely available to investors and one can reasonably

17   assume that they influence investor expectations.

18   **Q.   PLEASE EXPLAIN HOW YOU USED ANALYSTS' DIVIDEND AND**
19   **EARNINGS GROWTH FORECASTS IN YOUR CONSTANT GROWTH DCF**
20   **ANALYSIS.**

21   Q.   Columns (1) through (4) of Exhibit RAB-3 shows the forecasted dividend and earnings

22   growth rates from Value Line and the earnings growth forecasts from Zacks and

23   Yahoo! Finance for the companies in the proxy group. It is important to include

1   dividend growth forecasts in the DCF model since the model calls for forecasted cash

2   flows and Value Line is the only source of which I am aware that forecasts dividend

3   growth.

4   Q.   **HOW DID YOU PROCEED TO DETERMINE THE DCF RETURN OF**
5   **EQUITY FOR THE PROXY GROUP?**

6   A.   To estimate the expected dividend yield (D_1), the current dividend yield must be moved

7   forward in time to account for dividend increases over the next twelve months. I

8   estimated the expected dividend yield by multiplying the current dividend yield by one

9   plus one-half the expected growth rate.

10   Exhibit RAB-3, page 2, presents my standard method of calculating dividend

11   yields, growth rates, and return on equity for the proxy group. The DCF Return on

12   Equity Calculation section shows the application of each of four growth rates I used in

13   my analysis to the current group dividend yield of 3.08% to calculate the expected

14   dividend yield. I then added the expected growth rates to the expected dividend yield.

15   My DCF return on equity was calculated using two different methods. Method 1 uses

16   the Average Growth Rates shown in the upper section of Exhibit RAB-3 and Method

17   2 utilizes the median growth rates shown in that section.

18   Q.   **WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF**
19   **MODEL?**

20   A.   The results for Method 1 range from 7.69% to 8.36% and the results for Method 2 range

21   from 7.76% to 8.67%. Based on my recent experience, the DCF ROEs using the

22   Yahoo! Finance earning growth forecasts are unusually low. This is due, in part, to

23   implausibly low forecasts for Exelon Corp. and PPL Corp., which are below 1.0%

1   currently. Therefore, I calculated the group averages in Column (5) excluding Yahoo!

2   Finance for purposes of this case. The ROE using Method 1, then, is 8.28% and for

3   Method 2 is 8.40%.

4 **Q.   DID YOU FURTHER ANALYZE THE ROE RESULTS BY COMPANY?**

5 A.   Yes. Exhibit RAB-3, page 3 of 3, presents the individual ROEs for each company in

6   the proxy group. The expected growth rates were calculated excluding Yahoo! Finance

7   numbers consistent with the averages on page 2 of the exhibit. The median ROE for

8   the proxy group using this approach is 8.59%.

9 **Capital Asset Pricing Model**

10 **Q.   BRIEFLY SUMMARIZE THE CAPITAL ASSET PRICING MODEL**
11 **("CAPM") APPROACH.**

12 A.   The theory underlying the CAPM approach is that investors, through diversified

13   portfolios, may combine assets to minimize the total risk of the portfolio.

14   Diversification allows investors to diversify away all risks specific to a particular

15   company and be left only with market risk that affects all companies. Thus, the CAPM

16   theory identifies two types of risks for a security: company-specific risk and market

17   risk. Company-specific risk includes such events as strikes, management errors,

18   marketing failures, lawsuits, and other events that are unique to a particular firm.

19   Market risk includes inflation, business cycles, war, variations in interest rates, and

20   changes in consumer confidence. Market risk tends to affect all stocks and cannot be

21   diversified away. The idea behind the CAPM is that diversified investors are rewarded

22   with returns based on market risk.

1   Within the CAPM framework, the expected return on a security is equal to the

2   risk-free rate of return plus a risk premium that is proportional to the security's market,

3   or non-diversifiable, risk. Beta is the factor that reflects the inherent market risk of a

4   security and measures the volatility of a particular security relative to the overall market

5   for securities. For example, a stock with a beta of 1.0 indicates that if the market rises

6   by 15%, that stock will also rise by 15%. This stock moves in tandem with movements

7   in the overall market. Stocks with a beta of 0.5 will only rise or fall 50% as much as

8   the overall market. So with an increase in the market of 15%, this stock will only rise

9   7.5%. Stocks with betas greater than 1.0 will rise and fall more than the overall market.

10   Thus, beta is the measure of the relative risk of individual securities vis-à-vis the

11   market.

12   Based on the foregoing discussion, the equation for determining the return for

13   a security in the CAPM framework is:

14   $$K = Rf + \beta(MRP)$$

15   *Where:* K = *Required Return on equity*
16   Rf = *Risk-free rate*
17   MRP = *Market risk premium*
18   β = *Beta*

19   This equation tells us about the risk/return relationship posited by the CAPM.

20   Investors are risk averse and will only accept higher risk if they expect to receive higher

21   returns. These returns can be determined in relation to a stock's beta and the market

22   risk premium. The general level of risk aversion in the economy determines the market

23   risk premium. If the risk-free rate of return is 3.0% and the required return on the total

24   market is 15%, then the risk premium is 12%. Any stock's required return can be

25   determined by multiplying its beta by the market risk premium. Stocks with betas

1   greater than 1.0 are considered riskier than the overall market and will have higher

2   required returns. Conversely, stocks with betas less than 1.0 will have required returns

3   lower than the market as a whole.

4 Q. **IN GENERAL, ARE THERE CONCERNS REGARDING THE USE OF THE**
5   **CAPM IN ESTIMATING THE RETURN ON EQUITY?**

6 A. Yes. There is some controversy surrounding the use of the CAPM and its accuracy

7   regarding expected returns. There is substantial evidence that beta is not the primary

8   factor for determining the risk of a security. For example, Value Line's "Safety Rank"

9   is a measure of total risk, not its calculated beta coefficient. Beta coefficients usually

10   describe only a small amount of total investment risk. Dr. Burton Malkiel, author of *A*

11   *Random Walk Down Wall Street* noted the following in his best-selling book on

12   investing:

13   Second, as Professor Richard Roll of UCLA has argued, we must keep
14   in mind that it is very difficult (indeed probably impossible) to measure
15   beta with any degree of precision. The S&P 500 Index is not "the
16   market." The Total Stock Market contains many thousands of
17   additional stocks in the United States and thousands more in foreign
18   countries. Moreover, the total market includes bonds, real estate,
19   commodities, and assets of all sorts, including one of the most important
20   assets any of us has - the human capital built up by education, work, and
21   life experience. Depending on exactly how you measure "the market"
22   you can obtain very different beta values.[10]

23   Pratt and Grabowski also stated the following with respect to the CAPM:[11]

24   Even though the capital asset pricing model (CAPM) is the most widely
25   used method of estimating the cost of equity capital, the accuracy and
26   predictive power of beta as the sole measure of risk have increasingly
27   come under attack. As a result, alternative measures of risk have been
28   proposed and tested. That is, despite its wide adoption, academics and

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[10] *A Random Walk Down Wall Street*, Burton G. Malkiel, page 218, 2019 edition.
[11] *Cost of Capital*, Shannon Pratt and Roger Grabowski, 5th Edition, page 288, published by Wiley.

1   practitioners alike have questioned the usefulness of CAPM in
2   accurately estimating the cost of equity capital and the use of beta as a
3   reliable measure of risk.

4   As a practical matter, there is substantial judgment involved in estimating the

5 required market return and market risk premium. In theory, the CAPM requires an

6 estimate of the return on the total market for investments, including stocks, bonds, real

7 estate, etc. It is nearly impossible for the analyst to estimate such a broad-based return.

8 Often in utility cases, a market return is estimated using the S&P 500. However, as Dr.

9 Malkiel pointed out, this is a limited source of information with respect to estimating

10 the investor's required return for all investments. In practice, the total market return

11 estimate faces significant limitations to its estimation and, ultimately, its usefulness in

12 quantifying the investor required ROE.

13   In the final analysis, a considerable amount of judgment must be employed in

14 determining the market return and expected risk premium elements of the CAPM

15 equation. The analyst's application of judgment can significantly influence the results

16 obtained from the CAPM. My past experience with the CAPM indicates that it is

17 prudent to use a wide variety of data in estimating investor-required returns. Of course,

18 the range of results may also be wide, indicating the difficulty in obtaining a reliable

19 estimate from the CAPM.

20 **Q. HOW DID YOU ESTIMATE THE MARKET RETURN AND MARKET RISK**
21   **PREMIUM OF THE CAPM?**

22 A. I used two approaches to estimate the market risk premium portion of the CAPM

23   equation. One approach uses the expected return on the market and is forward-looking.

1   The other approach employs an historical risk premium based on actual stock and bond

2   returns from 1926 through 2018.

3   Q. **PLEASE DESCRIBE YOUR FORWARD-LOOKING APPROACH TO**
4   **ESTIMATING THE MARKET RISK PREMIUM.**

5   A. The first source I used was the Value Line Investment Analyzer Plus Edition, for

6   January 10, 2020. This edition covers several thousand stocks. The Value Line

7   Investment Analyzer provides a summary statistical report detailing, among other

8   things, forecasted growth rates for earnings and book value for the companies Value

9   Line follows as well as the projected total annual return over the next 3 to 5 years. I

10   present these growth rates and Value Line's projected annual returns on page 2 of

11   Exhibit RAB-4. I included median earnings and book value growth rates. The

12   estimated market returns using Value Line's market data range from 10.61% to 11.61%.

13   The average of these market returns is 11.11%.

14 Q. **WHY DID YOU USE MEDIAN GROWTH RATE ESTIMATES RATHER**
15   **THAN THE AVERAGE GROWTH RATE ESTIMATES FOR THE VALUE**
16   **LINE COMPANIES?**

17 A. Using median growth rates is likely a more accurate approach to estimating the central

18   tendency of Value Line's large data set compared to the average growth rates. Average

19   earnings and book value growth rates may be unduly influenced by very high or very

20   low 3 - 5-year growth rates that are unsustainable in the long run. For example, Value

21   Line's Statistical Summary shows both the highest and lowest value for earnings and

22   book value growth forecasts. For earnings growth, Value Line showed the highest

23   earnings growth forecast to be 92.5% and the lowest growth rate to be -13.5%. With

1 respect to book value, the highest growth rate was 84% and the lowest was a -27.5%.

2 None of these growth rate projections is compatible with long-run growth prospects for

3 the market as a whole. The median growth rate is not influenced by such extremes

4 because it represents the middle value of a very wide range of earnings growth rates.

5 **Q. PLEASE CONTINUE WITH YOUR MARKET RETURN ANALYSIS.**

6 A. I also considered a supplemental check to the Value Line projected market return

7 estimates. Duff and Phelps compiled a study of historical returns on the stock market

8 in its *2019 Valuation Handbook - U.S. Guide to Cost of Capital*, which is now part of

9 its Cost of Capital Navigator subscription service. Some analysts employ this historical

10 data to estimate the market risk premium of stocks over the risk-free rate. The

11 assumption is that a risk premium calculated over a long period of time is reflective of

12 investor expectations going forward. Exhibit RAB-5 presents the calculation of the

13 market returns and market risk premiums using the historical data from Duff and

14 Phelps.

15 **Q. PLEASE EXPLAIN HOW THIS HISTORICAL RISK PREMIUM IS**
16 **CALCULATED.**

17 A. Exhibit RAB-5 shows the arithmetic average of yearly historical stock market returns

18 over the historical period from 1926 - 2018. The average annual income return for 20-

19 year Treasury bond is subtracted from these historical stock returns to obtain the

20 historical market risk premium of stock returns over long-term Treasury bond income

21 returns. The resulting historical market risk premium is 6.9%.

| 1 | Q. | **DID YOU ADD AN ADDITIONAL MEASURE OF THE HISTORICAL RISK** |
| 2 | | **PREMIUM IN THIS CASE?** |

3 A. Yes. Duff and Phelps reported the results of a study by Dr. Roger Ibbotson and Dr.

4 Peng Chen indicating that the historical risk premium of stock returns over long-term

5 government bond returns has been significantly influenced upward by substantial

6 growth in the price/earnings ("P/E") ratio.[12] Duff and Phelps noted that this growth in

7 the P/E ratio for stocks was subtracted out of the historical risk premium to arrive at an

8 adjusted "supply side" historical arithmetic market risk premium is 6.14%, which I

9 have also included in Exhibit RAB-5.

10 Q. **HOW DID YOU DETERMINE THE RISK FREE RATE?**

11 A. I used two different measures for the risk-free rate. The first measure is the average

12 30-year Treasury Bond yield for the six-month period from July through December

13 2019. This represents a current measure of the risk-free rate based on actual current

14 Treasury yields, which is 2.27%.

15 The second measure comes from Duff and Phelps' most recent "normalized"

16 risk-free rate of September 30, 2019.[13] Duff and Phelps developed this normalized

17 risk-free rate using its measure of the "real risk free rate" and expected inflation. The

18 Duff and Phelps normalized risk-free rate is 3.0%.

19	Q.	**PLEASE SUMMARIZE YOUR CALCULATED MARKET RISK PREMIUM**
20		**ESTIMATES WITH THE FORWARD-LOOKING DATA FROM VALUE LINE**
21		**AND THE HISTORICAL DUFF AND PHELPS EQUITY RISK PREMIUMS.**

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[12] *2019 Cost of Capital: Annual U.S. Guidance and Examples,* Duff and Phelps Cost of Capital Navigator, Chapter 3, pp. 45 - 47.

[13] https://www.duffandphelps.com/insights/publications/valuation/us-normalized-risk-free-effective-september-30-2019.

1   A.   My market risk premiums from Exhibits RAB-4 and RAB-5 are as follows:

2   • Forward-looking risk premiums   8.11% - 8.84%

3   • Historical risk premium   6.14% - 6.90%

4   By way of comparison, Duff and Phelps currently recommends an equity risk

5   premium of 5.5%, which resulted in a base U.S. cost of capital estimate of 8.5%. Based

6   on this comparison, my range of equity risk premium estimates are certainly not

7   conservative or understated.

8   Q.   **HOW DID YOU DETERMINE THE VALUE FOR BETA?**

9   A.   I obtained the betas for the companies in the proxy group from most recent Value Line

10   reports. The average of the Value Line betas for the proxy group is 0.60.

11 Q.   **PLEASE SUMMARIZE THE CAPM RESULTS.**

12 A.   For my forward-looking CAPM return on equity estimates, the CAPM results are

13   7.60% - 7.89%. Using historical risk premiums, the CAPM results range from 5.97%

14   - 7.16%.

15 Q.   **DO YOU HAVE ANY COMMENTS REGARDING THE RESULTS OF THE**
16   **CAPM AT THIS TIME?**

17 A.   Yes. The CAPM is currently producing results that are lower than what I would expect

18   to be a reasonable range of equity risk premium estimates. Even if I had used Value

19   Line's highest expected market return of 12.21% from Exhibit RAB-4 and the Duff

20   and Phelps normalized risk-free rate, the CAPM result would have been:

21   *CAPM = 3.0% + .60 (12.21% - 3.0%) = 8.53%*

1   This represents the top of the range for the CAPM. At this point, I cannot

2   recommend that the Commission place substantial weight on the CAPM. Although

3   Ms. Bulkley presented CAPM results that are higher, her analysis is fraught with

4   problems that I will discuss at length later in my testimony.

5   **ROE Conclusions and Recommendations**

6   **Q.   PLEASE SUMMARIZE THE COST OF EQUITY RESULTS FOR YOUR DCF**
7   **AND CAPM ANALYSES.**

8   A.   Table 3 below summarizes my return on equity results using the DCF and CAPM for

9   the proxy group of companies.

Table 3
SUMMARY OF ROE ESTIMATES

DCF Methodology
Average Growth Rates

- High	8 36%
- Low	7 76%
- Average	8.28%

Median Growth Rates:

- High	8.67%
- Low	7.76%
- Average	8.40%

Single Company DCF Estimates:

-Top of the range	9.73%
-Median	8.59%

CAPM Methodology

Forward-lookng Market Return:

- Current 30-Year Treasury	7.60%
- D&P Normalized Risk-free Rate	7 89%

Historical Risk Premium:

- Current 30-Year Treasury	5 97% - 6.43%
- D&P Normalized Risk-free Rate	6 70% - 7 16%

10

1   Q.   **DID YOU CONSIDER RECENTLY ALLOWED EQUITY RETURNS FROM**
2   **REGULATORY COMMISSIONS?**

3   A.   Yes. My Table 1 shows that the average commission allowed ROEs and 30-Year

4   Treasury Bond yields for 2016, 2017, 2018, and 2019 were as follows:

5   •   2016: ROE - 9.55%, 30-Year Treasury - 2.60%

6   •   2017: ROE - 9.67%, 30-Year Treasury - 2.89%

7   •   2018: ROE - 9.57%, 30-Year Treasury - 3.11%

8   •   2019: ROE - 9.57%, 30-Year Treasury - 2.94%

9   I note that the average 30-year Treasury yields in these years were significantly

10   higher than current long-term Treasury yields. Exhibit RAB-4 shows that the most

11   recent six-month average 30-year Treasury Bond yield is only 2.27%, compared to the

12   average yield in 2019 of 2.94%. With long-term Treasury yields so much lower now,

13   it makes sense that the allowed ROE for regulated electric companies should decline

14   as well.

15   Q.   **WHAT IS YOUR RECOMMENDED RETURN ON EQUITY FOR SPS?**

16   A.   Based on my DCF analyses in this case, the decline in long-term interest rates in the

17   economy generally, and considering recent commission allowed returns, I recommend

18   that the Commission adopt a 9.20% return on equity for SPS.

19   Q.   **PLEASE EXPLAIN HOW YOU ARRIVED AT YOUR RECOMMENDATION.**

20   A.   I began with the average DCF ROE results in Table 2 and also considered the range of

21   DCF estimates for each company in the proxy group shown on page 3 of Exhibit RAB-

1   5. My recommended 9.20% is within the range of the median ROE (8.59%) and the

2   top of the range ROE (9.73%) for the individual companies in the proxy group. In

3   recommending 9.20%, I recognize that recent Commission allowed returns are

4   somewhat higher than my DCF results. However, I do not recommend that the

5   Commission base its allowed ROE on the average allowed ROEs in other states. Such

6   an approach would not be based on the specific evidence and circumstances presented

7   in this case. Nevertheless, my recommendation of 9.20% is reasonably close to

8   recently allowed ROEs and is fully based on the market evidence and analysis I

9   reviewed.

10   I also considered the comments from the Value Line Investment Survey I

11   quoted in Section II of my Direct Testimony, which stated that valuations for utility

12   stocks are currently at historic highs and that some recent prices are above their

13   forecasted levels for the 2022 - 2024 time period. My recommendation of 9.20%

14   allows for some risk of declines in the stock prices of the companies in the proxy group

15   given the current high valuations and the "reach for yield" by investors mentioned by

16   Value Line.

17   Finally, 9.20% is a conservative estimate that recognizes the possibility of some

18   slight additional risk for SPS given its current credit rating of Baa2 from Moody's. As

19   I mentioned previously, 9.20% is greater than the median ROE for the individual proxy

20   companies.

| 1 | Q. | **DID YOU USE THE COMPANY'S REQUESTED CAPITAL STRUCTURE IN** |
| 2 | | **YOUR RECOMMENDED RATE OF RETURN?** |

3 A.   No. SPS requested that the Commission grant a 54.65% common equity ratio in this

4   proceeding. The Company's most recent litigated outcome of the equity ratio for

5   ratemaking purposes is 51.0%.[14]   In its Final Order in Docket No. 43695, the

6   Commission found the following:

> 7 In the PFD, the SOAH ALJs recommended SPS's proposed capital
> 8 structure be adopted. However, the Commission concludes, based on
> 9 the totality of the evidence, that SPS's rates should be set to reflect a
> 10 capital structure consisting of 49% debt and 51% equity. This capital
> 11 structure falls within the range of those supported by record evidence.
> 12 It is based in part on SPS's test-year capital structure and in part on
> 13 recent Commission decisions in litigated base-rate proceedings in which
> 14 the Commission set rates for vertically-integrated electric utilities
> 15 reflecting capital structures of approximately 50% debt and 50% equity.
> 16 The Commission-adopted capital structure of 49% debt and 51% equity
> 17 also reflects what would be a more prudent balance sheet of a vertically-
> 18 integrated electric utility during this period of low-cost debt. Consistent
> 19 with this discussion, the Commission rejects proposed finding of fact
> 20 72, 74, 75 and 76 and instead adopts findings of fact 72A, 72B, 74A,
> 21 75A, and 76A.
> 22

23	Q.	**HOW DOES YOUR RECOMMENDED COMMON EQUITY RATIO OF 51%**
24		**COMPARE WITH THE COMMON EQUITY RATIOS OF THE PROXY**
25		**GROUP?**

26 A.   Table 4 below shows the 2018 common equity ratios for each company in the proxy

27   group as well as the average common equity ratio for the group.

---

[14]   Final Order, PUCT Docket No. 43695.

Table 4 Proxy Group 2018 Common Equity Ratios	
ALLETE, Inc.	60.1%
Alliant Energy Corporation	46.7%
Ameren Corp.	48.8%
American Electric Power Co.	46.8%
DTE Energy Company	45.8%
Duke Energy Corp.	46.2%
Exelon Corp.	47.2%
Evergy, Inc	60.0%
Hawaiian Electric	51.7%
IDACORP	56.4%
Northwestern Corporation	47 8%
OGE Energy Corp	58.0%
Otter Tail Corporation	55.3%
Pinnacle West Capital Corp	53.0%
PNM Resources, Inc	38.6%
Portland General Electric Company	53.5%
PPL Corporation	36.7%
Average	50.2%

Source: Value Line Investment Survey

The average common equity ratio for Ms. Bulkley's proxy group is 50.4%. This indicates that SPS is requesting significantly more equity than what is maintained by companies that SPS has deemed to be of comparable risk. My recommended capital structure of 51% equity is more in line with the equity ratios of the companies in the proxy group.

Ms. Bulkley also provided capital structure analysis that confirms the reasonableness of a 51% equity ratio for SPS in this case. On page 81 of her Direct Testimony, Ms. Bulkley calculated that the average equity ratios for the utility operating companies in the proxy group range from 46.51% to 60.29%. A 51% equity ratio for SPS, then, is reasonably within this range. Further, on page 82 of her Direct Testimony Ms. Bulkley testified that the average authorized equity ratio for vertically

1   integrated electric utilities from 2018 - 2019 was 51.80% and the median was 52%.

2   Once again, these numbers underscore the reasonableness of the PUCT continuing to

3   allow SPS a 51% equity ratio for ratemaking purposes in this proceeding.

4   Q.   **WHAT IS YOUR RECOMMENDED WEIGHTED COST OF CAPITAL FOR**
5   **SPS?**

6   A.   My recommended weighted cost of capital is presented in Table 5. I used an equity

7   ratio of 51%, SPS's requested cost of debt of 4.33%, and my recommended ROE of

8   9.20%. The weighed cost of capital for SPS is 6.81%.

Table 5 TIEC Recommended Weighted Cost of Capital			
	Capital Ratio	Component Costs	Weighted Avg Cost
Long Term Debt	49 00%	4 33%	2 12%
Common Equity	51 00%	9 20%	4.69%
Total Capital	100 00%		6 81%

9

10   **IV.   RESPONSE TO SPS DIRECT TESTIMONY**

11 Q.   **HAVE YOU REVIEWED THE DIRECT TESTIMONY OF MS. BULKLEY?**

12 A.   Yes.

13 Q.   **PLEASE SUMMARIZE MS. BULKLEY'S TESTIMONY AND APPROACH TO**
14   **RETURN ON EQUITY.**

15 A.   Ms. Bulkley employed four methods to estimate the investor required rate of return for

16   SPS: (1) the constant growth and multi-stage DCF models, (2) the CAPM , (3) the Bond

17   Yield Plus Risk Premium model ("BYRP") and (4) Expected Earnings Analysis.

18   For her constant growth DCF approach, Ms. Bulkley used Value Line, First

19   Call, and Zacks for the investor expected growth rate and average closing stock prices

1   over the 30-, 90-, and 180-trading days ending May 31, 2019. Ms. Bulkley also

2   explained that she eliminated constant growth DCF results lower than 7.0%. For the

3   proxy group, Ms. Bulkley's mean growth rate ROE results ranged from 8.74% to

4   8.91%.[15]

5   Ms. Bulkley also considered a multi-stage DCF approach, which she described

6   on pages 47 through 49 of her Direct Testimony. Ms. Bulkley employed a long-run

7   expected growth rate in the third stage of her model based on her forecast of GDP

8   growth, which she calculated to be 5.52%. The mean proxy group results from this

9   version of the DCF model ranged from 8.87% to 9.04%.[16]

10   With respect to the CAPM, Ms. Bulkley utilized three sources for the risk-free

11   rate: (1) a current 30-day average on the 30-Year Treasury Bond of 2.85%, (2) a

12   projected 30-Year Treasury Bond yield through 2020 of 3.06%, and (3) a projected

13   yield of 3.60% for 2021 through 2025. Ms. Bulkley estimated her market risk premium

14   using two measures of the expected return on the S&P 500 Index. The mean results

15   from her CAPM analyses ranged from 9.91% to 10.88%. The individual CAPM results

16   from her analyses ranged from 9.79% to 11.02%.

17   Ms. Bulkley's approach to the BYRP was based on commission-allowed ROEs

18   from 1980 through May 2019. She also used the same three Treasury Bond yields that

19   she utilized in her CAPM analyses. Ms. Bulkley's formulation of the BYRP approach

20   resulted in a ROE range of 9.55% - 9.99%.[17]

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[15]   Refer to Ms. Bulkley's Direct Testimony, page 52, Figure 8.
[16]   Refer to Ms. Bulkley's Direct Testimony, page 52, Figure 8.
[17]   Refer to Ms. Bulkley's Direct Testimony, pages 59 and 60.

1   Finally, Ms. Bulkley also considered the Expected Earnings approach, in which

2   she relied on projected return on book equity as reported by Value Line of the period

3   from 2022 - 2024. The result from this approach was 10.25%.[18]

4   Based on the results of her analyses and judgment, Ms. Bulkley recommended

5   a ROE range for SPS of 9.75% to 10.50%, concluding that the cost of equity is 10.35%.

6 Q. **BEFORE YOU PROCEED TO THE PARTICULARS OF YOUR REVIEW OF**
7   **MS. BULKLEY'S ROE ANALYSES, WHAT IS YOUR OVERALL**
8   **CONCLUSION WITH RESPECT TO HER RECOMMENDED ROE RANGE?**

9 A. My conclusion is that although Ms. Bulkley testified about the importance of using

10   multiple methods to estimate the investor required return, she omitted the entirety of

11   her mean constant growth and multi-stage DCF estimates and appears to have relied

12   almost exclusively on her CAPM results in formulating her recommended ROE range

13   to the Commission. Ms. Bulkley's Figure 16 shows that the mean constant growth and

14   multi-stage DCF results range from 8.74% to 9.04%. The mean high multi-stage DCF

15   results ranged from 9.11% - 9.29%. It is only the mean high constant growth DCF

16   results (9.97% - 10.14%) that fall within her recommended range for SPS.

17   In a similar fashion, two of the three BYRP ROE estimates (9.55% and 9.67%)

18   fall below the bottom of her recommended ROE range of 9.75%. Only the 9.99%

19   BYRP result that employs a forecasted 30-Year Treasury Bond yield of 3.60% falls

20   within her recommended ROE range.

---

[18]   Refer to Ms. Bulkley's Direct Testimony, page 61.

1   With respect to the high end of Ms. Bulkley's ROE range, it appears that only

2   the CAPM - Bloomberg Beta ROE results using her calculated return on the S&P 500

3   companies are consistent with her recommended 10.5%.

4   Based on my review of Ms. Bulkley's ROE results shown on Figure 16, I

5   conclude that Ms. Bulkley relied mainly on the CAPM ROE results for her ROE

6   recommendations in this proceeding.

7 Q. **IS IT APPROPRIATE FOR MS. BULKLEY TO REJECT THE MEAN**
8   **RESULTS FROM HER DCF ANALYSES?**

9 A. No, definitely not. Both the constant growth and multi-stage DCF models utilize

10   verifiable public information with respect to investor return requirements for regulated

11   electric utilities. Current stock prices are the best indicators we have of investor

12   expectations and analysts' earnings and dividend growth forecasts may reasonably be

13   assumed to influence investors' required ROEs. Discarding this important publicly

14   available information serves to significantly overstate Ms. Bulkley's recommended

15   investor required return for a low-risk regulated utility company such as SPS. The DCF

16   model currently shows that investor required returns are considerably lower for utility

17   stocks given their safety and security relative to the stock market as a whole.

18 Q. **IS USING THE HIGH MEAN RESULTS FROM THE DCF MODELS**
19   **APPROPRIATE?**

20 A. No. Ms. Bulkley's high mean results simply use the highest ROE for each company in

21   the proxy group, which is driven by the highest expected growth rate. There is no basis

22   for assuming that investors are more likely to expect the highest growth rate from the

23   three sources used by Ms. Bulkley. The average of the three sources is a far more likely

1	and reasonable assumption. For example, the proxy group high mean using Ms.
2	Bulkley's 180-day average stock price is unduly influenced by excessive ROE
3	estimates for Exelon (13.76%), Otter Tail (11.99%), and Portland General Corp.
4	(11.31%).[19] I would also point out that Ms. Bulkley's DCF approach is asymmetric
5	and biased because it only excludes DCF results that fall below 7.0%. She made no
6	attempt to examine and exclude excessively high DCF estimates from her proxy
7	groups.

8	Q.	**PLEASE PROCEED WITH YOUR DISCUSSION OF MS. BULKLEY'S**
9		**RECOMMENDED ROE RANGE OF 9.75% - 10.5%.**
10	A.	Ms. Bulkley's recommended ROE range and recommended ROE of 10.35% for SPS
11		significantly exceeds the average commission allowed returns for the last several years
12		based on Ms. Bulkley's own data. My Table 1 shows that the average allowed ROE
13		has been below 10.0% since 2013. Average commission-allowed ROEs for 2018 and
14		2019 were 9.57% and were below the 9.75% floor of Ms. Bulkley's recommended ROE
15		range. During those years, the average yield on the 30-Year Treasury Bond was 2.94%
16		- 3.11%. With the long-term Treasury Bond yield down to around 2.3% now, one
17		would logically expect that ROEs would be even lower, not higher as Ms. Bulkley
18		recommends.
19		Turning to Ms. Bulkley's CAPM results, it is informative to compare these
20		results to recently allowed Commission ROEs in my Table 1. Ms. Bulkley's CAPM
21		results using the Bloomberg Beta range from 10.43% - 11.02%. One would have to go

---

[19] See Attachment AEB-RR-2, page 3 of 3.

1 back to 2009 to find an average ROE (10.51%) that approximates the lower end of the

2 Bloomberg Beta CAPM range. In 2009 the average 30-Year Treasury Bond yield was

3 4.07%, which is over 170 basis points, or 1.70%, higher than the current 2.30% yield.

4 One would have to go even further back to 2002 to find an average allowed ROE of

5 11.07% to approximate the upper end of Ms. Bulkley's Bloomberg Beta CAPM range.

6 In 2002, the average 30-Year Treasury Bond yield was 5.29%, almost 300 basis points

7 higher than the more current 2.30% yield. My conclusion is that Ms. Bulkley's

8 Bloomberg Beta CAPM results are so excessive and implausible that they should be

9 rejected out of hand by the PUCT.

10 Q. **ON PAGE 51, LINES 2 THROUGH 9 OF HER DIRECT TESTIMONY, MS.**
11 **BULKLEY EXPRESSED CONCERNS REGARDING THE DCF MODEL AND**
12 **CURRENT STOCK PRICE VALUATIONS AND PRICE/EARNINGS ("P/E")**
13 **RATIOS. PLEASE ADDRESS MS. BULKLEY'S CRITICISMS.**

14 A. Ms. Bulkley expressed some concern regarding current utility stock valuations, that

15 they are high, and may not be sustainable. She testified that while she gave weight "to

16 the range of reasonable results established using the DCF methodologies," her

17 recommendation also gives weight to the results of other ROE estimation models.

18 First, it is important to realize that none of the models Ms. Bulkley and I use to

19 estimate the investor required ROE strictly adhere to their underlying assumptions

20 100% of the time in the real world. The DCF, CAPM, and risk premium models all

21 operate with certain simplifying assumptions. In Section III of my testimony I pointed

22 out the limitations of the CAPM that must be considered in assessing its effectiveness

23 relative to the DCF model. One of those limitations is estimating the market required

24 rate of return. Estimating the market required rate of return requires considerable

1   judgment on the part of the analyst, judgment that may result in a wide range of possible

2   returns. In this case, Ms. Bulkley and I used very different estimates of the market rate

3   of return that caused our CAPM results to differ considerably. I will address the serious

4   underlying problems with her CAPM approaches later in my testimony.

5   I suggest that the Commission recognize that no ROE estimation model strictly

6   adheres to its underlying assumptions all the time.

7   Q. **PLEASE CONTINUE WITH YOUR RESPONSE TO MS. BULKLEY'S**
8   **CRITICISM OF THE DCF MODEL'S P/E ASSUMPTION.**

9   A. With respect to the assumption of a constant P/E ratio, simply because the utility

10   industry's current P/E ratio may be above the long-term average P/E ratio does not

11   mean that the DCF results based on current data are questionable and should be thrown

12   out completely. As I have stated previously in my testimony, capital markets are

13   efficient and can be assumed to reflect investor preferences in the prices they are willing

14   and able to pay for a regulated utility's common stock. This includes publicly available

15   information to which investors have access, including P/E ratios. The current stock

16   price, then, is reflective of the discounted future cash flows to the investor in the form

17   of dividends as well as the expected price of the stock when it is sold. It does not make

18   sense for a rational investor to expect a capital loss in the future based on the price that

19   investor pays today. What this means is that it is reasonable to assume that current

20   stock prices are reflective of investors' required ROE and that the DCF model can

21   provide valid and valuable information to the Commission in its determination of the

22   allowed ROE for regulated utilities generally and for SPS in this case.

| 1 | Q. | **DID MS. BULKLEY GIVE WEIGHT TO THE REASONABLE RANGE OF** |
| 2 | | **RESULTS FROM HER DCF MODELS?** |

3   A.   No. Ms. Bulkley gave no weight whatsoever to her mean DCF ROE results, which are

4   reasonable and similar to my DCF results, although my results are lower due to updated

5   stock prices and earnings growth estimates.

6	Q.	**ON PAGES 40 AND 41 OF HER DIRECT TESTIMONY, MS. BULKLEY**
7		**CITED OPINION NO. 531 AND AN OCTOBER 2018 ORDER FROM THE**
8		**FEDERAL ENERGY REGULATORY COMMISSION ("FERC")**
9		**SUPPORTING THE USE OF MULTIPLE METHODS TO ESTIMATE THE**
10		**COST OF EQUITY. HAS THE FERC ISSUED A MORE RECENT ORDER**
11		**THAT ADDRESSES THE USE OF MULTIPLE ROE METHODOLOGIES?**

12   A.   Yes. FERC recently issued its Opinion No. 569 on November 21, 2019, Docket Nos.

13   EL14-12-003 and EL15-45-000 regarding the methods used to estimate a just and

14   reasonable ROE under the Federal Power Act ("FPA") section 206. In this Opinion,

15   the FERC rejected using the Risk Premium and Expected Earnings approaches to

16   estimating the ROE. FERC stated:

17   1.   On November 15, 2018, the Commission issued an Order
18   Directing Briefs in the above-captioned proceedings. The Briefing
19   Order directed the participants in the above captioned proceedings
20   to submit briefs regarding: (1) a proposed framework for
21   determining whether an existing base return on equity (ROE) is
22   unjust and unreasonable under the first prong of Federal Power
23   Act (FPA) section 206; and (2) a revised methodology for
24   determining just and reasonable base ROEs under the second
25   prong of FPA section 206. As discussed below, we will adopt the
26   proposal in the Briefing Order, with certain revisions. *Principally,*
27   *we will not adopt the use of the expected earnings (Expected*
28   *Earnings) and risk premium (Risk Premium) models in our ROE*
29   *analyses under the first and second prongs of section 206, and*
30   *instead will use only the discounted cash flow (DCF) model and*
31   *capital-asset pricing model (CAPM) in our ROE analyses under*
32   *both prongs of section 206.* (emphasis added)
33

1   FERC also found the following in its Opinion No. 569:

2   31.   We will expand our methodology for determining whether
3   an existing base ROE is unjust and unreasonable under the first
4   prong of section 206, and for determining a new just and
5   reasonable replacement base ROE under the second prong of
6   section 206 when an existing ROE has been shown to be unjust
7   and unreasonable, to rely on multiple financial models.
8   Specifically, we will use the DCF model and CAPM in our ROE
9   methodology, but not the Expected Earnings or Risk Premium
10   models. As discussed further below, we find that expanding our
11   methodology to use the CAPM model in addition to the DCF
12   model will better reflect how investors make their investment
13   decisions. This should result in our ROE analyses producing cost
14   of equity estimates that more accurately reflect what ROE a utility
15   must offer in order to attract capital. As discussed in sections VI
16   and VIII below, we find that, on balance, the Expected Earnings
17   and Risk Premium models would not improve our ROE
18   determinations sufficiently to justify using those models, in light
19   of their flaws and the potential inaccuracies and complexity that
20   they could introduce into our ROE analyses.

21   **Multi-Stage DCF Model and GDP Growth Rate**

22   Q.   **HOW DID MS. BULKLEY ESTIMATE THE LONG-TERM GROWTH RATE**
23   **IN GDP FOR THE THIRD STAGE OF HER MULTI-STAGE DCF**
24   **ANALYSES?**

25   A.   Ms. Bulkley explained that she computed growth in real GDP of 3.22% using historical

26   data from 1929 through 2018, then included an inflation component of 2.23% that

27   resulted in her forecasted GDP growth rate of 5.52%.

28   Q.   **ARE YOU AWARE OF OTHER SOURCES THAT FORECAST GDP**
29   **GROWTH? AND IF SO, WHAT ARE THOSE PROJECTIONS?**

30   A.   There are several other publicly available sources that indicate much lower forecasted

31   GDP growth than Ms. Bulkley's forecast in her Direct Testimony.

1   In Section II of my testimony I cited recent economic projections from the

2   Federal Reserve that were released on December 11, 2019. The Fed's forecast of real

3   long-run growth in GDP is 1.9% per year. If we add the Fed's long-run projection of

4   inflation of 2.0%, the result is an expected 3.9% growth in nominal GDP per year.

5   The Congressional Budget Office ("CBO") published *The 2019 Long-Term*

6   *Budget Outlook* dated June 2019. The CBO projected yearly long-term growth in real

7   GDP of 1.9% and long-term GDP price inflation of 2.0%.[20] Adding these two numbers

8   together results in a long-term nominal growth rate in GDP of 3.9% per year.

9   The United States Energy Information Administration ("EIA") also published

10   forecasts of real GDP and inflation in their publication entitled *Annual Energy Outlook*

11   *2019*. For the period from 2018 - 2050, the EIA projected yearly growth in real GDP

12   of 1.9% and inflation of 2.30%, resulting in a nominal yearly GDP growth rate of

13   4.20%.

14   The three publicly available forecasts from these organizations show much

15   lower expected growth in nominal GDP than Ms. Bulkley's forecasted growth rate of

16   5.52%. Although Ms. Bulkley did not include her multi-stage DCF results in her

17   recommended ROE range, her results would have been much lower if she had

18   employed an expected GDP growth rate of approximately 4.0% for the third stage of

19   her model. For example, page 1 of Attachment AEB-RR-3 shows Ms. Bulkley's 30-

20   Day Multi-Stage DCF results using the average first stage growth rate and her

21   forecasted GDP growth of 5.52%. I calculate that reducing the forecasted GDP growth

22   rate to 4.0% would lower Ms. Bulkley's mean DCF result from 8.87% to 7.62%.

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[20]   Table A-2 of *The 2019 Long-Term Budget Outlook.*

1   <u>CAPM</u>

2   Q.   **BRIEFLY SUMMARIZE THE MAIN ELEMENTS OF MS. BULKLEY'S**
3   **CAPM APPROACH.**

4   A.   On pages 53 and 54 of her Direct Testimony, Ms. Bulkley explained that she used three

5   different 30-Year Treasury Bond yields as proxies for the risk-free rate: the then-

6   current yield of 2.85%, a forecasted yield for 2019 through 2020 of 3.06%, and a

7   forecasted yield for 2021 through 2025 of 3.60%. She explained further on pages 54

8   and 55 that she obtained beta values for the companies in the proxy group from

9   Bloomberg and Value Line.

10   Finally, Ms. Bulkley estimated the market return for the companies in the S&P

11   500 using a DCF model, the results of which ranged from 13.90 to 14.41%.

12   Figure 10 of her Direct Testimony shows that the CAPM results ranged from

13   9.79% to 11.02%.

14   Q.   **IS IT APPROPRIATE TO USE FORECASTED OR PROJECTED BOND**
15   **YIELDS IN THE CAPM?**

16   A.   No. Current interest rates and bond yields embody all of the relevant market data and

17   expectations of investors, including expectations of changing future interest rates. The

18   forecasted bond yields used by Ms. Bulkley are significantly at odds with the trend of

19   declining long-term bond yields in 2019. Current interest rates provide tangible and

20   verifiable market evidence of investor return requirements today and these are the

21   interest rates and bond yields that should be used in both the CAPM and in the bond

22   yield plus risk premium analyses. To the extent that investors give forecasted interest

23   rates any weight at all, they are already incorporated in current securities prices.

| 1 | Q. | HOW DO MS. BULKLEY'S ESTIMATES OF THE OVERALL MARKET |
| 2 | | RETURN COMPARE TO YOURS? |

3   A.   My estimates of the market required return are as follows:

- Value Line 3-5 Year Total Return: 11.0% - 12.21%
- Value Line Growth Rates: 10.61%
- S&P Average Historical Returns: 11.90%

Ms. Bulkley's forecasted market returns of 13.90% - 14.41% are extraordinarily high compared to historical norms. Further, her calculation of the market return for the S&P 500 using Value Line's 3 -5 year earnings growth estimates greatly exceeds the Value Line 3-5 year total annual return numbers I used from the Value Line Investment Analyzer. Moreover, the number of companies the Value Line Investment Analyzer used to develop the total annual return numbers I used was 1,682, a far greater number of companies than the S&P 500 used by Ms. Bulkley. I recommend that the Commission give Ms. Bulkley's estimated market returns little weight in this proceeding.

Further, if we look historically at the actual capital appreciation for the S&P 500 over the period 1926 through 2018, we see that Ms. Bulkley's expected growth rates for the S&P 500 are significantly overstated, leading directly to an overstatement of her expected market returns. According to the Duff and Phelps *2019 SBBI Yearbook* the total return of the S&P 500 historically has been 11.90%.[21] This total return consists of an income return of 4.0% and a capital appreciation, or growth, component of 7.7%. However, Ms. Bulkley's expected 3 - 5 year growth rate for the S&P 500 is 11.69% -

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[21]   Duff and Phelps, *2019 SBBI Yearbook,* page 6-17.

1   12.27%, exceptionally high by historical standards. Note that I did not use historical

2   growth for my own CAPM analyses. However, the actual historical appreciation in the

3   S&P 500 suggests that growth rates used by Ms. Bulkley are highly unlikely to hold in

4   the long run.

5   Finally, SPS's response to TIEC 2-5 presents the Company's assumed returns

6   on its pension assets. I included the attachment from this response as Exhibit RAB-6.

7   Note that the assumed annual return for U.S. Large Capitalization companies is 7.35%

8   - 8.52%. These assumed returns are substantially lower than the returns forecasted by

9   Ms. Bulkley.

10 Q.   **ARE THERE SOURCES OF WHICH YOU ARE AWARE THAT SUGGEST**
11   **MS. BULKLEY'S MARKET RISK PREMIUM RANGE OF 10.30% - 11.56% IS**
12   **UNREASONABLY HIGH?**

13 A.   Yes. In the authoritative corporate finance textbook by Brealey, Myers, and Allen the

14   authors stated:

15   Brealey, Myers, and Allen have no official position on the issue, but we
16   believe that a range of 5 to 8 percent is reasonable for the risk premium
17   in the United States.[22]
18
19   As I cited earlier in my Direct Testimony, Duff and Phelps currently

20   recommends a market risk premium of 5.5% and an overall U. S. cost of equity of

21   8.5%. These sources underscore how much Ms. Bulkley's recommended market risk

22   premiums inflated her CAPM ROE estimates.

23 **Risk Premium**

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[22]   Richard A. Brealey, Stewart C. Myers, and Paul Allen, *Principles of Corporate Finance*, page 154;
        McGraw-Hill/Irwin, 8th Edition, 2006.

| 1 | Q. | **PLEASE SUMMARIZE MS. BULKLEY'S RISK PREMIUM APPROACH.** |

2   A.   Ms. Bulkley developed an historical risk premium using Commission-allowed returns

3   for regulated electric utility companies and 30-year Treasury Bond yields from 1980

4   through May 2019. She used regression analysis to estimate the value of the inverse

5   relationship between interest rates and risk premiums during that period. Applying the

6   regression coefficients to the average risk premium and using the current and projected

7   30-year Treasury yields I discussed earlier, Ms. Bulkley's risk premium ROE estimate

8   range is 9.55% – 9.99%.[23]

9   Q.   **PLEASE RESPOND TO MS. BULKLEY'S RISK PREMIUM ANALYSIS.**

10   A.   The bond yield plus risk premium approach is imprecise and can only provide very

11   general guidance on the current authorized ROE for a regulated electric utility. Risk

12   premiums can change substantially over time based on investor preferences and market

13   conditions. These changes will not be incorporated into an historical risk premium

14   analysis of the type Ms. Bulkley uses. As such, this approach is a "blunt instrument,"

15   if you will, for estimating the ROE in regulated proceedings. In my view, a properly

16   formulated DCF model using current stock prices and growth forecasts is far more

17   reliable and accurate than the bond yield plus risk premium approach, which relies on

18   a historical risk premium analysis over a certain period of time.

19   On page 60, lines 9 through 14 of her Direct Testimony Ms. Bulkley testified

20   that the results of her BYRP analysis "support selection of an authorized ROE in the

21   upper range of the DCF results." However, given the range of Ms. Bulkley's BYRP

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[23]   *Bulkley Direct Testimony, page 60.*

1   ROE estimates and the fact that she is recommending a 10.35% ROE for SPS, it would

2   appear that the BYRP results would argue for a lower ROE than her recommendation.

3 **Q. WHAT WOULD THE RISK PREMIUM RESULT BE USING A CURRENT 30-**
4   **YEAR TREASURY YIELD OF 2.30% IN MS. BULKLEY'S BYRP MODEL?**

5 A.   As I demonstrated earlier in my testimony, the yield on the 30-Year Treasury Bond has

6   declined substantially since Ms. Bulkley filed her Direct Testimony in this proceeding.

7   Applying Ms. Bulkley's BYRP model with the December 2019 30-Year Treasury Bond

8   yield would yield the following result:

9   *BYRP ROE = 2.30% + (7.8665549% + (-0.409467844 * 2.30%) = 9.22%*

10   Using the current yield on the 30-Year Treasury bond produces a BYRP ROE

11   result that supports my 9.20% ROE recommendation for SPS. It does not support Ms.

12   Bulkley's recommendation of 10.35%.

13 **Expected Earnings**

14 **Q. BEGINNING ON PAGE 60 OF HER DIRECT TESTIMONY, MS. BULKLEY**
15   **PRESENTED HER EXPECTED EARNINGS ANALYSIS. PLEASE RESPOND**
16   **TO MR. BULKLEY'S ANALYSIS.**

17 A.   Ms. Bulkley relied on Value Line's projected returns on book value equity for the

18   period 2022-2024 for her expected earnings ROE estimate for the proxy group, the

19   mean result of which is 10.25%.[24]

20   The major flaw in the expected earnings approach is that it measures

21   accounting returns on book value, not investor required returns in the marketplace. A

22   market-based ROE estimation method like the DCF model uses stock market data and

---

[24]   *Bulkley Direct Testimony, page 61.*

1   earnings growth forecasts to determine a forward-looking ROE estimate that

2   incorporates true opportunity cost measured against the returns available to the investor

3   in alternative investments such as other stocks, bonds, real estate, and so forth. Further,

4   changes in economic variables such as interest rates will affect the required returns of

5   utility stock investments and other investments as well. Such changes will be

6   incorporated into the DCF and CAPM models, which use current market data. These

7   changes will not be reflected in book returns on common equity.

8   Turning to Ms. Bulkley's expected earnings approach, she provided

9   absolutely no support for the assumption that Value Line's projected accounting returns

10   on book value in the 2022 – 2024 projected time period have any influence whatsoever

11   on required returns in today's financial marketplace or that they provide a useful

12   benchmark in estimating current required returns. I recommend the Commission reject

13   Ms. Bulkley's expected earnings approach and instead use market-based ROE

14   estimation models to set SPS's allowed ROE in this proceeding.

15   **Flotation Costs**

16   **Q.**   **BEGINNING ON PAGE 77 OF HER DIRECT TESTIMONY, MS. BULKLEY**
17   **PRESENTED HER POSITION REGARDING THE NEED TO RECOGNIZE**
18   **THE EFFECT OF FLOTATION COSTS IN THE COST OF EQUITY. PLEASE**
19   **ADDRESS MS. BULKLEY'S POSITION ON FLOTATION COSTS.**

20   **A.**   A flotation cost adjustment attempts to recognize and collect the costs of issuing

21   common stock. Such costs typically include legal, accounting, and printing costs as

22   well as broker fees and discounts. In my opinion, it is likely that flotation costs are

23   already accounted for in current stock prices and that adding an adjustment for flotation

24   costs amounts to double counting. A DCF model using current stock prices should

1   already account for investor expectations regarding the collection of flotation costs.

2   Multiplying the dividend yield by a 4% flotation cost adjustment, for example,

3   essentially assumes that the current stock price is wrong and that it must be adjusted

4   downward to increase the dividend yield and the resulting cost of equity. This is not

5   an appropriate assumption regarding investor expectations. Current stock prices most

6   likely already account for flotation costs, to the extent that such costs are even

7   accounted for by investors.

8   **Management Performance**

9   **Q.**   **ON PAGE 76, LINE 18 THROUGH PAGE 77, LINE 2 MS. BULKLEY**
10   **EXPLAINED HER POSITION REGARDING THE RECOGNITION OF**
11   **MANAGEMENT PERFORMANCE IN SETTING SPS'S ALLOWED ROE.**
12   **SHOULD THE PUCT GRANT SPS A HIGHER ROE DUE TO MANAGEMENT**
13   **PERFORMANCE?**

14 **A.**   No. Texas ratepayers are entitled to excellent performance by utility management as

15   part of its responsibility to provide service at just and reasonable rates. Management

16   should prudently manage expenses and investments so that rates to customers are set

17   as low as possible consistent with safe and reliable service. I strongly recommend

18   against the Commission allowing an adder to SPS's ROE in this case for management

19   performance.

20
21 **Q**   **DOES THIS CONCLUDE YOUR TESTIMONY?**
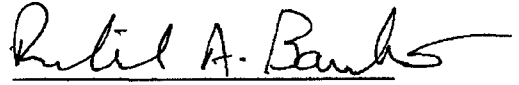
22 **A.**   Yes.

AFFIDAVIT
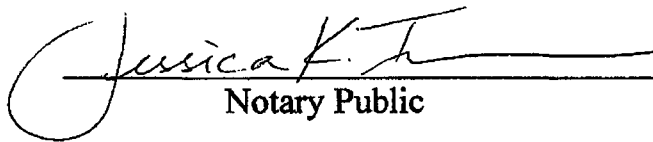
STATE OF GEORGIA)

COUNTY OF FULTON)

RICHARD A. BAUDINO, being duly sworn, deposes and states: that the attached is his sworn testimony and that the statements contained are true and correct to the best of his knowledge, information and belief.

Richard A. Baudino
Richard A. Baudino

Sworn to and subscribed before me on this
_10th_ day of _February_ 20_20_.
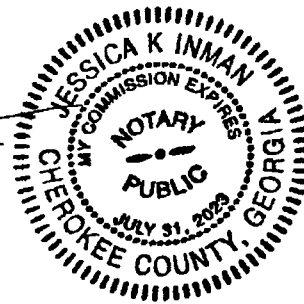
Jessica K. I
Notary Public

RESUME OF RICHARD A. BAUDINO

EDUCATION

New Mexico State University, M.A.
Major in Economics
Minor in Statistics

New Mexico State University, B.A.
Economics
English

Thirty-seven years of experience in utility ratemaking and the application of principles of economics to the regulation of electric, gas, and water utilities. Broad based experience in revenue requirement analysis, cost of capital, rate of return, cost and revenue allocation, and rate design.

REGULATORY TESTIMONY

Preparation and presentation of expert testimony in the areas of:

Cost of Capital for Electric, Gas and Water Companies
Electric, Gas, and Water Utility Cost Allocation and Rate Design
Revenue Requirements
Gas and Electric industry restructuring and competition
Fuel cost auditing
Ratemaking Treatment of Generating Plant Sale/Leasebacks

RESUME OF RICHARD A. BAUDINO

EXPERIENCE

**1989 to
Present:**   **Kennedy and Associates: Director of Consulting, Consultant** - Responsible for consulting assignments in revenue requirements, rate design, cost of capital, economic analysis of generation alternatives, electric and gas industry restructuring/competition and water utility issues.

**1982 to
1989:**   **New Mexico Public Service Commission Staff: Utility Economist** - Responsible for preparation of analysis and expert testimony in the areas of rate of return, cost allocation, rate design, finance, phase-in of electric generating plants, and sale/leaseback transactions.

CLIENTS SERVED

Regulatory Commissions

Louisiana Public Service Commission
Georgia Public Service Commission
New Mexico Public Service Commission

Other Clients and Client Groups

Ad Hoc Committee for a Competitive
  Electric Supply System
Air Products and Chemicals, Inc.
Arkansas Electric Energy Consumers
Arkansas Gas Consumers
AK Steel
Armco Steel Company, L.P.
Aqua Large Users Group
Assn. of Business Advocating
  Tariff Equity
Atmos Cities Steering Committee
Canadian Federation of Independent Businesses
CF&I Steel, L.P.
Cities of Midland, McAllen, and Colorado City
Cities Served by Texas-New Mexico Power Co.
Cities Served by AEP Texas
City of New York
Climax Molybdenum Company
Connecticut Industrial Energy Consumers
Crescent City Power Users Group
Cripple Creek & Victor Gold Mining Co.
General Electric Company
Holcim (U.S.) Inc.
IBM Corporation
Industrial Energy Consumers
Kentucky Industrial Utility Consumers
Kentucky Office of the Attorney General
Lexington-Fayette Urban County Government
Large Electric Consumers Organization
Newport Steel
North Carolina Attorney General's Office

Northwest Arkansas Gas Consumers
Maryland Energy Group
Occidental Chemical
PSI Industrial Group
Large Power Intervenors (Minnesota)
Tyson Foods
West Virginia Energy Users Group
The Commercial Group
Wisconsin Industrial Energy Group
South Florida Hospital and Health Care Assn.
PP&L Industrial Customer Alliance
Philadelphia Area Industrial Energy Users Gp.
Philadelphia Large Users Group
West Penn Power Intervenors
Duquesne Industrial Intervenors
Met-Ed Industrial Users Gp.
Penelec Industrial Customer Alliance
Penn Power Users Group
Columbia Industrial Intervenors
U.S. Steel & Univ. of Pittsburg Medical Ctr.
Multiple Intervenors
Maine Office of Public Advocate
Missouri Office of Public Counsel
University of Massachusetts - Amherst
WCF Hospital Utility Alliance
West Travis County Public Utility Agency
Steering Committee of Cities Served by Oncor
Utah Office of Consumer Services
Healthcare Council of the National Capital Area
Vermont Department of Public Service
Texas Industrial Energy Consumers

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Expert Testimony Appearances
of
Richard A. Baudino
As of February 2020

Date	Case	Jurisdict.	Party	Utility	Subject
10/83	1803, 1817	NM	New Mexico Public Service Commission	Southwestern Electric Coop.	Rate design.
11/84	1833	NM	New Mexico Public Service Commission Palo Verde	El Paso Electric Co.	Service contract approval, rate design, performance standards for nuclear generating system
1983	1835	NM	New Mexico Public Service Commission	Public Service Co. of NM	Rate design.
1984	1848	NM	New Mexico Public Service Commission	Sangre de Cristo Water Co.	Rate design.
02/85	1906	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
09/85	1907	NM	New Mexico Public Service Commission	Jornada Water Co.	Rate of return.
11/85	1957	NM	New Mexico Public Service Commission	Southwestern Public Service Co.	Rate of return.
04/86	2009	NM	New Mexico Public Service Commission	El Paso Electric Co.	Phase-in plan, treatment of sale/leaseback expense.
06/86	2032	NM	New Mexico Public Service Commission	El Paso Electric Co.	Sale/leaseback approval.
09/86	2033	NM	New Mexico Public Service Commission	El Paso Electric Co.	Order to show cause, PVNGS audit.
02/87	2074	NM	New Mexico Public Service Commission	El Paso Electric Co.	Diversification.
05/87	2089	NM	New Mexico Public Service Commission	El Paso Electric Co.	Fuel factor adjustment.
08/87	2092	NM	New Mexico Public Service Commission	El Paso Electric Co.	Rate design.
10/87	2146	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Financial effects of restructuring, reorganization.
07/88	2162	NM	New Mexico Public Service Commission	El Paso Electric Co.	Revenue requirements, rate design, rate of return.

J. KENNEDY AND ASSOCIATES, INC.

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2020**

Date	Case	Jurisdict.	Party	Utility	Subject
01/89	2194	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Economic development.
1/89	2253	NM	New Mexico Public Service Commission	Plains Electric G&T Cooperative	Financing.
08/89	2259	NM	New Mexico Public Service Commission	Homestead Water Co.	Rate of return, rate design.
10/89	2262	NM	New Mexico Public Service Commission	Public Service Co. of New Mexico	Rate of return.
09/89	2269	NM	New Mexico Public Service Commission	Ruidoso Natural Gas Co.	Rate of return, expense from affiliated interest.
12/89	89-208-TF	AR	Arkansas Electric Energy Consumers	Arkansas Power & Light Co.	Rider M-33.
01/90	U-17282	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
09/90	90-158	KY	Kentucky Industrial Utility Consumers	Louisville Gas & Electric Co.	Cost of equity.
09/90	90-004-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Cost of equity, transportation rate.
12/90	U-17282 Phase IV	LA	Louisiana Public Service Commission	Gulf States Utilities	Cost of equity.
04/91	91-037-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Transportation rates.
12/91	91-410-EL-AIR	OH	Air Products & Chemicals, Inc., Armco Steel Co., General Electric Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Cost of equity.
05/92	910890-EI	FL	Occidental Chemical Corp.	Florida Power Corp.	Cost of equity, rate of return.
09/92	92-032-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost of equity, rate of return, cost-of-service.
09/92	39314	ID	Industrial Consumers for Fair Utility Rates	Indiana Michigan Power Co.	Cost of equity, rate of return.

J. KENNEDY AND ASSOCIATES, INC.

**Expert Testimony Appearances
of
Richard A. Baudino
As of February 2020**

Date	Case	Jurisdict.	Party	Utility	Subject
09/92	92-009-U	AR	Tyson Foods	General Waterworks	Cost allocation, rate design.
01/93	92-346	KY	Newport Steel Co.	Union Light, Heat & Power Co.	Cost allocation.
01/93	39498	IN	PSI Industrial Group	PSI Energy	Refund allocation.
01/93	U-10105	MI	Association of Businesses Advocating Tariff Equality (ABATE)	Michigan Consolidated Gas Co.	Return on equity.
04/93	92-1464-EL-AIR	OH	Air Products and Chemicals, Inc., Armco Steel Co., Industrial Energy Consumers	Cincinnati Gas & Electric Co.	Return on equity.
09/93	93-189-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Transportation service terms and conditions.
09/93	93-081-U	AR	Arkansas Gas Consumers	Arkansas Louisiana Gas Co.	Cost-of-service, transportation rates, rate supplements; return on equity; revenue requirements.
12/93	U-17735	LA	Louisiana Public Service Commission Staff	Cajun Electric Power Cooperative	Historical reviews; evaluation of economic studies.
03/94	10320	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric Co.	Trimble County CWIP revenue refund.
4/94	E-015/ GR-94-001	MN	Large Power Intervenors	Minnesota Power Co.	Evaluation of the cost of equity, capital structure, and rate of return.
5/94	R-00942993	PA	PG&W Industrial Intervenors	Pennsylvania Gas & Water Co.	Analysis of recovery of transition costs.
5/94	R-00943001	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Evaluation of cost allocation, rate design, rate plan, and carrying charge proposals.
7/94	R-00942986	PA	Armco, Inc., West Penn Power Industrial Intervenors	West Penn Power Co.	Return on equity and rate of return.
7/94	94-0035-E-42T	WV	West Virginia Energy Users' Group	Monongahela Power Co.	Return on equity and rate of return.

J. KENNEDY AND ASSOCIATES, INC.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2020

Date	Case	Jurisdict.	Party	Utility	Subject
8/94	8652	MD	Westvaco Corp. Co.	Potomac Edison	Return on equity and rate of return.
9/94	930357-C	AR	West Central Arkansas Gas Consumers	Arkansas Oklahoma Gas Corp.	Evaluation of transportation service.
9/94	U-19904	LA	Louisiana Public Service Commission	Gulf States Utilities	Return on equity.
9/94	8629	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Transition costs.
11/94	94-175-U	AR	Arkansas Gas Consumers	Arkla, Inc.	Cost-of-service, rate design, rate of return.
3/95	RP94-343-000	FERC	Arkansas Gas Consumers	NorAm Gas Transmission	Rate of return.
4/95	R-00943271	PA	PP&L Industrial Customer Alliance	Pennsylvania Power & Light Co.	Return on equity.
6/95	U-10755	MI	Association of Businesses Advocating Tariff Equity	Consumers Power Co.	Revenue requirements.
7/95	8697	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Cost allocation and rate design.
8/95	95-254-TF U-2811	AR	Tyson Foods, Inc.	Southwest Arkansas Electric Cooperative	Refund allocation.
10/95	ER95-1042-000	FERC	Louisiana Public Service Commission	Systems Energy Resources, Inc.	Return on Equity.
11/95	I-940032	PA	Industrial Energy Consumers of Pennsylvania	State-wide - all utilities	Investigation into Electric Power Competition.
5/96	96-030-U	AR	Northwest Arkansas Gas Consumers	Arkansas Western Gas Co.	Revenue requirements, rate of return and cost of service.
7/96	8725	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.,Potomac Electric Power Co. and Constellation Energy Corp.	Return on Equity.
7/96	U-21496	LA	Louisiana Public Service Commission	Central Louisiana Electric Co.	Return on equity, rate of return.
9/96	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.

Expert Testimony Appearances
of
Richard A. Baudino
As of February 2020

Date	Case	Jurisdict.	Party	Utility	Subject
1/97	RP96-199-000	FERC	The Industrial Gas Users Conference	Mississippi River Transmission Corp.	Revenue requirements, rate of return and cost of service.
3/97	96-420-U	AR	West Central Arkansas Gas Corp.	Arkansas Oklahoma Gas Corp.	Revenue requirements, rate of return, cost of service and rate design.
7/97	U-11220	MI	Association of Business Advocating Tariff Equity	Michigan Gas Co. and Southeastern Michigan Gas Co.	Transportation Balancing Provisions.
7/97	R-00973944	PA	Pennsylvania American Water Large Users Group	Pennsylvania-American Water Co.	Rate of return, cost of service, revenue requirements.
3/98	8390-U	GA	Georgia Natural Gas Group and the Georgia Textile Manufacturers Assoc.	Atlanta Gas Light	Rate of return, restructuring issues, unbundling, rate design issues.
7/98	R-00984280	PA	PG Energy, Inc. Intervenors	PGE Industrial	Cost allocation.
8/98	U-17735	LA	Louisiana Public Service Commission	Cajun Electric Power Cooperative	Revenue requirements.
10/98	97-596	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric Co.	Return on equity, rate of return.
10/98	U-23327	LA	Louisiana Public Service Commission	SWEPCO, CSW and AEP	Analysis of proposed merger.
12/98	98-577	ME	Maine Office of the Public Advocate	Maine Public Service Co.	Return on equity, rate of return.
12/98	U-23358	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity, rate of return.
3/99	98-426	KY	Kentucky Industrial Utility Customers, Inc.	Louisville Gas and Electric Co	Return on equity.
3/99	99-082	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Utilities Co.	Return on equity.
4/99	R-984554	PA	T. W. Phillips Users Group	T. W. Phillips Gas and Oil Co.	Allocation of purchased gas costs.
6/99	R-0099462	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Balancing charges.
10/99	U-24182	LA	Louisiana Public Service Commission	Entergy Gulf States,Inc.	Cost of debt.

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Date	Case	Jurisdict.	Party	Utility	Subject
10/99	R-00994782	PA	Peoples Industrial Intervenors	Peoples Natural Gas Co.	Restructuring issues.
10/99	R-00994781	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Restructuring, balancing charges, rate flexing, alternate fuel.
01/00	R-00994786	PA	UGI Industrial Intervenors	UGI Utilities, Inc.	Universal service costs, balancing, penalty charges, capacity Assignment.
01/00	8829	MD	Maryland Industrial Gr.	Baltimore Gas & Electric Co.	Revenue requirements, cost allocation, rate design.
02/00	R-00994788	PA	Penn Fuel Transportation	PFG Gas, Inc., and	Tariff charges, balancing provisions.
05/00	U-17735	LA	Louisiana Public Service Comm.	Louisiana Electric Cooperative	Rate restructuring.
07/00	2000-080	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric Co.	Cost allocation.
07/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket E)	LA	Louisiana Public Service Commission	Southwestern Electric Power Co.	Stranded cost analysis.
09/00	R-00005654	PA	Philadelphia Industrial And Commercial Gas Users Group.	Philadelphia Gas Works	Interim relief analysis.
10/00	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring, Business Separation Plan.
11/00	R-00005277 (Rebuttal)	PA	Penn Fuel Transportation Customers	PFG Gas, Inc. and North Penn Gas Co.	Cost allocation issues.
12/00	U-24993	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/01	U-22092	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Stranded cost analysis.
04/01	U-21453 U-20925 (SC), U-22092 (SC) (Subdocket B) (Addressing Contested Issues)	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Restructuring issues.
04/01	R-00006042	PA	Philadelphia Industrial and Commercial Gas Users Group	Philadelphia Gas Works	Revenue requirements, cost allocation and tariff issues.

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Date	Case	Jurisdict.	Party	Utility	Subject
11/01	U-25687	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
03/02	14311-U	GA	Georgia Public Service Commission	Atlanta Gas Light	Capital structure.
08/02	2002-00145	KY	Kentucky Industrial Utility Customers	Columbia Gas of Kentucky	Revenue requirements.
09/02	M-00021612	PA	Philadelphia Industrial And Commercial Gas Users Group	Philadelphia Gas Works	Transportation rates, terms, and conditions.
01/03	2002-00169	KY	Kentucky Industrial Utility Customers	Kentucky Power	Return on equity.
02/03	02S-594E	CO	Cripple Creek & Victor Gold Mining Company	Aquila Networks – WPC	Return on equity.
04/03	U-26527	LA	Louisiana Public Service Commission	Entergy Gulf States, Inc.	Return on equity.
10/03	CV020495AB	GA	The Landings Assn., Inc.	Utilities Inc. of GA	Revenue requirement & overcharge refund
03/04	2003-00433	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric	Return on equity, Cost allocation & rate design
03/04	2003-00434	KY	Kentucky Industrial Utility Customers	Kentucky Utilities	Return on equity
4/04	04S-035E	CO	Cripple Creek & Victor Gold Mining Company, Goodrich Corp., Holcim (U.S.) Inc., and The Trane Co.	Aquila Networks – WPC	Return on equity.
9/04	U-23327, Subdocket B	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Fuel cost review
10/04	U-23327 Subdocket A	LA	Louisiana Public Service Commission	Southwestern Electric Power Company	Return on Equity
06/05	050045-EI	FL	South Florida Hospital and HeallthCare Assoc.	Florida Power & Light Co.	Return on equity
08/05	9036	MD	Maryland Industrial Group	Baltimore Gas & Electric Co.	Revenue requirement, cost allocation, rate design, Tariff issues.
01/06	2005-0034	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co.	Return on equity.

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Date	Case	Jurisdict.	Party	Utility	Subject
03/06	05-1278-E-PC-PW-42T	WV	West Virginia Energy Users Group	Appalachian Power Company	Return on equity.
04/06	U-25116 Commission	LA	Louisiana Public Service	Entergy Louisiana, LLC	Transmission Issues
07/06	U-23327 Commission	LA	Louisiana Public Service	Southwestern Electric Power Company	Return on equity, Service quality
08/06	ER-2006-0314	MO	Missouri Office of the Public Counsel	Kansas City Power & Light Co.	Return on equity, Weighted cost of capital
08/06	06S-234EG	CO	CF&I Steel, L.P. & Climax Molybdenum	Public Service Company of Colorado	Return on equity, Weighted cost of capital
01/07	06-0960-E-42T	WV	West Virginia Energy Users Group	Monongahela Power & Potomac Edison	Return on Equity
01/07	43112	AK	AK Steel, Inc.	Vectren South, Inc.	Cost allocation, rate design
05/07	2006-661	ME	Maine Office of the Public Advocate	Bangor Hydro-Electric	Return on equity, weighted cost of capital.
09/07	07-07-01	CT	Connecticut Industrial Energy Consumers	Connecticut Light & Power	Return on equity, weighted cost of capital
10/07	05-UR-103	WI	Wisconsin Industrial Energy Group, Inc.	Wisconsin Electric Power Co.	Return on equity
11/07	29797	LA	Louisiana Public Service Commission	Cleco Power :LLC & Southwestern Electric Power	Lignite Pricing, support of settlement
01/08	07-551-EL-AIR	OH	Ohio Energy Group	Ohio Edison, Cleveland Electric, Toledo Edison	Return on equity
03/08	07-0585, 07-0585, 07-0587, 07-0588, 07-0589, 07-0590, (consol.)	IL	The Commercial Group	Ameren	Cost allocation, rate design
04/08	07-0566	IL	The Commercial Group	Commonwealth Edison	Cost allocation, rate design
06/08	R-2008-2011621	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Cost and revenue allocation, Tariff issues
07/08	R-2008-2028394	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy	Cost and revenue allocation, Tariff issues

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Date	Case	Jurisdict.	Party	Utility	Subject
07/08	R-2008-2039634	PA	PPL Gas Large Users Group	PPL Gas	Retainage, LUFG Pct.
08/08	6680-UR-116	WI	Wisconsin Industrial Energy Group	Wisconsin P&L	Cost of Equity
08/08	6690-UR-119	WI	Wisconsin Industrial Energy Group	Wisconsin PS	Cost of Equity
09/08	ER-2008-0318	MO	The Commercial Group	AmerenUE	Cost and revenue allocation
10/08	R-2008-2029325	PA	U.S. Steel & Univ. of Pittsburgh Med. Ctr.	Equitable Gas Co.	Cost and revenue allocation
10/08	08-G-0609	NY	Multiple Intervenors	Niagara Mohawk Power	Cost and Revenue allocation
12/08	27800-U	GA	Georgia Public Service Commission	Georgia Power Company	CWIP/AFUDC issues, Review financial projections
03/09	ER08-1056	FERC	Louisiana Public Service Commission	Entergy Services, Inc.	Capital Structure
04/09	E002/GR-08-1065	MN	The Commercial Group	Northern States Power	Cost and revenue allocation and rate design
05/09	08-0532	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation
07/09	080677-EI	FL	South Florida Hospital and Health Care Association	Florida Power & Light	Cost of equity, capital structure, Cost of short-term debt
07/09	U-30975	LA	Louisiana Public Service Commission	Cleco LLC, Southwestern Public Service Co.	Lignite mine purchase
10/09	4220-UR-116	WI	Wisconsin Industrial Energy Group	Northern States Power	Class cost of service, rate design
10/09	M-2009-2123945	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Smart Meter Plan cost allocation
10/09	M-2009-2123944	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Company	Smart Meter Plan cost allocation
10/09	M-2009-2123951	PA	West Penn Power Industrial Intervenors	West Penn Power	Smart Meter Plan cost allocation
11/09	M-2009-2123948	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Smart Meter Plan cost allocation
11/09	M-2009-2123950	PA	Met-Ed Industrial Users Group Penelec Industrial Customer Alliance, Penn Power Users Group	Metropolitan Edison, Pennsylvania Electric Co., Pennsylvania Power Co.	Smart Meter Plan cost allocation

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Date	Case	Jurisdict.	Party	Utility	Subject
03/10	09-1352-E-42T	WV	West Virginia Energy Users Group	Monongahela Power Potomac Edison	Return on equity, rate of return
03/10	E015/GR-09-1151	MN	Large Power Intervenors	Minnesota Power	Return on equity, rate of return
04/10	2009-00459	KY	Kentucky Industrial Utility Consumers	Kentucky Power	Return on equity
04/10	2009-00548 2009-00549	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
05/10	10-0261-E-GI	WV	West Virginia Energy Users Group	Appalachian Power Co./ Wheeling Power Co.	EE/DR Cost Recovery, Allocation, & Rate Design
05/10	R-2009-2149262	PA	Columbia Industrial Intervenors	Columbia Gas of PA	Class cost of service & cost allocation
06/10	2010-00036	KY	Lexington-Fayette Urban County Government	Kentucky American Water Company	Return on equity, rate of return, revenue requirements
06/10	R-2010-2161694	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities	Rate design, cost allocation
07/10	R-2010-2161575	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Return on equity
07/10	R-2010-2161592	PA	Philadelphia Area Industrial Energy Users Group	PECO Energy Co.	Cost and revenue allocation
07/10	9230	MD	Maryland Energy Group	Baltimore Gas and Electric	Electric and gas cost and revenue allocation; return on equity
09/10	10-70	MA	University of Massachusetts-Amherst	Western Massachusetts Electric Co.	Cost allocation and rate design
10/10	R-2010-2179522	PA	Duquesne Industrial Intervenors	Duquesne Light Company	Cost and revenue allocation, rate design
11/10	P-2010-2158084	PA	West Penn Power Industrial Intervenors	West Penn Power Co.	Transmission rate design
11/10	10-0699-E-42T	WV	West Virginia Energy Users Group	Appalachian Power Co. & Wheeling Power Co.	Return on equity, rate of Return
11/10	10-0467	IL	The Commercial Group	Commonwealth Edison	Cost and revenue allocation and rate design
04/11	R-2010-2214415	PA	Central Pen Gas Large Users Group	UGI Central Penn Gas, Inc.	Tariff issues, revenue allocation
07/11	R-2011-2239263	PA	Philadelphia Area Energy Users Group	PECO Energy	Retainage rate

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Date	Case	Jurisdict.	Party	Utility	Subject
08/11	R-2011-2232243	PA	AK Steel	Pennsylvania-American Water Company	Rate Design
08/11	11AL-151G	CO	Climax Molybdenum	PS of Colorado	Cost allocation
09/11	11-G-0280	NY	Multiple Intervenors	Corning Natural Gas Co.	Cost and revenue allocation
10/11	4220-UR-117	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
02/12	11AL-947E	CO	Climax Molybdenum, CF&I Steel	Public Service Company of Colorado	Return on equity, weighted cost of capital
07/12	120015-EI	FL	South Florida Hospitals and Health Care Association	Florida Power and Light Co,	Return on equity, weighted cost of capital
07/12	12-0613-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal for Century Aluminum
07/12	R-2012-2290597	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities Corp.	Cost allocation
09/12	05-UR-106	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Class cost of service, cost and revenue allocation, rate design
09/12	2012-00221 2012-00222	KY	Kentucky Industrial Utility Consumers	Louisville Gas and Electric, Kentucky Utilities	Return on equity.
10/12	9299	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design Cost of equity, weighted cost of capital
10/12	4220-UR-118	WI	Wisconsin Industrial Energy Group	Northern States Power Company	Class cost of service, cost and revenue allocation, rate design
10/12	473-13-0199	TX	Steering Committee of Cities Served by Oncor	Cross Texas Transmission, LLC	Return on equity, capital structure
01/13	R-2012-2321748 et al.	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation
02/13	12AL-1052E	CO	Cripple Creek & Victor Gold Mining, Holcim (US) Inc.	Black Hills/Colorado Electric Utility Company	Cost and revenue allocations
06/13	8009	VT	IBM Corporation	Vermont Gas Systems	Cost and revenue allocation, rate design
07/13	130040-EI	FL	WCF Hospital Utility Alliance	Tampa Electric Co.	Return on equity, rate of return
08/13	9326	MD	Maryland Energy Group	Baltimore Gas and Electric	Cost and revenue allocation, rate design, special rider

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Date	Case	Jurisdict.	Party	Utility	Subject
08/13	P-2012-2325034	PA	PP&L Industrial Customer Alliance	PPL Electric Utilities, Corp.	Distribution System Improvement Charge
09/13	4220-UR-119	WI	Wisconsin Industrial Energy Group	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
11/13	13-1325-E-PC	WV	West Virginia Energy Users Group	American Electric Power/APCo	Special rate proposal, Felman Production
06/14	R-2014-2406274	PA	Columbia Industrial Intervenors	Columbia Gas of Pennsylvania	Cost and revenue allocation, rate design
08/14	05-UR-107	WI	Wisconsin Industrial Energy Group	Wisconsin Electric Power Co.	Cost and revenue allocation, rate design
10/14	ER13-1508 et al.	FERC	Louisiana Public Service Comm.	Entergy Services, Inc.	Return on equity
11/14	14AL-0660E	CO	Climax Molybdenum Co. and CFI Steel, LP	Public Service Co. of Colorado	Return on equity, weighted cost of capital
11/14	R-2014-2428742	PA	AK Steel	West Penn Power Company	Cost and revenue allocation
12/14	42866	TX	West Travis Co. Public Utility Agency	Travis County Municipal Utility District No. 12	Response to complain of monopoly power
3/15	2014-00371 2014-00372	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
3/15	2014-00396	KY	Kentucky Industrial Utility Customers	Kentucky Power Co.	Return on equity, weighted cost of capital
6/15	15-0003-G-42T	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Cost and revenue allocation, Infrastructure Replacement Program
9/15	15-0676-W-42T	WV	West Virginia Energy Users Gp.	West Virginia-American Water Company	Appropriate test year, Historical vs. Future
9/15	15-1256-G-390P	WV	West Virginia Energy Users Gp.	Mountaineer Gas Co.	Rate design for Infrastructure Replacement and Expansion Program
10/15	4220-UR-121	WI	Wisconsin Industrial Energy Gp.	Northern States Power Co.	Class cost of service, cost and revenue allocation, rate design
12/15	15-1600-G-390P	WV	West Virginia Energy Users Gp.	Dominion Hope	Rate design and allocation for Pipeline Replacement & Expansion Prog.
12/15	45188	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring-fence protections for cost of capital

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Date	Case	Jurisdict.	Party	Utility	Subject
2/16	9406	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design, proposed Rider 5
3/16	39971	GA	GA Public Service Comm. Staff	Southern Company / AGL Resources	Credit quality and service quality issues
04/16	2015-00343	KY	Kentucky Office of the Attorney General	Atmos Energy	Cost of equity, cost of short-term debt, capital structure
05/16	16-G-0058 16-G-0059	NY	City of New York	Brooklyn Union Gas Co., KeySpan Gas East Corp.	Cost and revenue allocation, rate design, service quality issues
06/16	16-0073-E-C	WV	Constellium Rolled Products Ravenswood, LLC	Appalachian Power Co.	Complaint, security deposit
07/16	9418	MD	Healthcare Council of the National Capital Area	Potomac Electric Power Co.	Cost of equity, cost of service, Cost and revenue allocation
07/16	160021-EI	FL	South Florida Hospital and Health Care Association	Florida Power and Light Co.	Return on equity, cost of debt, capital structure
07/16	16-057-01	UT	Utah Office of Consumer Svcs.	Dominion Resources, Questar Gas Co.	Credit quality and service quality issues
08/16	8710	VT	Vermont Dept. of Public Service	Vermont Gas Systems	Return on equity, cost of debt, cost of capital
08/16	R-2016-2537359	PA	AK Steel Corp.	West Penn Power Co.	Cost and revenue allocation
09/16	2016-00162	KY	Kentucky Office of the Attorney General	Columbia Gas of Ky.	Return on equity, cost of short-term debt
09/16	16-0550-W-P	WV	West Va. Energy Users Gp.	West Va. American Water Co.	Infrastructure Replacement Program Surcharge
01/17	46238	TX	Steering Committee of Cities Served by Oncor	Oncor Electric Delivery Co.	Ring fencing and other conditions for acquisition, service quality and reliability
02/17	45414	TX	Cities of Midland, McAllen, and Colorado City	Sharyland Utilities, LP and Sharyland Dist. and Transmission Services, LLC	Return on equity
02/17	2016-00370 2016-00371	KY	Kentucky Industrial Utility Customers	Louisville Gas & Electric, Kentucky Utilities	Return on equity, cost of debt, weighted cost of capital
03/17	10580	TX	Atmos Cities Steering Committee	Atmos Pipeline Texas	Return on equity, capital structure, weighted cost of capital
03/17	R-3867-2013	Quebec, Canada	Canadian Federation of Independent Businesses	Gaz Metro	Marginal Cost of Service Study

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Date	Case	Jurisdict.	Party	Utility	Subject
05/17	R-2017-2586783	PA	Philadelphia Industrial and Commercial Gas Users Gp.	Philadelphia Gas Works	Cost and revenue allocation, rate design, Interruptible tariffs
08/17	R-2017-2595853	PA	AK Steel	Pennsylvania American Water Co.	Cost and revenue allocation, rate design
8/17	17-3112-INV	VT	Vt. Dept. of Pubic Service	Green Mountain Power	Return on equity, cost of debt, weighted cost of capital
9/17	4220-UR-123	WI	Wisconsin Industrial Energy Group	Northern States Power	Cost and revenue allocation, rate design
10/17	2017-00179	KY	Kentucky Industrial Utility Customers, Inc.	Kentucky Power Co	Return on equity, cost of short-term debt
12/17	2017-00321	KY	Office of the Attorney General	Duke Energy Kentucky, Inc.	Return on equity
1/18	2017-00349	KY	Office of the Attorney General	Atmos Energy	Return on equity, cost of debt, weighted cost of capital
5/18	Fiscal Years 2019-2021 Rates	PA	Philadelphia Large Users Group	Philadelphia Water Department	Cost and revenue allocation
8/18	18-0974-TF	VT	Vt. Dept. of Public Service	Green Mountain Power	Return on equity, cost of debt, weighted cost of capital
8/18	48401	TX	Cities Served by Texas-New Mexico Power Company	Texas-New Mexico Power Co.	Return on equity, capital structure
8/18	18-05-16	CT	Connecticut Industrial Energy Consumers	Connecticut Natural Gas Co.	Cost and revenue allocation
9/18	9484	MD	Maryland Energy Group	Baltimore Gas & Electric	Cost and revenue allocation, rate design
9/18	2017-370-E	SC	South Carolina Office of Regulatory Staff	South Carolina Electric & Gas, Dominion Resources, SCANA	Return on equity, service quality standards, credit quality conditions
10/18	18-1115-G-390P	WV	West Va. Energy Users Group	Mountaineer Gas Company	Customer protections for Infrastructure Replacement and Expansion Program
12/18	R-2018-3003558, R-2018-3003561	PA	Aqua Large Users Group	Aqua Pennsylvania, Inc.	Cost and revenue allocation
02/19	UD-18-07	CCNO	Crescent City Power Users' Gp.	Entergy New Orleans, LLC	Return on equity, Reliability Incentive Mechanism, other proposed riders
03/19	2018-00358	KY	Office of the Attorney General	Kentucky American Water Co.	Return on equity, Qualified Infrastructure Program rider
05/19	19-E-0065 19-G-0066	NY	City of New York	Consolidated Edison Co.	Cost and revenue allocation, rate design, tariff issues, fast-charging station incentives

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Date	Case	Jurisdict.	Party	Utility	Subject
05/2019	19-0513-TF	VT	Vt. Dept. of Public Service	Vermont Gas Systems	Return on equity, capital structure
06/2019	5-TG-100	WI	Wisconsin Industrial Energy Group	WEPCO, Wisconsin Gas, Wisconsin PS	Transportation and balancing issues
07/2019	49494	TX	Cities Served by AEP Texas	AEP Texas, Inc.	Return on equity, capital structure
08/2019	19-G-0309 19-G-0310	NY	City of New York	Brooklyn Union Gas Co.., KeySpan Gas East Corp.	Cost and revenue allocation, rate design, tariff issues and modifications
08/2019	19-0316-G-42T	WV	West Virginia Energy Users Gp.	Mountaineer Gas Company	Cost and revenue allocation
8/2019	5-UR-109	WI	Wisconsin Industrial Energy Gp	Wisconsin Electric Power Co., Wisconsin Gas, LLC	Cost Allocation, Class cost of service study
8/2019	6690-UR-126	WI	Wisconsin Industrial Energy Gp.	Wisconsin Public Service Corp.	Cost Allocation, Class cost of service study
9/2019	9610	MD	Maryland Energy Group	Baltimore Gas and Electric Co.	Cost and revenue allocation, rate design
12/2019	2019-00271	KY	Office of the Attorney General	Duke Energy Kentucky, Inc.	Return on equity
2/2020	49831	TX	Texas Industrial Energy Consumers	Southwestern Public Service Co.	Return on equity, capital structure, rate of return

J. KENNEDY AND ASSOCIATES, INC.

WE'RE BUILDING THE FUTURE

EVERCORE ISI CONFERENCE

JANUARY 2020

Attractive Investment Thesis

PREMIUM
UTILITY ASSETS

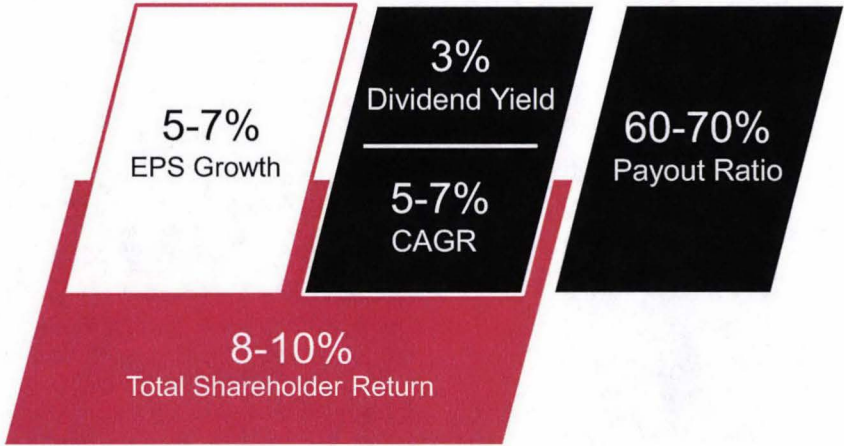**TRANSPARENT**
GROWTH

LEADING
ESG PROFILE

STRONG
FINANCIAL PROFILE

5-7%
EPS Growth

3%
Dividend Yield

5-7%
CAGR

60-70%
Payout Ratio

8-10%
Total Shareholder Return

2

SOUTHWESTERN PUBLIC SERVICE PROXY GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
ALLETE, Inc.	High Price ($)	88.580	88.380	88.600	87.830	86.910	82.160
	Low Price ($)	82.380	83.280	83.590	85.130	78.880	78.250
	Avg. Price ($)	85.480	85.830	86.095	86.480	82.895	80.205
	Dividend ($)	0.588	0.588	0.588	0.588	0.588	0.588
	Mo. Avg. Div.	2.75%	2.74%	2.73%	2.72%	2.83%	2.93%
	6 mos. Avg.	2.78%					
Alliant Energy Corp.	High Price ($)	50.960	53.000	54.590	54.430	53.670	55.400
	Low Price ($)	48.480	48.770	50.360	51.580	50.930	52.240
	Avg. Price ($)	49.720	50.885	52.475	53.005	52.300	53.820
	Dividend ($)	0.355	0.355	0.355	0.355	0.355	0.355
	Mo. Avg. Div.	2.86%	2.79%	2.71%	2.68%	2.72%	2.64%
	6 mos. Avg.	2.73%					
Ameren Corp.	High Price ($)	77.280	77.520	80.850	80.050	77.920	77.040
	Low Price ($)	74.230	73.670	73.310	75.260	73.340	73.510
	Avg. Price ($)	75.755	75.595	77.080	77.655	75.630	75.275
	Dividend ($)	0.475	0.475	0.475	0.475	0.475	0.495
	Mo. Avg. Div.	2.51%	2.51%	2.46%	2.45%	2.51%	2.63%
	6 mos. Avg.	2.51%					
American Electric Power Co.	High Price ($)	91.820	91.500	94.890	96.220	94.980	95.770
	Low Price ($)	87.080	87.040	90.080	91.350	88.170	90.210
	Avg. Price ($)	89.450	89.270	92.485	93.785	91.575	92.990
	Dividend ($)	0.670	0.670	0.670	0.670	0.700	0.700
	Mo. Avg. Div.	3.00%	3.00%	2.90%	2.86%	3.06%	3.01%
	6 mos. Avg.	2.97%					
DTE Energy Co.	High Price ($)	132.090	131.730	134.370	133.390	127.930	130.700
	Low Price ($)	126.180	124.930	127.160	123.410	120.080	123.130
	Avg. Price ($)	129.135	128.330	130.765	128.400	124.005	126.915
	Dividend ($)	0.945	0.945	0.945	0.945	0.945	1.013
	Mo. Avg. Div.	2.93%	2.95%	2.89%	2.94%	3.05%	3.19%
	6 mos. Avg.	2.99%					
Duke Energy Corp.	High Price ($)	90.600	93.350	96.800	97.370	94.550	91.500
	Low Price ($)	86.170	86.310	92.330	93.330	86.360	87.150
	Avg. Price ($)	88.385	89.830	94.565	95.350	90.455	89.325
	Dividend ($)	0.928	0.945	0.945	0.945	0.945	0.945
	Mo. Avg. Div.	4.20%	4.21%	4.00%	3.96%	4.18%	4.23%
	6 mos. Avg.	4.13%					

SOUTHWESTERN PUBLIC SERVICE PROXY GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Exelon Corp.	High Price ($)	49.800	47.470	49.320	48.580	45.920	45.730
	Low Price ($)	44.900	43.690	46.640	43.420	43.810	43.570
	Avg. Price ($)	47.350	45.580	47.980	46.000	44.865	44.650
	Dividend ($)	0.363	0.363	0.363	0.363	0.363	0.363
	Mo. Avg. Div.	3.07%	3.19%	3.03%	3.16%	3.24%	3.25%
	6 mos. Avg.	3.15%					
Evergy, Inc.	High Price ($)	62.120	66.000	67.810	66.540	65.630	65.150
	Low Price ($)	59.640	59.600	63.350	62.040	62.330	61.970
	Avg. Price ($)	60.880	62.800	65.580	64.290	63.980	63.560
	Dividend ($)	0.475	0.475	0.475	0.475	0.505	0.505
	Mo. Avg. Div.	3.12%	3.03%	2.90%	2.96%	3.16%	3.18%
	6 mos. Avg.	3.06%					
Hawaiian Electric Ind.	High Price ($)	45.190	45.140	45.960	45.780	45.400	47.640
	Low Price ($)	42.890	42.720	43.240	43.970	42.950	43.330
	Avg. Price ($)	44.040	43.930	44.600	44.875	44.175	45.485
	Dividend ($)	0.320	0.320	0.320	0.320	0.320	0.320
	Mo. Avg. Div.	2.91%	2.91%	2.87%	2.85%	2.90%	2.81%
	6 mos. Avg.	2.88%					
iDACORP	High Price ($)	105.250	110.570	114.010	113.250	108.770	108.300
	Low Price ($)	98.880	101.240	106.080	106.580	102.040	103.720
	Avg. Price ($)	102.065	105.905	110.045	109.915	105.405	106.010
	Dividend ($)	0.630	0.630	0.630	0.630	0.670	0.670
	Mo. Avg. Div.	2.47%	2.38%	2.29%	2.29%	2.54%	2.53%
	6 mos. Avg.	2.42%					
Northwestern Corp.	High Price ($)	73.810	72.660	76.720	76.180	73.340	73.080
	Low Price ($)	69.500	67.360	71.630	70.950	68.030	69.350
	Avg. Price ($)	71.655	70.010	74.175	73.565	70.685	71.215
	Dividend ($)	0.575	0.575	0.575	0.575	0.575	0.575
	Mo. Avg. Div.	3.21%	3.29%	3.10%	3.13%	3.25%	3.23%
	6 mos. Avg.	3.20%					
OGE Energy Corp.	High Price ($)	43.920	43.530	45.770	45.490	43.770	44.550
	Low Price ($)	42.110	41.390	42.410	42.130	41.790	41.830
	Avg. Price ($)	43.015	42.460	44.090	43.810	42.780	43.190
	Dividend ($)	0.365	0.365	0.365	0.388	0.388	0.388
	Mo. Avg. Div.	3.39%	3.44%	3.31%	3.54%	3.62%	3.59%
	6 mos. Avg.	3.48%					

SOUTHWESTERN PUBLIC SERVICE PROXY GROUP
AVERAGE PRICE, DIVIDEND AND DIVIDEND YIELD

		Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
Otter Tail Corp.	High Price ($)	54.510	54.260	55.100	56.690	57.740	53.160
	Low Price ($)	51.480	48.090	50.340	52.560	48.170	48.590
	Avg. Price ($)	52.995	51.175	52.720	54.625	52.955	50.875
	Dividend ($)	0.350	0.350	0.350	0.350	0.350	0.350
	Mo. Avg. Div.	2.64%	2.74%	2.66%	2.56%	2.64%	2.75%
	6 mos. Avg.	2.67%					
Pinnacle West Capital Corp.	High Price ($)	96.450	95.790	98.580	97.520	93.880	90.680
	Low Price ($)	90.530	90.480	91.180	92.060	84.260	84.880
	Avg. Price ($)	93.490	93.135	94.880	94.790	89.070	87.780
	Dividend ($)	0.738	0.738	0.738	0.738	0.783	0.783
	Mo. Avg. Div.	3.16%	3.17%	3.11%	3.11%	3.51%	3.57%
	6 mos. Avg.	3.27%					
PNM Resources, Inc.	High Price ($)	51.440	51.470	52.950	52.980	52.280	51.980
	Low Price ($)	48.890	47.590	48.710	50.330	47.230	47.850
	Avg. Price ($)	50.165	49.530	50.830	51.655	49.755	49.915
	Dividend ($)	0.290	0.290	0.290	0.290	0.290	0.290
	Mo. Avg. Div.	2.31%	2.34%	2.28%	2.25%	2.33%	2.32%
	6 mos. Avg.	2.31%					
Portland General Electric Co.	High Price ($)	55.950	57.270	58.430	57.520	57.920	57.090
	Low Price ($)	53.380	53.470	54.780	55.410	54.240	54.360
	Avg. Price ($)	54.665	55.370	56.605	56.465	56.080	55.725
	Dividend ($)	0.385	0.385	0.385	0.385	0.385	0.385
	Mo. Avg. Div.	2.82%	2.78%	2.72%	2.73%	2.75%	2.76%
	6 mos. Avg.	2.76%					
PPL Corporation	High Price ($)	31.250	29.990	31.900	33.510	34.400	36.280
	Low Price ($)	29.430	28.550	29.200	30.100	33.030	33.410
	Avg. Price ($)	30.340	29.270	30.550	31.805	33.715	34.845
	Dividend ($)	0.413	0.413	0.413	0.413	0.413	0.413
	Mo. Avg. Div.	5.44%	5.64%	5.41%	5.19%	4.90%	4.74%
	6 mos. Avg.	5.22%					
Monthly Avg. Dividend Yield		3.10%	3.12%	3.02%	3.02%	3.13%	3.14%
6-month Avg. Dividend Yield		3.09%					

Source: Yahoo! Finance

SOUTHWESTERN PUBLIC SERVICE PROXY GROUP
DCF Growth Rate Analysis

Company	(1) Value Line DPS	(2) Value Line EPS	(3) Zacks	(4) Yahoo! Finance
ALLETE, Inc.	5.00%	5.00%	7.20%	7.00%
Alliant Energy Corporation	5.50%	6.50%	5.49%	5.40%
Ameren Corp.	4.50%	6.50%	6.24%	4.60%
American Electric Power Co.	5.50%	4.00%	5.65%	6.05%
DTE Energy Company	7.00%	4.50%	6.00%	4.83%
Duke Energy Corp.	2.50%	6.00%	4.84%	4.45%
Exelon Corp.	5.50%	9.00%	4.19%	0.46%
Evergy, Inc.	NMF	NMF	6.57%	6.50%
Hawaiian Electric	3.00%	2.50%	4.22%	3.40%
IDACORP	7.00%	3.50%	2.50%	2.50%
Northwestern Corporation	4.50%	3.00%	3.53%	3.23%
OGE Energy Corp.	6.50%	6.50%	4.26%	3.50%
Otter Tail Corporation	4.00%	5.00%	7.00%	9.00%
Pinnacle West Capital Corp.	6.00%	5.00%	4.71%	4.41%
PNM Resources, Inc.	7.00%	7.00%	5.73%	6.35%
Portland General Electric Company	6.50%	4.50%	4.91%	4.80%
PPL Corp.	2.00%	1.50%	N/A	0.50%
Average	5.13%	5.00%	5.19%	4.53%
Median	5.50%	5.00%	5.20%	4.60%

Sources: **Value Line Investment Survey, October 25, November 15, and December 13, 2019**
Yahoo! Finance and Zacks growth rates retrieved January 14, 2020
NMF = No meaningful figure, N/A = Not available

SOUTHWESTERN PUBLIC SERVICE PROXY GROUP
DCF RETURN ON EQUITY

	(1) Value Line Dividend Gr.	(2) Value Line Earnings Gr.	(3) Zack's Earning Gr.	(4) Yahoo! Earning Gr.	(5) Average Excl. Yahoo!
Method 1:					
Dividend Yield	3.09%	3.09%	3.09%	3.09%	3.09%
Average Growth Rate	5.13%	5.00%	5.19%	4.53%	5.11%
Expected Div. Yield	3.17%	3.17%	3.17%	3.16%	3.17%
DCF Return on Equity	*8.30%*	*8.17%*	*8.36%*	*7.69%*	*8.28%*
Method 2:					
Dividend Yield	3.09%	3.09%	3.09%	3.09%	3.09%
Median Growth Rate	5.50%	5.00%	5.20%	4.60%	5.23%
Expected Div. Yield	3.17%	3.17%	3.17%	3.16%	3.17%
DCF Return on Equity	*8.67%*	*8.17%*	*8.37%*	*7.76%*	*8.40%*

SOUTHWESTERN PUBLIC SERVICE PROXY GROUP
PROXY GROUP COMPANY DCF ROE

	Dividend Yield	Expected Div. Yield	Average Growth Excl. Yahoo!	DCF ROE
Evergy, Inc.	3.06%	3.16%	6.57%	9.73%
Exelon Corp.	3.15%	3.25%	6.23%	9.48%
OGE Energy Corp.	3.48%	3.58%	5.75%	9.34%
PNM Resources, Inc.	2.31%	2.38%	6.58%	8.96%
DTE Energy Company	2.99%	3.08%	5.83%	8.91%
Duke Energy Corp.	4.13%	4.22%	4.45%	8.67%
Alliant Energy Corporation	2.73%	2.81%	5.83%	8.64%
ALLETE, Inc.	2.78%	2.86%	5.73%	8.60%
Pinnacle West Capital Corp.	3.27%	3.36%	5.24%	8.59%
Ameren Corp.	2.51%	2.58%	5.75%	8.33%
Portland General Electric Company	2.76%	2.83%	5.30%	8.14%
American Electric Power Co.	2.97%	3.05%	5.05%	8.10%
Otter Tail Corporation	2.67%	2.74%	5.33%	8.07%
PPL Corp.	5.22%	5.27%	1.75%	7.02%
Northwestern Corporation	3.20%	3.26%	3.68%	6.94%
IDACORP	2.42%	2.47%	4.33%	6.80%
Hawaiian Electric	2.88%	2.92%	3.24%	6.16%
Median				8.59%

SOUTHWESTERN PUBLIC SERVICE PROXY GROUP
Capital Asset Pricing Model Analysis

30-Year Treasury Bond, Value Line Beta

Line No.		Value Line
1	Market Required Return Estimate	11.11%
2	Risk-free Rate of Return, 30-Year Treasury Bond	
3	Average of Last Six Months	2.27%
4	Risk Premium	
5	(Line 1 minus Line 3)	8.84%
6	Comparison Group Beta	0.60
7	Comparison Group Beta * Risk Premium	
8	(Line 5 * Line 6)	5.33%
9	CAPM Return on Equity	
10	(Line 3 plus Line 8)	7.60%

Duff and Phelps Normalized Risk-free Rate

Line No.		Value Line
1	Market Required Return Estimate	11.11%
2	Duff and Phelps Normalized Risk-free Rate	3.00%
3	Risk Premium	
4	(Line 1 minus Line 2)	8.11%
5	Proxy Group Beta	0.60
6	Proxy Group Beta * Risk Premium	
7	(Line 4 * Line 5)	4.89%
8	CAPM Return on Equity	
9	(Line 2 plus Line 7)	7.89%

SOUTHWESTERN PUBLIC SERVICE PROXY GROUP
Capital Asset Pricing Model Analysis

Supporting Data for CAPM Analyses

30 Year Treasury Bond Data

	Avg. Yield
July-19	2.57%
August-19	2.12%
September-19	2.16%
October-19	2.19%
November-19	2.28%
December-19	2.30%
6 month average	2.27%

Source: www.federalreserve.gov

Value Line Market Return Data:		Comparison Group Betas:	Value Line
Forecasted Data:		ALLETE, Inc.	0.65
		Alliant Energy Corporation	0.60
Value Line Median Growth Rates:		Ameren Corp.	0.55
Earnings	11.00%	American Electric Power Co.	0.55
Book Value	8.00%	DTE Energy Company	0.55
Average	9.50%	Duke Energy Corp.	0.50
Average Dividend Yield	1.06%	Evergy, Inc.	NMF
Estimated Market Return	10.61%	Exelon Corp.	0.65
		Hawaiian Electric	0.55
Value Line Projected 3-5 Yr.		IDACORP	0.55
Median Annual Total Return	11.00%	Northwestern Corporation	0.60
Average Annual Total Return	12.21%	OGE Energy Corp.	0.75
Average	11.61%	Otter Tail Corporation	0.70
		Pinnacle West Capital Corp.	0.55
		PNM Resources, Inc.	0.60
Average of Projected Mkt.		Portland General Electric Company	0.60
Returns	11.11%	PPL Corp.	0.70
Source: Value Line Investment Survey		Average	0.60
for Windows, Jan. 10, 2020		Source: Value Line Investment Survey	
		NMF = No meaningful figure	

SOUTHWESTERN PUBLIC SERVICE PROXY GROUP
Capital Asset Pricing Model Analysis
Historic Market Premium

	Arithmetic Mean	Adjusted Arithmetic Mean
CAPM with Current 30-Year Treasury Yield		
Long-Term Annual Return on Stocks	11.90%	
Long-Term Annual Income Return on Long-Term Treas. Bonds	5.00%	
Historical Market Risk Premium	6.90%	6.14%
Proxy Group Beta, Value Line	0.60	0.60
Beta * Market Premium	4.16%	3.70%
Current 30-Year Treasury Bond Yield	2.27%	2.27%
CAPM Cost of Equity, Value Line Beta	**6.43%**	**5.97%**
CAPM with D&P Normalized Risk-Free Rate		
Historical Market Risk Premium	6.90%	6.14%
Proxy Group Beta, Value Line	0.60	0.60
Beta * Market Premium	4.16%	3.70%
D&P Normalized Risk-Free Rate	3.00%	3.00%
CAPM Cost of Equity, Normalized Risk-Free Rate	**7.16%**	**6.70%**

Source: Duff and Phelps Cost of Capital Navigator
2019 Cost of Capital: Annual U.S. Guidance and Examples, Chapter 2, Exhibit 2.3, Chapter 3, pages 45-47

QUESTION NO. TIEC 2-5:

Referring to the Direct Testimony of Richard R. Schrubbe:

Please provide the expected return on assets used in calculating SPS's requested qualified pension costs, broken down by the expected return for each asset class (e.g., equities, fixed income).

RESPONSE:

Please refer to Exhibit SPS-TIEC 2-5 for a breakdown of the expected return on assets used in calculating SPS's requested qualified pension costs.

Preparer: Levi Glines
Sponsor: Richard R. Schrubbe

SOAH Docket No. 473-19-6677
PUC Docket No. 49831
Southwestern Public Service Company's Response to
Texas Industrial Energy Consumer' Second Request for Information
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Xcel Energy Inc.
2019 Expected Return on Assets (EROA) Analysis[1]

Asset Class	Willis Towers Watson October 2018 Return Estimator 10-Yr Arithmetic Returns[2]	10-Yr Geometric Returns[3]	Target Asset Allocations (Provided by Xcel Energy) XEPP	PSCO	SPS	NCE	MPT	VEBA (Includes EIS Allocation)
Cash and Derivatives	3.00%	2 99%	2.00%	2.00%	2.00%	2.00%	2.00%	4.10%
US Equity - All	8.64%	7.37%	0.00%	0.00%	0.00%	0.00%	0.00%	9.00%
US Equity - Large Cap	8.52%	7.35%	15.50%	14.50%	14.50%	15.50%	15.09%	2.20%
US Equity - Small Cap	8.76%	6 95%	3.00%	3.00%	3.00%	3.00%	3.00%	1.10%
Non-US Equity - EAFE	8.84%	7 23%	9.00%	8.50%	8.50%	9.00%	8.79%	5.20%
Non-US Equity - EM	11.58%	7 94%	9.00%	8.50%	8.50%	9.00%	8.79%	0.00%
Fixed Income - Barclays Aggregate	3.56%	3.40%	0.00%	0.00%	0.00%	0.00%	0.00%	52.80%
Fixed Income - High Yield	5.18%	4 57%	18.00%	16.00%	16.00%	18.00%	17.18%	11.60%
Fixed Income - EM Debt[4]	5.18%	4 57%	0.00%	0.00%	0.00%	0.00%	0.00%	5.50%
Alternatives - Hedge Fund of Funds	6.19%	5 70%	3.50%	3.50%	3.50%	3.50%	3.50%	8.50%
Alternatives - Private Equity	13.35%	8 66%	5.00%	4.50%	4.50%	5.00%	4.79%	0.00%
Alternatives - Real Estate	6.76%	6 08%	7.00%	6.50%	6.50%	7.00%	6.79%	0.00%
LDFI	3.57%	2.74%	18.00%	22.00%	22.00%	18.00%	19.65%	0.00%
Treasury Strips	2.86%	0 11%	10.00%	11.00%	11.00%	10.00%	10.41%	0.00%
Total			100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

			XEPP	PSCO	SPS	NCE	MPT	VEBA
Expected Geometric Portfolio Returns (before administrative expenses)								
Willis Towers Watson - 10-year - passive			6.13%	5.93%	5.93%	6.13%	6.05%	4.76%
Willis Towers Watson - 20-year - passive			6.76%	6.58%	6.58%	6.76%	6.68%	5.21%
Goldman Sachs - 10-year - active (net of investment management fees)			6.50%	6.40%	6.40%	6.50%	6 46%	4.50%
Expected 2019 Administrative Expenses[5]			-0.38%	-0.58%	-0.26%	-0.63%	-0.44%	-0.08%
2019 EROA Assumption Selected by Xcel Energy[6]			**7.10%**	**6.50%**	**6.75%**	**6.90%**	**6.87%**	**5.30%**
2018 EROA Assumption			7.10%	6.50%	6.75%	6.90%	6.87%	5.80%

[1] All returns are net of investment expenses

[2] Reflects average of all single-year returns within the first 10 years of the simulation Returns assume passive management and do not include alpha

[3] Reflects average of all annualized compound returns for the first 10 years of the simulation Returns assume passive management and do not include alpha

[4] Emerging market debt modeled as Fixed Income - High Yield

[5] ASC 715 expected return assumption is net of administrative expenses as these are paid from plan assets. Expected administrative expenses equal annualized amounts paid through
September 2018 plus expected changes in PBGC premiums VEBA assumption is a high-level estimate.

[6] See Xcel Energy assumption memo for more information on the assumption selection process and additional information considered

WillisTowersWatson