COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF KENTUCKY	)	
UTILITIES COMPANY FOR AN	)	
ADJUSTMENT OF ITS ELECTRIC RATES,	)	CASE NO. 2025-00113
AND APPROVAL OF CERTAIN	)	
REGULATORY AND ACCOUNTING	)	
TREATMENTS	)	

In the Matter of:

ELECTRONIC APPLICATION OF LOUISVILLE	)	
GAS AND ELECTRIC COMPANY FOR AN	)	
ADJUSTMENT OF ITS ELECTRIC AND GAS	)	CASE NO. 2025-00114
RATES, AND APPROVAL OF CERTAIN	)	
REGULATORY AND ACCOUNTING	)	
TREATMENTS	)	

DIRECT TESTIMONY

AND EXHIBITS OF

RICHARD A. BAUDINO

ON BEHALF OF THE
OFFICE OF THE ATTORNEY GENERAL OF THE COMMONWEALTH OF KENTUCKY
AND KENTUCKY INDUSTRIAL UTILITY CUSTOMERS

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

AUGUST 2025

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DIRECT TESTIMONY OF RICHARD A. BAUDINO

1   **I. INTRODUCTION AND QUALIFICATIONS**

2   **Q.   State your name, occupation, and business address.**

3   A.   My name is Richard A. Baudino.   My business address is J. Kennedy and

4   Associates, Inc. (Kennedy and Associates), 570 Colonial Park Drive, Suite 305,

5   Roswell, Georgia 30075.

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

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

8   **Q.   Describe your educational and professional background.**

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

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

1   of Arts Degree with majors in Economics and English from New Mexico State in

2   1979.

3   I began my professional career with the New Mexico Public Service

4   Commission Staff in October 1982 and was employed there as a Utility Economist.

5   During my employment with the Staff, my responsibilities included the analysis of

6   a broad range of issues in the ratemaking field. Areas in which I testified included

7   cost of service, rate of return, rate design, revenue requirements, analysis of

8   sale/leasebacks of generating plants, utility finance issues, and generating plant

9   phase-ins.

10   In October 1989, I joined the utility consulting firm of Kennedy and

11   Associates as a Senior Consultant where my duties and responsibilities covered

12   substantially the same areas as those during my tenure with the New Mexico Public

13   Service Commission Staff. I became Manager in July 1992 and was named

14   Director of Consulting in January 1995. Currently, I am a consultant with Kennedy

15   and Associates.

16   Exhibit RAB-1 summarizes my expert testimony experience.

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

18 A.   I am submitting Direct Testimony on behalf of the Office of the Attorney General

19   of the Commonwealth of Kentucky (OAG) and the Kentucky Industrial Utility

20   Customers (KIUC).

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

22 A.   The purpose of my Direct Testimony is to address the investor required return on

23   equity (ROE) for the regulated electric operations of Louisville Gas and Electric

1   Company (LGE) and Kentucky Utilities Company (KU) and the regulated gas

2   distribution operations of LGE[1]. I will also address the Companies' requested

3   capital structure and costs of long-term debt.

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

5   A.   I recommend that the Kentucky Public Service Commission (KPSC or

6   Commission) authorize a ROE for LGE/KU's electric and gas operations of 9.60%.

7   My recommended ROE for electric operations is based on: (1) the results of a

8   discounted cash flow (DCF) analysis applied to a proxy group of 12 regulated

9   electric utilities and (2) Capital Asset Pricing Model (CAPM) analyses using

10   historical and forecasted market risk premiums as well as publicly available

11   estimates of market risk premiums from other sources. My recommended ROE for

12   LGE's gas operations is based on DCF and CAPM analyses applied to a proxy

13   group of 7 gas distribution utilities that was used by Companies' witness Mr. Dylan

14   D'Ascendis. My recommendation fully reflects current economic and financial

15   market conditions at the time I prepared my testimony, which I will describe in

16   more detail in Section II. A 9.60% ROE provides a fair return on low-risk regulated

17   electric and gas utility investments for LGE and KU. Section III presents my ROE

18   analyses for both electric and gas operations.

19   Regarding the Companies' ratemaking capital structure, I recommend that

20   the Commission accept the Companies' filed capital structures. I also recommend

21   that the Companies' filed costs for short-term debt be accepted by the Commission.

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[1] I will refer to LGE and KU together as "Companies".

1   I also recommend the Companies' cost of long-term debt be adjusted downward to

2   reflect new issues of long-term debt that occurred in August of this year.

3   In Section IV, I will respond to the testimony and ROE recommendation of

4   Companies' witness Mr. D'Ascendis. I will demonstrate that his recommended

5   ROE of 10.95% for LGE/KU's electric and gas operations grossly overstates the

6   investor required return for regulated utilities. Mr. D'Ascendis' recommendation

7   is significantly biased upward and I will explain this in detail in Section IV of my

8   Direct Testimony. Mr. D'Ascendis' recommended 10.95% ROE would

9   significantly inflate the Companies' revenue requirement, thereby harming

10   Kentucky's electric and gas ratepayers. The Commission should reject his ROE

11   recommendation.

12   **II. ROE GUIDELINES AND REVIEW OF ECONOMIC CONDITIONS**

13   **Q.**   **What are the main guidelines to which you adhere in estimating the cost of**

14   **equity?**

15   A.   Generally speaking, the estimated cost of equity should be comparable to the

16   returns of other firms with similar risk structures and should be sufficient for the

17   firm to attract capital. These are the basic standards set out by the United States

18   Supreme Court in *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591

19   (1944), and *Bluefield W.W. & Improv. Co. v. Public Service Comm'n*, 262 U.S. 679

20   (1922).

21   From an economist's perspective, the notion of "opportunity cost" plays a

22   vital role in estimating the ROE for LGE/KU. One measures the opportunity cost

1   of an investment equal to what one would have obtained in the next best alternative.

2   For example, suppose that an investor decides to purchase the stock of a publicly

3   traded regulated electric utility. That investor will make the decision based on the

4   expectation of dividend payments and perhaps some appreciation in the stock's

5   value over time; however, that investor's opportunity cost is measured by what she

6   or he could have invested in as the next best alternative. That alternative could

7   have been another utility stock, a utility bond, a mutual fund, a money market fund,

8   or any number of alternative investment vehicles.

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

10   comparative levels of risk. Our hypothetical investor would not invest in a

11   regulated electric or gas utility stock if it offered a return lower than other

12   investments of similar risk. The opportunity cost simply would not justify such an

13   investment. Thus, the task for the rate of return analyst is to estimate a return on

14   equity that is equivalent to that being offered by other risk-comparable firms.

15 **Q.   Please provide the Commission an overview of important economic factors**

16   **that affect your estimate of the allowed ROE for LGE/KU.**

17 A.   Certain key factors in the economy are important influences on the current investor

18   required ROE. These factors include the current level of interest rates, current

19   levels of inflation, the effects of unemployment and economic growth, and stock

20   market volatility.

21 **Q.   Does the level of interest rates affect the allowed ROE for regulated utilities?**

22 A.   Generally, yes. The common stock of regulated utilities tends to be interest rate

23   sensitive. This means that the cost of equity for regulated utilities tends to rise and

1   fall with changes in interest rates. For example, as interest rates rise, the cost of

2   equity will also rise, and vice versa when interest rates fall. This relationship is due

3   in large part to the capital-intensive nature of regulated industries, including electric

4   and gas utility companies, that rely heavily on both debt and equity to finance their

5   regulated investments.

6   **Q.   Before you continue, please provide a brief explanation of how the Federal**

7   **Reserve Board (Fed) uses interest rates to affect conditions in the financial**

8   **markets.**

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

10   Fed explained its monetary policy as follows:

11   Monetary policy in the United States comprises the Federal
12   Reserve's actions and communications to promote maximum
13   employment, stable prices, and moderate long-term interest rates--
14   the economic goals the Congress has instructed the Federal Reserve
15   to pursue.[2]

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

17   federal funds rate. The federal funds rate is the interest rate set by the Fed that

18   banks and credit unions charge each other for overnight loans of reserve balances.

19   Traditionally, the federal funds rate directly influences short-term interest rates,

20   such as the Treasury bill rate and interest rates on savings and checking accounts.

21   The federal funds rate has a more indirect effect on long-term interest rates, such

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[2] Monetary Policy, FED. RESERVE BD., (Feb. 19, 2025),
https://www.federalreserve.gov/monetarypolicy.htm.

1   as the 30-Year Treasury Bond and private and corporate long-term debt. Long-

2   term interest rates are set more by market forces that influence the supply and

3   demand of loanable funds.

4   **Q.**   **Describe the trend in interest rates over the last 10 years.**

5   A.   Until recently, the overall trend in interest rates in the U.S. and the world economy

6   had been lower and this continued into 2020-2021 as governments and central

7   banks, including the Fed, instituted programs in response to the economic shocks

8   brought about by the COVID-19 pandemic. The trend of lower interest rates was

9   precipitated by the 2007 financial crisis and severe recession that followed in

10   December 2007. In response to this economic crisis, the Fed undertook a series of

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

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

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

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

15   improved conditions in financial markets."[3]

16   In 2022, however, the Fed began an aggressive policy of raising short-term

17   interest rates in response to concerns about persistently high inflation in the

18   economy, which began to be a significant problem in 2021. After the Fed reduced

19   the federal funds rate to nearly 0% through 2021, it was increased several times in

20   2022 and 2023, rising to a target range of 5.25% - 5.50%.

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[3] *Credit and Liquidity Programs and the Balance Sheet,* Monetary Policy, FED. RESERVE BD., (May 10, 2021), **https://www.federalreserve.gov/monetarypolicy/bst_crisisresponse.htm.**

1   As inflation began to ease in 2023 and 2024, the Fed cut the federal funds

2   rate by 50 basis points, or 0.50% on September 18, 2024, to a range of 4.75% to

3   5.00%, noting progress on reducing inflation toward its goal of 2.0%.[4] The Fed

4   further lowered the federal funds rate on November 7, 2024 and again on December

5   18, 2024 to its current level of 4.25% - 4.50%. In its most recent press release

6   issued on July 30, 2025, the Fed stated, in part, the following:

7   Although swings in net exports continue to affect the data, recent
8   indicators suggest that growth of economic activity moderated in the
9   first half of the year. The unemployment rate remains low, and labor
10   market conditions remain solid. Inflation remains somewhat
11   elevated.
12   The Committee seeks to achieve maximum employment and
13   inflation at the rate of 2 percent over the longer run. Uncertainty
14   about the economic outlook remains elevated. The Committee is
15   attentive to the risks to both sides of its dual mandate.
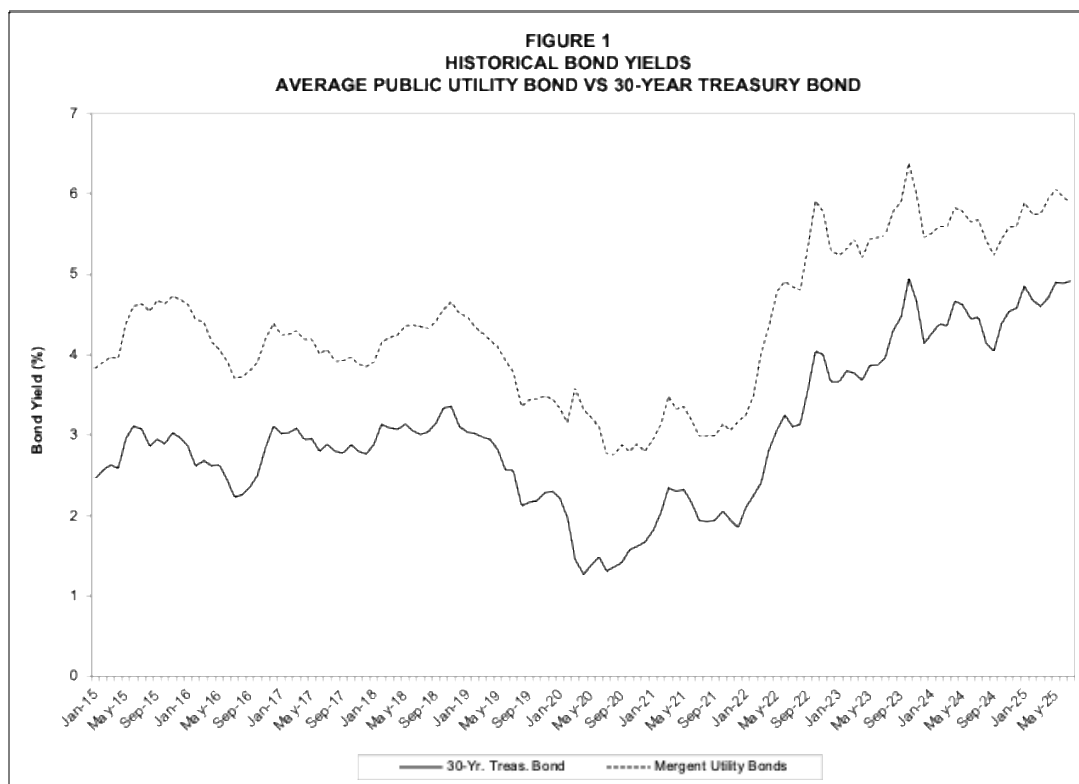16   In support of its goals, the Committee decided to maintain
17   the target range for the federal funds rate at 4-1/4 to 4-1/2 percent.
18   In considering the extent and timing of additional adjustments to the
19   target range for the federal funds rate, the Committee will carefully
20   assess incoming data, the evolving outlook, and the balance of risks.
21   The Committee will continue reducing its holdings of Treasury
22   securities and agency debt and agency mortgage-backed securities.
23   The Committee is strongly committed to supporting maximum
24   employment and returning inflation to its 2 percent objective.[5]

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

26   and the Mergent average utility bond yield. The graph covers the period from

27   January 2015 through July 2025.

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[4] https://www.federalreserve.gov/monetarypolicy/files/monetary20240918a1.pdf.
[5] *Federal Reserve issues FOMC statement,* Press Release, FED. RESERVE BD., (July 30, 2025),
https://www.federalreserve.gov/newsevents/pressreleases/monetary20250730a.htm.

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

2   Figure 1 graphically shows the steady increase in long-term bond yields

3   since 2022. The 30-year Treasury Bond yield rose from 2.10% in January 2022 to

4   4.92% in July 2025. The Mergent average public utility bond yield also increased

5   during that same period from 3.25% to 5.90%.

6 **Q.** **What has been the recent experience with inflation?**

7 A. Figure 2 presents monthly annualized inflation data from January 2021 through

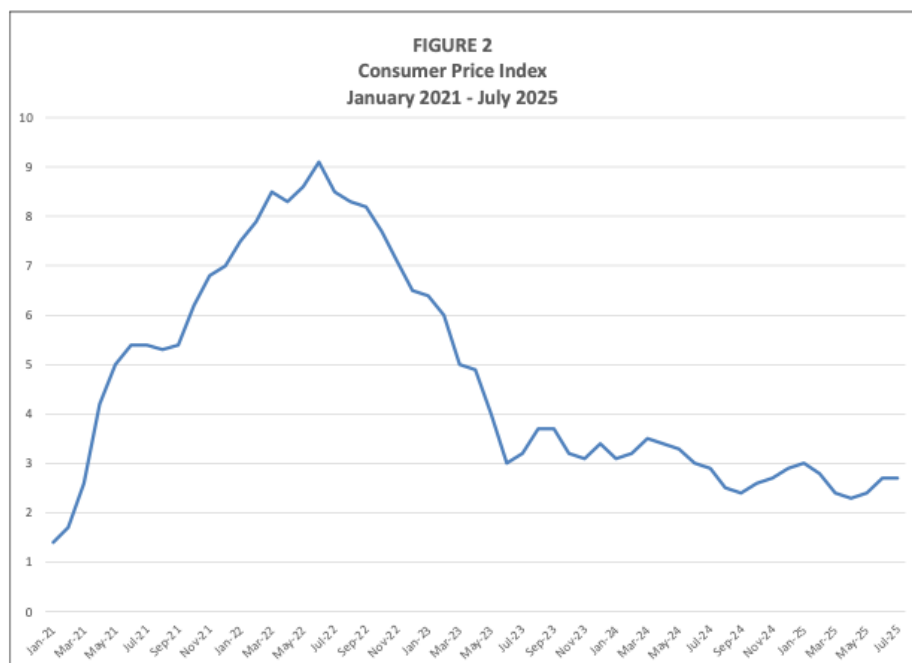8   July 2025, the most recent monthly data that was available to me.

FIGURE 2
Consumer Price Index
January 2021 - July 2025

1

2   Figure 2 shows that inflation greatly accelerated in 2021, peaked in June

3   2022 at 9.1%, then declined substantially through the rest of the study period. The

4   inflation rate for July 2025 was 2.7%.

5   **Q.   What are the expectations for inflation, interest rates, and other economic**

6   **indicators going forward?**

7   A.   The Federal Reserve Bank of Philadelphia publishes the *Livingston Survey*

8   ("Survey"), in which a panel of 21 forecasters provide projections for a number of

9   economic variables, including growth in Gross Domestic Product (GDP), inflation,

10   and unemployment, as well as short-term and long-term interest rates. The most

11   recent edition of the Survey dated June 24, 2025, provided the following forecasts:

12   • Consumer Price Index (CPI) inflation is expected to average 3.0% for 2025

13   and 2026 and 2.26% over the next 10 years.

1   • 10-Year Treasury Bond yield is forecasted to be 4.1% for December 2025

2   and 2026.

3   • An unemployment rate of 4.3% is forecasted for 2025 and 4.6% for 2026.

4   • Real growth in GDP of 1.3% is forecasted in 2025, 1.6% for 2026 and 2.0%

5   over the next ten years.[6]

6   The Fed's economic projections as of June 18, 2025, showed the following

7   median forecasts:

8   • Personal Consumption Expenditures (PCE) inflation rate of 3.0% for 2025,

9   2.4% for 2026, and longer run inflation at 2.0%;

10   • Unemployment rate of 4.5% for 2025 and 2026, with a longer run

11   unemployment rate of 4.2%; and

12   • Growth in real GDP of 1.4% for 2025, 1.6% for 2026, with a longer run

13   growth rate of 1.8%.[7]

14   **Q.   Please explain the market volatility index and its performance since the**

15   **beginning of 2024.**
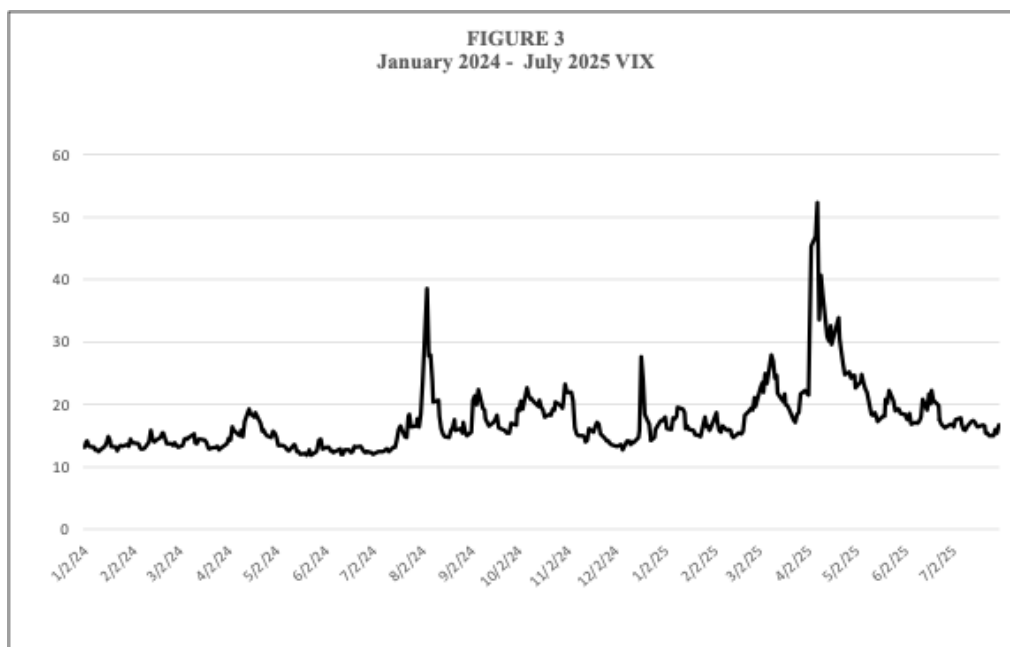
16   A.   A widely used measure of market volatility is the Chicago Board Options Exchange

17   (CBOE) Volatility Index (VIX), also called the "fear index" or "fear gauge."

18   Basically, the VIX measures the market's expectations for volatility over the next

19   30-day period. The higher the VIX, the greater the expectation of volatility and

---

[6] *Livingston Survey*, June 24, 2025;
https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/livingston-2025-06
[7] Summary of Economic Projections, FED. RESERVE BD., (June 18, 2025),
https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20250618.pdf

1   market risk. Figure 3 presents the VIX from January 1, 2024 through July 31,

2   2025.[8]

FIGURE 3
January 2024 - July 2025 VIX

3

4   Figure 3 shows a sharp increase in the VIX on August 5, 2024. Then in

5   March 2025, the VIX turned higher with very high expected volatility in April after

6   President Trump announced a wide-ranging tariff plan. The VIX reached a high of

7   52.33 on April 8 but fell to 24.7 on April 30, 2025. The VIX has generally trended

8   lower since then, with a value of 16.72 on July 31, 2025. The average VIX value

9   so far for 2025 is 20.34 compared to the 2024 average of 15.55. This indicates

10   increased expected market volatility so far in 2025.

11 **Q.**   **Did you review recent commission-allowed ROEs as part of your review of**

12   **current financial and economic conditions?**

---

[8] Historical Data for CBOE VIX Index and Other Volatility Indices, CBOE,
https://www.cboe.com/tradable_products/vix/vix_historical_data/.

1   A.   Yes. Regulatory Research Associates (RRA) is a group within S&P Global

2   Commodity Insights that compiles and publishes commission-allowed ROEs from

3   across the country. For 2024 and the first six months of 2025 RRA reported the

4   following average allowed ROEs:[9]

5   • For 2024, the average allowed ROE for vertically integrated electric utilities

6   was 9.84%.

7   • For the first six months of 2025, the average allowed ROE for vertically

8   integrated utilities was 9.74%.

9   • The average allowed ROE for gas distribution utilities in fully litigated rate

10   cases in 2024 was 9.78%.

11   • The average allowed ROE for gas distribution utilities in fully litigated rate

12   cases for the first six months of 2025 was 9.83%.

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

14   **Q.**   **Please describe the methods you employed in estimating a fair rate of return**

15   **for the regulated electric operations of LGE and KU and the regulated gas**

16   **operations of LGE.**

17   A.   I employed two methods of estimating the ROE for the Companies: the Discounted

18   Cash Flow (DCF) model and the Capital Asset Pricing Model (CAPM). For electric

19   operations, I applied these ROE estimation techniques to a group of twelve electric

20   utility companies that was developed by Mr. D'Ascendis and then modified as I

---

[9] *Major energy rate case decisions in the US, January – June 2025,* Regulatory Research Associates, a group within S&P Global Commodity Insights.

1   will explain later. For gas operations, I employed the same proxy group of seven

2   gas utilities used by Mr. D'Ascendis. My DCF analyses are based on the standard

3   constant growth form of the model that employs four different growth rate forecasts

4   from the Value Line Investment Survey, S&P Capital IQ, and Zacks. I also

5   employed Capital Asset Pricing Model (CAPM) analyses using both historical and

6   forward-looking data as well as sources that provide additional recommendations

7   for the market risk premium portion of the CAPM. I estimated the CAPM ROE

8   separately for electric and gas operations. The results from the DCF and CAPM

9   support the reasonableness of my ROE recommendation to the Commission.

10   **DCF Model**

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

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

13   that the value of a financial asset is determined by its ability to generate future net

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

15   the form of dividends and appreciation in stock price. The value of the stock to

16   investors is the discounted present value of future cash flows. The general equation

17   is:

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

19   *Where: V = asset value*
20   *R = yearly cash flows*
21   *r = discount rate*

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

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

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

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

3   date (as is the case with a bond). Another important assumption is that financial

4   markets are reasonably efficient; that is, they correctly evaluate the cash flows

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

6   relative to other alternatives. Finally, the model I typically employ also assumes a

7   constant growth rate in dividends. The fundamental relationship employed in the

8   DCF method is described by the formula:

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

10   *Where:* D_1 = *the next period dividend*
11   P_0 = *current stock price*
12   g = *expected growth rate*
13   k = *investor-required return*

14   Using this formula, it is apparent that "k" must reflect the investors' expected

15   return. Use of the DCF method to determine an investor-required return is

16   complicated by the need to express investors' expectations relative to dividends,

17   earnings, and book value over an infinite time horizon. Financial theory suggests

18   that stockholders purchase common stock on the assumption that there will be some

19   change in the rate of dividend payments over time. We assume that the rate of

20   growth in dividends is constant over the assumed time horizon, but the model could

21   easily handle varying growth rates if we knew what they were. Finally, the relevant

22   time frame is prospective rather than retrospective.

23 **Q.   Please describe your approach for selecting proxy groups of companies.**

1 A. With respect to LGE/KU's electric operations, I began with the proxy group of

2   vertically integrated electric utilities that Companies' witness Mr. D'Ascendis used

3   for his analysis. Mr. D'Ascendis described the criteria he used to select companies

4   for his Electric Utility Proxy Group on pages 13 through 14 of his Direct

5   Testimony. These screening criteria resulted in a 15-member proxy group, shown

6   on page 15, that is generally reasonable to use for estimating the ROE for LGE/KU.

7   In this case I chose to exclude Edison International from the Electric Utility

8   Proxy Group. Edison International's stock price was adversely affected by the risk

9   associated with the wildfires that occurred in its service territory in January. As of

10   January 2, 2025, Edison's stock price was $80.01 per share. The price dropped

11   precipitously in January to $54 on January 31. At this point, the market is still

12   substantially discounting Edison's stock price because of the uncertainty of the

13   company's role in the wildfires. This significant event and its ongoing impact on

14   Edison's stock price provide a sound basis for excluding it from the proxy group at

15   this time. I also excluded TXNM Energy, Inc. from the Electric Utility Proxy

16   Group as this company announced on May 19, 2025 that it agreed to be acquired

17   by Blackstone Infrastructure. Finally, I excluded NorthWestern Energy Group

18   from the Electric Utility Proxy Group due to a recently announced merger with

19   Black Hills Corporation.

20   The 12-member Electric Utility Proxy Group for purposes of my ROE

21   analyses is:

22
23   1.   Alliant Energy Corporation
24   2.   Ameren Corporation

1   3.   American Electric Power Company, Inc.
2   4.   Duke Energy Corp.
3   5.   Entergy Corporation
4   6.   Evergy, Inc.
5   7.   IDACORP, Inc.
6   8.   OGE Energy Corporation
7   9.   Pinnacle West Capital Corp.
8   10.   Portland General Electric Company
9   11.   Southern Company
10   12.   Xcel Energy Inc.
11

12   The 7-member Gas Utility Proxy Group is as follows:

13   1.   Atmos Energy Corp.
14   2.   New Jersey Resources Corp.
15   3.   NiSource Inc.
16   4.   Northwest Natural Holding Co.
17   5.   ONE Gas, Inc.
18   6.   Southwest Gas Holdings, Inc.
19   7.   Spire Inc.

20 **Q.** **What was your first step in determining the DCF return on equity for the**

21   **proxy groups?**

22 A. I first determined the current dividend yield, D_0/P_0, from the basic equation. My

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

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

25   February through July, 2025. I averaged daily stock prices from S&P Capital IQ

26   for 1-month, 2-month, 3-month, and 6-month periods. The current dividend for

27   each company was taken from each company's Value Line report.

28   The resulting average 6-month dividend yield for the Electric Utility Proxy

29   Group is 3.52%. These calculations are presented in Exhibit RAB-2.

30   The resulting average 6-month dividend yield for the Gas Utility Proxy

31   Group is 3.55%. These calculations are presented in Exhibit RAB-3.

1 Q. **Having established the average dividend yield for your proxy groups, how did**

2   **you determine the investors' expected growth rate?**

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

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

5   and the payout ratio, neither of which is known precisely for the future. We refer

6   to a perpetual growth rate since the DCF model has no arbitrary cut-off point. We

7   must estimate the investors' expected growth rate because there is no way to know

8   with absolute certainty what investors expect the growth rate to be in the short term,

9   much less in perpetuity.

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

11   forecasts for growth: Value Line, S&P Capital IQ, and Zacks.

12 Q. **Please briefly describe Value Line, S&P Capital IQ, and Zacks.**

13 A. Value Line is a widely used and respected source of investor information that

14   covers approximately 1,700 companies in its Standard Edition and several thousand

15   in its Plus Edition. It is updated quarterly and represents a comprehensive source

16   of information for investors. It provides both historical and forecasted information

17   on a number of important data elements. Value Line neither participates in

18   financial markets as a broker nor works for the utility industry in any capacity of

19   which I am aware.

20   Zacks gathers opinions from a variety of analysts on earnings growth

21   forecasts for numerous firms including regulated electric utilities. The estimates of

22   the analysts responding are combined to produce consensus average estimates of

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

1   Like Zacks, S&P Capital IQ also compiles and reports consensus analysts'

2   forecasts of earnings growth.

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

4 A.   ROE analysis is a forward-looking process. Five-year or ten-year historical growth

5   rates may not accurately represent investor expectations for future dividend and

6   earnings growth. Analysts' forecasts for earnings and dividend growth provide

7   better proxies for the expected growth component in the DCF model than historical

8   growth rates. Analysts' forecasts are also widely available to investors and one can

9   reasonably assume that they influence investor expectations.

10   In this case, however, I am concerned that the consensus analysts' forecasts

11   from S&P Capital IQ and Zacks will overstate the long-run constant growth rate

12   for the two proxy groups, especially the Gas Utility Proxy Group. I will discuss

13   this in greater detail in the Conclusions and Recommendations portion of this

14   section of my testimony.

15 **Q.** **Please explain how you used analysts' dividend and earnings growth forecasts**

16   **in your constant growth DCF analysis.**

17 A.   Columns (1) through (4) of Exhibits RAB-4 and RAB-5 show the forecasted

18   dividend and earnings growth rates from Value Line and the earnings growth

19   forecasts from S&P Capital IQ and Zacks for the companies in the two proxy

20   groups. It is important to include dividend growth forecasts in the DCF model since

21   the model calls for forecasted cash flows and Value Line is the only source of which

22   I am aware that forecasts dividend growth.

1   **Q.**   **Using this information, how did you determine the DCF ROE for the proxy**

2   **groups?**

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

4   moved forward in time to account for dividend increases over the next twelve

5   months. I estimated the expected dividend yield by multiplying the current

6   dividend yield by one plus one-half the expected growth rate.

7   Exhibits RAB-4 and RAB-5 present my standard method of calculating

8   dividend yields, growth rates, and ROE for the proxy groups. The DCF ROE

9   section of each of these exhibits shows the application of each of four growth rates

10   to the current dividend yield to calculate the expected dividend yield. I then added

11   the expected growth rates to the expected dividend yield. My DCF ROE was

12   calculated using two different methods. Method 1 uses the average growth rates for

13   the proxy group and Method 2 utilizes the median growth rates.

14 **Q.**   **What are the results of your constant growth DCF model for the proxy**

15   **groups?**

16 A.   For the Electric Utility Proxy Group (average growth rates), the Method 1 results

17   range from 8.56% to 10.51%, with the average of these results being 9.70%. For

18   Method 2 (median growth rates), the ROE results range from 9.11% to 10.35%,

19   with the average of these results being 9.94%.[10]

20   For the Gas Utility Proxy Group (average growth rates), the Method 1

21   results range from 7.69% to 11.52%, with the average of these results being

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[10] Refer to Exhibit RAB-4 for the detailed calculations.

1   10.17%. The midpoint of the range is 9.61%. For Method 2 (median growth rates),

2   the ROE results range from 8.13% to 11.59%, with the average of these results

3   being 10.21%.[11] The midpoint of the range is 9.86%.

4   **Capital Asset Pricing Model**

5   **Q.**   **Briefly summarize the CAPM approach.**

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

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

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

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

10   CAPM theory identifies two types of risks for a security: company-specific risk and

11   market risk. Company-specific risk includes such events as strikes, management

12   errors, marketing failures, lawsuits, and other events that are unique to a particular

13   firm. Market risk includes inflation, business cycles, war, variations in interest

14   rates, and changes in consumer confidence. Market risk tends to affect all stocks

15   and cannot be diversified away. The idea behind the CAPM is that diversified

16   investors are rewarded with returns based on market risk.

17   Within the CAPM framework, the expected return on a security is equal to

18   the risk-free rate of return plus a risk premium that is proportional to the security's

19   market, or non-diversifiable risk. Beta is the factor that reflects the inherent market

20   risk of a security and measures the volatility of a particular security relative to the

---

[11] Refer to Exhibit RAB-5 for the detailed calculations.

1   overall market for securities. For example, a stock with a beta of 1.0 indicates that

2   if the market rises by 15%, that stock will also rise by 15%. This stock moves in

3   tandem with movements in the overall market. Stocks with a beta of 0.5 will only

4   rise or fall 50% as much as the overall market. With an increase in the market of

5   15%, this stock will only rise 7.5%. Stocks with betas greater than 1.0 will rise and

6   fall more than the overall market. Thus, beta is the measure of the relative risk of

7   individual securities vis-à-vis the market.

8   Based on the foregoing discussion, the equation for determining the return

9   for a security in the CAPM framework is:

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

11   *Where:*   *K*   *= Required Return on equity*
12   *Rf*   *= Risk-free rate*
13   *MRP = Market risk premium*
14   *β   = Beta*
15   This equation tells us about the risk/return relationship posited by the

16   CAPM. Investors are risk averse and will only accept higher risk if they expect to

17   receive higher returns. These returns can be determined in relation to a stock's beta

18   and the market risk premium (MRP). The general level of risk aversion in the

19   economy determines the MRP. If the risk-free rate of return is 3.0% and the

20   required return on the total market is 10%, then the market risk premium is 7%.

21   Any stock's risk premium can be determined by multiplying its beta by the MRP.

22   Its total return may then be estimated by adding the risk-free rate to that risk

23   premium. Stocks with betas greater than 1.0 are considered riskier than the overall

1   market and will have higher required returns. Conversely, stocks with betas less

2   than 1.0 will have required returns lower than the market as a whole.

3   **Q.   In general, are there concerns regarding the use of the CAPM in estimating**

4   **the ROE?**

5   A.   Yes. There is some controversy surrounding the use of the CAPM and its accuracy

6   regarding expected returns. There is substantial evidence that beta is not the

7   primary factor for determining the risk of a security. For example, Value Line's

8   "Safety Rank" is a measure of total risk, not its calculated beta coefficient. Dr.

9   Burton Malkiel, author of *A Random Walk Down Wall Street*, noted the following

10   in his best-selling book on investing:

11   Second, as Professor Richard Roll of UCLA has argued, we must
12   keep in mind that it is very difficult (indeed probably impossible) to
13   measure beta with any degree of precision. The S&P 500 Index is
14   not "the market." The total stock market contains many thousands
15   of additional stocks in the United States and thousands more in
16   foreign countries. Moreover, the total market includes bonds, real
17   estate, commodities, and assets of all sorts, including one of the most
18   important assets any of us has - the human capital built up by
19   education, work, and life experience. Depending on exactly how you
20   measure "the market" you can obtain very different beta values.[12]

21   Shannon Pratt and Roger Grabowski, authors of *Cost of Capital*, also stated

22   the following with respect to the CAPM:

23   Even though the capital asset pricing model (CAPM) is the most
24   widely used method of estimating the cost of equity capital, the
25   accuracy and predictive power of beta as the sole measure of risk
26   have increasingly come under attack. As a result, alternative
27   measures of risk have been proposed and tested. That is, despite its
28   wide adoption, academics and practitioners alike have questioned
29   the usefulness of CAPM in accurately estimating the cost of equity

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[12] Burton G. Malkiel, <u>A Random Walk Down Wall Street</u>, 219 (2023 ed.)

1   capital and the use of beta as a reliable measure of risk.[13]

2   As a practical matter, there is substantial judgment involved in estimating

3   the required market return and MRP. In theory, the CAPM requires an estimate of

4   the return on the total market for investments, including stocks, bonds, real estate,

5   etc. It is nearly impossible for the analyst to estimate such a broad-based return.

6   Often in utility cases, a market return is estimated using the S&P 500. However,

7   as Dr. Malkiel pointed out, this is a limited source of information with respect to

8   estimating the investor's required return for all investments. In practice, the total

9   market return and MRP estimates face limitations to estimation and, ultimately,

10   their usefulness in quantifying the investor required CAPM ROE.

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

12   in determining the market return and expected risk premium elements of the CAPM

13   equation. The analyst's application of judgment can significantly influence the

14   results obtained from the CAPM. My experience with the CAPM indicates that it

15   is prudent to use a wide variety of data in estimating investor-required returns. Of

16   course, the range of results may also be wide, indicating the challenge in obtaining

17   a reliable estimate from the CAPM.

18 **Q. How did you estimate the market return and MRP of the CAPM?**

19 A. I used three approaches to estimate the MRP portion of the CAPM equation. First,

20   I will present an approach that uses the expected return on the market and is

21   forward-looking. Second, I will present an approach that employs three historical

---

[13] Shannon Pratt & Roger Grabowski, Cost of Capital 269 (5th ed 2014).

1   MRPs based on actual stock and bond returns. Third, I will present four published

2   sources that estimate the current investor required MRP.

3 **Q.**   **Please describe your forward-looking approach to estimating the MRP.**

4 A.   The first source I used was the Value Line *Summary and Index* dated August 1,

5   2025. The Value Line *Summary and Index* provides data with which one may

6   calculate a DCF estimate on the companies that Value Line follows. Value Line

7   presents a median estimated dividend yield for all dividend paying stocks (2.10%)

8   and the median estimated 3–5-year price appreciation potential of all stocks in the

9   Value Line universe (40%). The estimated 3-5-year appreciation estimate

10   translates into an annualized appreciation number, or growth rate, of 8.78%. I

11   present Value Line's projected annual returns on page 1 of Exhibits RAB-6 and

12   RAB-7. The DCF ROE result for the market is 10.88%.

13 **Q.**   **Do you have any concerns related to this forward-looking MRP estimate?**

14 A.   Yes. The expected growth rate of 8.78% is overstated as a long-term constant

15   growth rate for the market. This is because it is far higher than the expected

16   nominal growth rate for the Gross Domestic Product of the U.S., which is around

17   4.0%. I will discuss this concern in greater detail in Section IV where I respond to

18   Mr. D'Ascendis' forward-looking market risk premium. A long-term earnings

19   growth rate of 8.78% cannot be sustained over the long run and, therefore, it may

20   overstate the investor-required return on the market and the CAPM ROE result.

21 **Q.**   **Please continue with your MRP analysis.**

22 A.   The second source I considered came from Kroll, which compiled a study of

23   historical returns on the stock market in its *Cost of Capital Navigator: U.S. Cost of*

1   *Capital Module* and is part of its Cost of Capital Navigator subscription service.

2   Kroll provides services to clients in 140 countries covering valuation, compliance

3   and regulation, corporate finance and restructuring, and other areas. Kroll now

4   provides the Cost of Capital Navigator service that was formerly provided by Duff

5   and Phelps.

6   Some analysts employ historical data to estimate the MRP of stocks over

7   the risk-free rate. The assumption is that a risk premium calculated over a long

8   period of time is reflective of investor expectations going forward. Exhibits RAB-

9   6 and RAB-7, page 2, presents the calculation of the market returns and MRPs using

10   the historical data from Kroll.

11 **Q.**   **Please explain how these historical MRPs are calculated.**

12 A.   Exhibit RAB-6, page 2, shows the historical arithmetic average MRP over the

13   historical period from 1926 – 2024. The historical MRP is calculated by subtracting

14   the average annual return for the 20-year Treasury Bond from historical average

15   stock returns, resulting in an historical MRP of 7.31%.

16 **Q.**   **Did you include additional measures of historical risk premiums in this case?**

17 A.   Yes. Kroll reported the results of a study by Dr. Roger Ibbotson and Dr. Peng Chen

18   indicating that the historical risk premium of stock returns over long-term

19   government bond returns has been significantly influenced upward by substantial

20   growth in the price/earnings (P/E) ratio.[14] Kroll noted that this growth in the P/E

21   ratio for stocks was subtracted from the historical risk premium to arrive at an

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[14] *Kroll Cost of Capital Navigator: U.S. Cost of Capital Module,* Basic Building Blocks of the Cost of Equity Capital – Risk-free Rate and Equity Risk Premium (Abridged), pp. 4 – 6.

1   adjusted "supply side" historical MRP. The most recent "supply side" historical

2   MRP is 6.26%, which I have also included in Exhibit RAB-6, page 2.

3   **Q.   Is there additional evidence that the growth in the P/E ratio should be removed**

4   **from the historical risk premium?**

5   A.   Yes. William Goetzman and Roger Ibbotson wrote the following regarding the

6   supply-side approach to estimating the equity risk premium:

7   There are several ways in which one might estimate an expected risk
8   premium used for forecasting. One way is to extrapolate historical
9   risk premiums, as did Ibbotson and Sinquefield. Another is to use
10   investor demand models based upon investor risk aversion, as did
11   Mehra and Precott. A third way is to look at the type of returns that
12   the corporate sector supplies. Diermeir, Ibbotson, and Siegel (1984)
13   and later Ibbotson and Chen (2003) used this supply approach. They
14   extrapolated the cash flows and earnings growth generated by
15   companies themselves.   These forecasts tend to give somewhat
16   lower historical risk premiums, primarily because part of the total
17   return of the stock market has come from price-to-earnings ratio
18   expansion.   This expansion is not predicated to continue on
19   indefinitely and is removed from the expected risk premium.[15]
20
21 **Q.   Are there other concerns regarding the use of historical MRPs for**

22   **estimating the investor required ROE?**

23 A.   Yes. A historical MRP calculated over a long period of time may not reflect current

24   investor expectations and requirements. For example, Pratt and Grabowski

25   presented a detailed discussion of the sources of potential upward bias and

26   overstatement of the long-term historical risk premium.[16] One potential source of

27   bias they analyzed was the historical period of 1942 – 1951, which included

[15] William N. Goetzmann & Roger G. Ibbotson, <u>Handbook of the Equity Risk Premium</u> 522-523
(Rajnish Mehra ed., Elsevier B.V., 2008).
[16] Pratt and Grabowski, <u>Cost of Capital</u>, 119 (Wiley, 5th ed.)

1   government-imposed stability in interest rates for government bonds during the

2   Second World War. Pratt and Grabowski named this period "WWII Interest Rate

3   Bias" and estimated that it resulted in an overstatement of the long-run historical

4   risk premium of 117 basis points, or 1.17%. Pratt and Grabowski also considered

5   the supply-side MRP, which I considered and presented earlier.

6   Kroll analyzed and calculated the so-called World War II Interest Rate Bias

7   and subtracted it from the supply-side ERP of 6.26%, resulting in an adjusted

8   historical ERP of 5.31%. I also present this historical ERP on page 2 of Exhibits

9   RAB-6 and RAB-7.

10   In addition to the foregoing discussions, Dr. Aswath Damodaran of the

11   Stern Business School observed the following regarding the use of historical MRPs:

12   Given how widely the historical risk premium approach is used, it
13   is surprising that the flaws in the approach have not drawn more
14   attention. Consider first the underlying assumption that investors'
15   risk premiums have not changed over time and that the average risk
16   investment (in the market portfolio) has remained stable over the
17   period examined. We would be hard pressed to find anyone who
18   would be willing to sustain this argument with fervor. The obvious
19   fix for this problem, which is to use a more recent time period, runs
20   directly into a second problem, which is the large noise associated
21   with historical risk premium estimates. While these standard errors
22   may be tolerable for very long time periods, they clearly are
23   unacceptably high when shorter periods are used.[17]

24   Although the simple, unadjusted long-run historical risk premium is widely

25   used and available to investors, it is flawed and likely to overstate the investor

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[17] *Equity Risk Premiums (ERP): Determinants, Estimation, and Implications – The 2022 Edition, Updated: March 23, 2022*, Aswath Damodaran, Stern School of Business.

1   expected risk premium for forecasting purposes. It should be viewed with caution

2   and supplemented with other sources as I have done here.

3   **Q.   Did you consider any other sources for estimating the MRP?**

4   A.   Yes, I also considered four other sources for estimating the MRP.

5   First, Kroll provides a recommendation for the MRP for the United States.

6   Its recommended MRP as of April 15, 2025 is 5.50%.[18]

7   Second, KMPG Corporate Finance and Evaluations produces an estimate of

8   the MRP based on its market valuation analyses. The markets included in KMPG's

9   analyses are the S&P 500, Financial Times Stock Exchange (FTSE), and STOXX

10   600. As of June 30, 2025 KMPG recommended an MRP of 5.25%.[19]

11   Third, Dr. Aswath Damodaran provides monthly estimates of the MRP

12   using what he calls an implied risk premium approach. Dr. Damodaran is a

13   professor of finance at the Stern School of Business at New York University and is

14   a researcher on the topic of MRPs, among other things. On July 1, 2025, Dr.

15   Damodaran estimated an MRP in the range of 3.56% - 5.74%, with an average of

16   4.28%.[20]

17   Fourth, Pablo Fernandez, Diego Garcia, and Lucia Acin prepared and

18   published a study entitled *Survey: Market Risk Premium and Risk-Free Rate used*

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[18]https://www.kroll.com/en/insights/publications/cost-of-capital/recommended-us-equity-risk-premium-and-corresponding-risk-free-rates.

[19] https://indialogue.io/clients/reports/public/5d9da61986db2894649a7ef2/5d9da63386db2894649a7ef5

[20]Aswath   Damodaran,   Damodaran   Online   (last   visited   July   12,   2025), https://pages.stern.nyu.edu/~adamodar/New_Home_Page/home.htm

1 *for 54 countries in 2025.*[21] This is a comprehensive survey of finance and economics

2 professors, analysts, and managers of companies regarding their expectations for the

3 market risk premium and risk-free rate for purposes of calculating the required return on

4 equity in various countries. This survey has been published yearly since 2008. The authors

5 received 1,079 survey responses for the MRP and risk-free rate for the United States. The

6 average and median MRP for 2025 was 5.50%.

7 These MRPs are presented on page 3 of Exhibits RAB-6 and RAB-7.

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

9 A. I considered a six-month average of the 30-year Treasury Bond yield from February

10 through July 2025. These yields are shown in Exhibits RAB-6 and RAB-7, page

11 1. The six-month average 30-Year Treasury Bond yield is 4.77%. This six-month

12 period tracks the six-month period I used for stock prices in my DCF analyses. The

13 most recent three-month average is the same 4.90%. Given the rise in the 30-Year

14 Treasury yield over the last three months, I chose to use 4.90% as the risk-free rate

15 in my CAPM analyses.

16 **Q. Please summarize your calculated MRP estimates with the forward-looking**

17 **data from Value Line, the historical MRPs, and the four other sources you**

18 **described.**

19 A. The MRPs from Exhibits RAB-6 and RAB-7, pages 1 through 3 are as follows:

20 • Value Line forward-looking risk premium   5.97%

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[21] Fernandez, Garcia, and Acin, *Survey: Market Risk Premium and Risk-Free Rate used for 54 countries in 2025*, IESE Business School, May 20, 2025.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5260463

1	• Historical risk premium	5.31% - 7.31%
2	• Kroll	5.50%
3	• KMPG	5.25%
4	• IESE Survey	5.50%
5	• Average Damodaran MRP	4.28%

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

7   A.   I used two sources in this case. I obtained the betas for the companies in the Electric

8   Utility Proxy Group and the Gas Utility Proxy Group from the most recent Value

9   Line reports at the time I prepared my Direct Testimony and analyses. The average

10   of the Value Line betas for the Electric Utility Proxy Group is 0.75.[22] For the Gas

11   Utility Proxy Group, the average beta is 0.81.[23]

12   The second source is from S&P Capital IQ. S&P publishes 5-year betas for

13   each company in the proxy group. I added this additional source for a more robust

14   estimate of the CAPM. I would note that Mr. D'Ascendis also used two sources

15   for beta in his CAPM analyses. The S&P betas, however, are known as "raw betas,"

16   meaning that they are not adjusted for beta's tendency to rise toward the market

17   beta of 1.0 over time. Value Line adjusts its betas for this tendency and an adjusted

18   beta is thought to be superior to the "raw" unadjusted beta for forecasting purposes.

19   In order to adjust the raw S&P Capital IQ betas, I employed a commonly used

---

[22] Refer to Exhibit RAB-6, page 1.
[23] Refer to Exhibit RAB-7, page 1.

1   formula called "the Blume Adjustment" or "the Bloomberg Adjustment." The

2   formula is as follows:

3   *Adjusted beta = (Raw beta * 0.67) + .33*

4   This formula results in upward adjustments to beta values less than 1.0,

5   which is the case for all the electric and gas utility companies in the proxy groups.

6   The adjusted beta for the companies in the Electric Utility Proxy Group is 0.65 and

7   for the Gas Utility Proxy Group is 0.74.[24]

8   Finally, I used the average of the S&P Capital IQ and Value Line betas for

9   purposes of estimating the CAPM ROE for the two proxy groups. Please refer to

10   page 1 of Exhibits RAB-6 and RAB-7 for the proxy group averages.

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

12 **A.**   For the Electric Utility Proxy Group, the CAPM ROE estimates are as follows:

1.	Forward-looking MRP	9.10%
2.	Arithmetic Historical MRP	10.04%
3.	Supply-side Historical MRP	9.30%
4.	Supply-side Less WWII Bias	8.63%
5.	IESE Survey MRP	8.77%
6.	KMPG MRP	8.59%
7.	Kroll MRP	8.77%
8.	Damodaran Average MRP	7.91%

22   For the Gas Utility Proxy Group, the CAPM ROE estimates are as follows:

1.	Forward-looking MRP	9.52%
2.	Arithmetic Historical MRP	10.56%
3.	Supply-side Historical MRP	9.74%
4.	Supply-side Less WWII Bias	9.01%
5.	IESE Survey MRP	9.16%
6.	KMPG MRP	8.96%

[24] Refer to page 1 of Exhibits RAB-6 and RAB-7.

| 1 | 7. | Kroll MRP | 9.16% |
| 2 | 8. | Damodaran Average MRP | 8.22% |

3 **Conclusions and Recommendations**

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

5 **as they apply to the Electric Utility Proxy Group.**

6 A. Table 1 summarizes my ROE results using the DCF and CAPM for the Electric

7 Utility Proxy Group.

TABLE 1
SUMMARY OF ROE ESTIMATES
ELECTRIC UTILITY PROXY GROUP

DCF Methodology
Method 1
- High	10.51%
- Low	8.56%
- Average	9.70%

Method 2
- High	10.35%
- Low	9.11%
- Average	9.94%

CAPM Methodology

Forward-lookng Market Return:	9.10%

Historical Risk Premium:
- Arithmetic Mean	10.04%
- Supply side MRP	9.30%
- Supply side Less WWI Bias	8.63%

IESE MRP Survey	8.77%
KMPG MRP	8.59%
Kroll MRP	8.77%
Damodaran MRP	7.91%

Average CAPM Results	8.89%
Average CAPM Excluding High and Low	9.02%
CAPM Midpoint	8.98%
CAPM Midpoint Excluding High and Low	8.95%

8

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

10 **as they apply to the Gas Utility Proxy Group.**

1   A.   Table 2 summarizes my ROE results using the DCF and CAPM for the Gas Utility

2   Proxy Group.

TABLE 2 SUMMARY OF ROE ESTIMATES GAS UTILITY PROXY GROUP	
DCF Methodology	
Average Growth Rates	
- High	11.52%
- Low	7.69%
- Average	10.17%
- Midpoint	9.61%
Median Growth Rates:	
- High	11.59%
- Low	8.13%
- Average	10.21%
- Midpoint	9.86%
CAPM Methodology	
Forward-lookng Market Return:	9.52%
Historical Risk Premium:	
- Arithmetic Mean	10.56%
- Supply side MRP	9.74%
- Supply side Less WWI Bias	9.01%
IESE MRP Survey	9.16%
KMPG MRP	8.96%
Kroll MRP	9.16%
Damodaran MRP	8.22%
Average of CAPM Range	9.29%
Midpoint of CAPM Range	9.39%
Average excluding high and low	9.26%
Midpoint excluding high and low	9.35%

3

4   **Q.   What is your recommended ROE for the electric and gas utility operations of**

5   **LGE and KU?**

6   A.   My recommended ROE for LGE/KU's electric and gas operations is 9.60%. The

7   range of ROE results for the Electric Utility Proxy Group is 9.0% (CAPM average

8   results) to 10.0% (median DCF results rounding up). My recommended ROE is

9   slightly above the midpoint of this range.

1   The range of ROE results for LGE's gas utility operations is 9.30% to

2   10.20%. The lower end of this recommended range is consistent with the average

3   ROE results from the CAPM analyses. The upper end of the range is consistent

4   with the average DCF results. My 9.60% recommendation is below the midpoint

5   of the range.

6   Given LGE/KU's credit ratings of A3 from Moody's and A- from S&P, a

7   9.60% ROE is just and reasonable for the low-risk electric and gas utility operations

8   of the Companies.

9 **Q.   Earlier in your testimony you expressed concerns regarding the increase in the**

10   **consensus analysts' earnings growth forecasts for your DCF model. Please**

11   **explain your concern in this regard.**

12 A.   In this case, the average of consensus analysts' earnings growth rates for the

13   Electric Utility Proxy Group is 6.40% to 6.87% as shown in my Exhibit RAB-4.

14   The consensus analysts' forecasts for the Gas Utility Proxy Group are much higher,

15   ranging from 7.44% to 7.83%. These earnings growth forecasts are significantly

16   higher than the long-term growth rate of the overall economy as measured by

17   growth in the GDP, as well as historical earnings and dividend growth for the

18   companies in the proxy groups. For mature, steady-state industries such as electric

19   and gas utilities, it is highly unlikely that earnings growth significantly above GDP

20   growth can be maintained indefinitely as the constant growth DCF model assumes.

21   In other words, electric and gas utilities cannot outgrow the GDP in perpetuity.

22   Using these consensus forecasts alone would overstate the DCF ROE in this case,

23   especially for the utilities in the Gas Utility Proxy Group.

1   As support for this, in *Fundamentals of Financial Management,* Brigham

2   and Houston note the following:

3   Second, the constant growth model as expressed in Equation 9.2 is not
4   appropriate unless a company's growth rate is expected to remain constant
5   in the future. This condition almost never holds for new start-up firms, but
6   it does exist for many mature companies. Indeed, mature firms such as
7   Keller, Allied, and GE are generally expected to grow at about the same rate
8   as nominal gross domestic product (i.e., real gross domestic product [GDP]
9   plus inflation).[25]
10
11   Pratt and Grabowski also cautioned as follows:

12   It is theoretically impossible for the sustainable perpetual growth rate for a
13   company to significantly exceed the growth rate in the economy. Any rate
14   over a 6% to 7% perpetual growth rate should be questioned carefully.[26]
15

16   Regarding forecasts of GDP, Federal Reserve projections of June 18, 2025,

17   called for longer-run real GDP growth of 1.8% and PCE inflation of 2.0%. This

18   translates into forecasted nominal GDP growth of 3.80% per year.   The

19   Congressional Budget Office also projects growth in real GDP through 2035 of

20   1.80% and CPI inflation of 2.0%.[27] If we assume forecasted long-run nominal GDP

21   growth of around 4.0%, then forecasted constant earnings growth rates between

22   6.40% - 7.83% for the electric and gas utility industries simply cannot be sustained

23   over time.

24   Given current consensus earnings growth forecasts, forecasted dividend

25   growth must also be considered in the DCF ROE analyses. The lower dividend

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[25] Eugene F. Brigham and Joel F. Houston, Fundamentals of Financial Management, 333-334, Eleventh Edition (2022, 2020 Cengage Learning, Inc.)
[26] Shannon Pratt and Roger Grabowski, Cost of Capital 461 (Wiley, 5th ed.)
[27] https://www.cbo.gov/system/files/2025-03/61187-Long-Term-Outlook-2025.pdf.

1 growth forecasts from Value Line help to offset the higher consensus analysts'

2 forecasts for the Electric Utility Proxy Group, but in my opinion do not fully offset

3 these forecasts for the Gas Utility Proxy Group. The resulting ROEs for the Gas

4 Utility Proxy Group using the S&P Capital IQ and Zacks forecasts range from

5 10.98% to 11.59%. These ROE results do not represent long-term earnings growth

6 for gas utilities and fail the basic test of reasonableness when compared to recent

7 commission-allowed ROEs for gas utilities that averaged 9.83% for the first half of

8 2025.

9 **Q.** **How do the S&P Capital IQ and Zacks growth rates compare to historical**

10 **earnings and dividend growth for the Electric Utility Proxy Group?**

11 A. Table 3 below presents Value Line's 5-year and 10-year historical earnings and

12 dividend growth for the companies in the Electric Utility Proxy Group.

TABLE 3
Electric Utility Proxy Group Historical Earnings and Dividend Growth

	Earnings Growth		Dividend Growth	
	5-Year	10-Year	5-Year	10-Year
Alliant Energy Corporation	4.5%	5.5%	6.0%	6.5%
Ameren Corporation	8.0%	4.0%	5.0%	3.5%
American Electric Power Company	4.0%	5.0%	5.0%	5.0%
Duke Energy	3.5%	3.5%	2.5%	3.0%
Entergy Corporation	4.0%	2.5%	4.0%	2.5%
Evergy, Inc.	N/A	N/A	N/A	N/A
IDACORP, Inc.	3.5%	4.0%	6.0%	7.5%
OGE Energy Corporation	4.5%	3.0%	6.5%	7.5%
Pinnacle West Capital Corporation	Nil	2.5%	4.0%	4.0%
Portland General Electric Company	3.0%	3.5%	5.5%	5.5%
Southern Company	3.0%	3.0%	3.5%	3.5%
Xcel Energy Inc.	6.0%	5.5%	6.5%	6.5%
Average Excluding Negative Values	4.4%	3.8%	5.0%	5.0%
Median	4.0%	3.5%	5.0%	5.0%

Source: Value Line Investment Survey

13

1   Historical earnings growth ranges from 3.8% to 4.4%. Historical dividend

2   is 5.0%. Historical growth rates are all significantly lower than the average

3   consensus earnings growth forecasts in this case.

4 **Q.**   **How do the S&P Capital IQ and Zacks growth rates compare to historical**

5   **earnings and dividend growth for the Gas Utility Proxy Group?**

6 A.   Table 4 below presents Value Line's 5-year and 10-year historical earnings and

7   dividend growth for the companies in the Gas Utility Proxy Group.

TABLE 4
Gas Utility Proxy Group Historical Earnings and Dividend Growth

	Earnings Growth		Dividend Growth	
	5-Year	10-Year	5-Year	10-Year
Atmos Energy	9.00%	9.50%	9.00%	7.50%
New Jersey Resources Corp.	5.00%	5.50%	7.00%	7.00%
NiSource	10.50%	1.00%	6.00%	Nil
Northwest Natural Holding Company	25.00%	1.00%	0.50%	1.00%
One Gas, Inc.	4.50%	7.00%	7.00%	12.50%
Southwest Gas	Nil	Nil	3.50%	6.50%
Spire	1.00%	5.50%	5.00%	5.50%
Proxy Group Average	9.17%	4.92%	5.43%	6.67%
Proxy Group Median	7.00%	5.50%	6.00%	6.75%

Source: Value Line Investment Survey

8

9   Regarding historical earnings growth, the 5-year average earnings growth

10   rate is skewed because of the 25% growth rate of Northwest Natural Holding Co.,

11   which is clearly a statistical aberration. Excluding Southwest Gas, the average

12   historical earnings growth rates range from 4.92% to 7.00% with a midpoint of

13   5.96%. Dividend growth ranged from 5.43% to 6.75% with a midpoint of 6.09%.

14   Using an historical growth rate of 6.00%, the resulting DCF ROE would be :

15   *(3.55% * 1.03) + 6.0% = 9.66%*

1   My recommended 9.60% ROE for LGE's gas operations reasonably

2   approximates a DCF ROE using a 6.00% historical growth rate.

3 **Q.   Did you review LGE/KU's requested capital structures?**

4 A.   Yes. Companies' witness Burgos presented the requested capital structures for the

5   Companies. I reviewed Mr. Burgos testimony and the J-Schedules that support the

6   capital structures and find the requested capital structures reasonable for purposes

7   of this case.

8 **Q.   Did you identify any issues with the Companies' requested cost of long-term**

9   **debt?**

10 A.   Yes. Both LGE and KU included new long-term debt issuances of $800 million in

11   their proposed capital structures. The Companies' assumed coupon rate for this

12   new debt was 6.50% and it was further assumed to be issued on August 1, 2025.

13   On August 13, 2025 it was reported by Investing.com that LGE and KU each had

14   issued $700 million of long-term debt with a coupon rate of 5.85%.[28] I recommend

15   that the Commission adjust the Companies' assumed coupon rate of 6.50% to the

16   actual coupon rate of 5.85%. Mr. Lane Kollen, witness for the OAG and KIUC,

17   will address this adjustment in his Direct Testimony.

18 **Q.   Should the Companies' capital structure be adjusted for the lower amount of**

19   **long-term debt?**

20 A.   No. The Companies' proposed forecasted common equity ratios of 52.86% for KU

21   and 52.93% for LGE are reasonable and adequate for the provision of service to

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[28] https://za.investing.com/news/sec-filings/louisville-gas-and-electric-and-kentucky-utilities-issue-700-million-bonds-each-93CH-3838160

1   ratepayers. Given that they are forecasted amounts for the test years, I recommend

2   that the Commission accept the forecasted common equity percentages in this case.

3   **Q.   What is the current treatment for the ROE that is applied to LGE and KU's**

4   **Environmental Cost Recovery (ECR) riders?**

5   A.   Pursuant to past Commission Orders, the ECR riders are calculated with a reduction

6   to the Companies' Commission-approved ROE.[29] Most recently, the Commission

7   awarded a 10 basis point reduction for capital riders in Case No. 2024-00276

8   involving Atmos Energy Corporation and asserted that the ROE for capital riders

9   is adjusted downwards because "[w]ith a rider, since a return is guaranteed and the

10   time line of recovery is known and ordinarily not meaningfully delayed, the

11   required return is less than the ROE associated with a rate case as the risk involved

12   is decreased and most lag associated with recovery is eliminated."[30] This approach

13   continues to be appropriate and applicable for LGE and KU's ECR riders and I

14   recommend that the Commission apply a 10 basis point reduction to my

15   recommended ROE of 9.60%, making the ECR ROE 9.50%.

16   **Q.   Did you review the Direct Testimony filed by LGE witness Rieth regarding**

17   **LGE's Gas Line Tracker (GLT)?**

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[29] LG&E and KU base rate cases 2020-00350 and 2020-00349 [ECR]: In Re: Application Of Louisville Gas And Electric Company For An Adjustment Of Its Electric And Gas Rates, A Certificate Of Public Convenience And Necessity To Deploy Advanced Metering Infrastructure, Approval Of Certain Regulatory And Accounting Treatments, And Establishment Of A One-Year Surcredit, Case No. 2020-00350, Final Order dated June 30, 2021 at 7-8;   In Re: Application Of Kentucky Utilities Company For An Adjustment Of Its Electric Rates, A Certificate Of Public Convenience And Necessity To Deploy Advanced Metering Infrastructure, Approval Of Certain Regulatory And Accounting Treatments, And Establishment Of A One-Year Surcredit, Final Order dated June 30, 2021 at 7 [ECR].
[30] Case No. 2024-00276, *Electronic Application of Atmos Energy Corporation for an Adjustment of Rates; Approval of Tariff Revisions; and Other General Relief* (Ky. PSC Aug. 11, 2025), Order, page 38.

1   A.   Yes. Mr. Rieth presented testimony supporting the continuance of LGE's GLT in

2   this proceeding. The GLT provides for recovery of safety-related investments in

3   areas related to service risers, customer service line ownership, leak mitigation

4   through the main replacement program and replacing company services, and the

5   replacement of Aldyl-A plastic pipe. The GLT operates outside of LGE's rate cases

6   and is trued-up yearly for actual costs.

7   Q.   **What is your ROE recommendation for the GLT?**

8   A.   If the Commission decides to continue the GLT in this proceeding, then consistent

9   with its treatment of other tracker mechanisms I recommend that the Commission

10   apply a 10 basis point reduction to investments included in the GLT. If the

11   Commission adopts my recommended ROE, then the ROE for the GLT should be

12   9.50% consistent with the ECR riders.

13   **IV. RESPONSE TO LGE/KU ROE TESTIMONY**

14 Q.   **Please summarize your conclusions with respect to Mr. D'Ascendis' ROE**
15   **recommendation.**

16 A.   Mr. D'Ascendis' recommended 10.95% ROE is grossly excessive, would inflate

17   LGE/KU's revenue requirement, harm Kentucky ratepayers, and should be rejected

18   by the Commission. The remainder of this section of my testimony will present my

19   points of disagreement with Mr. D'Ascendis and how his CAPM and risk premium

20   analyses in particular contributed significantly to an inflated ROE recommendation

21   for LGE/KU.

1   **Q.**   **Before you address the specifics of Mr. D'Ascendis' analyses, do you have any**

2   **general observations regarding his 10.95% ROE recommendation?**

3   A.   Yes. I noted earlier in Section II that the average allowed ROE for vertically

4   integrated electric utilities was 9.84% in 2024 and 9.74% through the first half of

5   2025. The average allowed ROE for gas utilities in fully litigated cases was 9.78%

6   in 2024 and 9.83% in the first half of 2025. Mr. D'Ascendis' recommended ROE

7   of 10.95% represents an extreme outlier compared to recent commission-allowed

8   ROEs. Having said this, I do not recommend that the Commission base its allowed

9   ROE in this case on average allowed ROEs in other states. Nonetheless, the

10   average allowed ROEs I have cited provide the Commission a general basis for

11   comparison and demonstrate that Mr. D'Ascendis' 10.95% ROE recommendation

12   for LGE/KU is far outside of the mainstream.

13   **Q.**   **What was the KPSC's allowed ROE in its recent Order for Atmos Energy in**

14   **Case No. 2024-00276 issued August 11, 2025?**

15   A.   The Commission's Order specified an allowed ROE for Atmos Energy of 9.75%.

16   Mr. D'Ascendis was Atmos' witness in that case and recommended a ROE of

17   10.95%, the same ROE he recommends for LGE/KU's electric and gas operations.

18   Obviously, Mr. D'Ascendis' ROE recommendation in this case is far above the

19   Commission's allowed ROE for Atmos and should be rejected in this proceeding

20   as well.

21   **Q.**   **How did Mr. D'Ascendis develop his recommended ROE range for the**

22   **Companies?**

1   A.   On page 4 of his Direct Testimony, Mr. D'Ascendis presented the ROE range from

2   the application of the models he used. For LGE/KU's electric operations his

3   recommended range before adjustments is 10.32% - 11.84%. He then increased

4   this range by 0.05% to 0.10% for a size adjustment, by -0.07% for a credit risk

5   adjustment, and by 0.15% for flotation costs. This resulted in an adjusted ROE

6   range of 10.51% - 12.03% for LGE and 10.46% - 11.97% for KU.

7   For LGE's gas operations, Mr. D'Ascendis' ROE range before adjustments

8   is 10.29% - 11.92%, then was increased by 0.15% for a size adjustment and 0.15%

9   for flotation costs. These adjustments resulted in a range of 10.59% - 12.22%.

10   From this range of results, Mr. D'Ascendis recommended a 10.95% ROE

11   for LGE/KU's electric and gas operations.

12   **Q.   Where does Mr. D'Ascendis' 10.95% ROE recommendation fall within the**

13   **recommended ranges he presented on page 4?**

14   A.   The midpoints of Mr. D'Ascendis' Electric Utility Proxy Group ROE ranges are

15   11.22% and 11.27%. The midpoint for his Gas Utility Proxy Group ROE range is

16   11.41%. Mr. D'Ascendis' 10.95% recommendation is below all of these midpoints.

17   Mr. D'Ascendis did not provide an explanation in his testimony as to why his ROE

18   recommendations are in the lower half of his recommended ranges.

19   **DCF Analyses**

20   **Q.   Please comment on Mr. D'Ascendis' DCF analyses.**

21   A.   Mr. D'Ascendis presented the results of his DCF analyses in his Exhibit DWD-3,

22   page 1, for both his proxy groups. The average of the median and average results

1   for his Gas Utility Proxy Group results is 10.29%. The average of the median and

2   average results for his Electric Utility Proxy Group is 10.32%. Mr. D'Ascendis

3   utilized earnings growth rates from Value Line, S&P Capital IQ, and Zacks to

4   develop his DCF ROE estimates. These are all commonly cited sources of earnings

5   growth forecasts and I used the same sources as well. While Mr. D'Ascendis relied

6   upon Value Line's earnings growth forecasts he also should have considered Value

7   Line's dividend growth forecast for both proxy groups. I agree with Mr.

8   D'Ascendis' statement on page 21 of his Direct Testimony that security analysts'

9   earnings growth forecasts have a more significant influence on market prices than

10   dividend expectations. However, because dividend payments are such a significant

11   portion of the total return to utility shareholders, forecasted dividend growth should

12   also be considered and Value Line is a trusted source of this information.

13   In addition, it is crucially important to consider the lower dividend growth

14   forecasts for both proxy groups in this proceeding due to the unsustainably high

15   earnings growth forecasts from S&P Capital IQ and Zacks. I explained earlier in

16   my testimony why this is the case presently. Using only earnings growth forecasts

17   will lead to a significant overstatement of the ROE results from the DCF model.

18   **Risk Premium Model Analyses**

19   **Q.   Before you address the specifics of Mr. D'Ascendis' risk premium model**

20   **("RPM") analyses, do you have any general comments regarding the risk**

21   **premium method of estimating the investor required ROE for regulated**

22   **utilities?**

1 A. Yes. The bond yield plus RP approach is imprecise and can only provide very

2   general guidance on the current authorized ROE for a regulated electric utility.

3   Historical risk premiums can change substantially over time based on investor

4   preferences and market conditions. As such, this approach is a "blunt instrument,"

5   if you will, for estimating the ROE in regulated proceedings. In my view, a properly

6   formulated DCF model using current stock prices and growth forecasts is far more

7   reliable and accurate than the bond yield plus risk premium models that rely on an

8   historical analysis of risk premiums.

9   As I will explain, much of Mr. D'Ascendis' RPM analyses are based on

10   historical risk premium analyses that may have no relevance in today's

11   marketplace. Regarding his use of more forward-looking analyses, Mr. D'Ascendis

12   systematically overstated his risk premiums. Both of these general problems led

13   directly to excessive MRP ROEs for LGE/KU's electric and gas operations.

14 Q. **Summarize and describe Mr. D'Ascendis' approach to estimating the expected**

15   **RPM ROE.**

16 A. First, Mr. D'Ascendis described the total market approach to estimating the RPM

17   beginning on page 23 of his Direct Testimony. This method adds the prospective

18   yield on a public utility bond (5.73%) to the average of (1) an equity risk premium

19   that is derived from a beta-adjusted total market equity risk premium, (2) an equity

20   risk premium based on the S&P Utilities Index, and (3) an equity risk premium

21   based on authorized ROEs for electric and gas distribution utilities.

22   The beta-driven total market equity risk premium is actually composed of

23   three historical market data-based equity risk premiums, a Value Line-based equity

1   risk premium, and a combined Value Line, Bloomberg, and S&P Capital IQ-based

2   equity risk premium. These RPs are summarized on page 33, Table 7 of Mr.

3   D'Ascendis' Direct Testimony. The risk premiums range from 5.85% to 9.88%,

4   with an average of 7.19%.

5   **Q.   Did Mr. D'Ascendis use historical market returns as one method of estimating**

6   **the MRP?**

7   A.   Yes. In Exhibit DWD-4, page 6 Mr. D'Ascendis showed that he used the "Kroll

8   Equity Risk Premium" as one way of determining the MRP. He explained in that

9   exhibit that the MRP was based on historical monthly returns on large company

10   common stocks from Kroll and Bloomberg less the arithmetic mean monthly yield

11   of Moody's average Aaa/Aa2 corporate bonds from 1928 – 2024.

12   **Q.   Did Mr. D'Ascendis address the potential for the overstatement of historical**

13   **risk premiums that you addressed in discussing the CAPM MRP earlier in**

14   **your testimony?**

15   A.   No. There is credible analysis that historical risk premiums may be overstated due

16   to (1) rising price/earnings ratios that are not expected to persist and (2) the "World

17   War II bias", both of which I explained in Section III of my Direct Testimony. Mr.

18   D'Ascendis did not address these two potential sources of overstatement of the

19   MRPs in his historical analysis.

20   **Q.   Did Mr. D'Ascendis use regression analyses to forecast risk premiums?**

21   A.   Yes. Mr. D'Ascendis explained the derivation of his regression-based market risk

22   premium on pages 25 - 26 of his Direct Testimony. He calculated an MRP of 6.82%

23   by attempting to model the relationship between interest rates and the MRP using

1   the yield on Moody's Aaa/Aa-rated corporate bonds as the independent variable

2   and the monthly market risk premium as the dependent variable. I examined Mr.

3   D'Ascendis' analysis and regression results included in his work paper MRP ERP

4   WP.

5 **Q.   Was Mr. D'Ascendis' regression analysis statistically valid and does it form a**

6   **sound basis for forecasting the expected risk premium?**

7 A.   No. There are statistical tests that are part of regression analyses that are designed

8   to test the validity of the model and how well the model explains and predicts what

9   is going on with the data set. One bedrock test is called the R-squared statistic, also

10   referred to as the coefficient of determination. R-squared measures the proportion

11   of variance in the dependent variable (the monthly risk premium) that is explained

12   by the independent variable (corporate bond yields). R-squared results fall between

13   0 and 1. A higher value indicates that the model explains more of the total variation

14   in the dependent variable. For example, an R-squared of .80 means that the model

15   explains 80% of the variation and may be a good predictive model.

16   However, Mr. D'Ascendis' regression analysis has an R-squared of only

17   0.028, meaning that his model only explains about 2.80% of the total variation in

18   historical market risk premiums. This is a very poor result and means that his model

19   cannot and should not be relied upon to predict market risk premiums based on

20   changes in bond yields.

21   Another measure of statistical accuracy, the t-statistic, shows that the

22   independent variable, bond yields, is statistically significant in his regression

23   model. This means it is a factor in predicting market risk premiums, but the overall

1   explanatory power of the model is so poor that it cannot be used accurately for

2   forecasting purposes. The Commission should reject Mr. D'Ascendis' regression-

3   based risk premium of 6.82%.

4 Q.   **Did Mr. D'Ascendis use regression equations to estimate risk premiums**

5   **elsewhere in his analyses?**

6 A.   Yes. Mr. D'Ascendis employed two other regression analyses to estimate risk

7   premiums. These are as follows:

8   • Regression analysis of monthly historical equity risk premiums between the

9   S&P Utility Index and Moody's A2-rated public utility bond yields. This

10   resulted in a risk premium of 4.80%.

11   • Regression analysis of the monthly annualized historical returns on the S&P

12   500 relative to historical yields on long-term U.S. Government Securities.

13   This analysis resulted in a market equity risk premium of 7.94% that was

14   used in Mr. D'Ascendis' CAPM analysis.

15 Q.   **Were these two regression analyses similarly flawed in terms of low R-squared**

16   **statistics?**

17 A.   Yes. The regression analysis of monthly historical equity risk premiums between

18   the S&P Utility Index and Moody's A2-rated public utility bond yields had an R-

19   squared value of only 0.013. Regression analysis of the monthly annualized

20   historical returns on the S&P 500 relative to historical yields on long-term U.S.

21   Government Securities had an R-squared value of only 0.019. These two R-squared

22   values are even lower than the 0.028 R-squared value I mentioned previously.

1   To sum up, the two regression analyses Mr. D'Ascendis used to estimate

2   risk premiums for his RPM ROE and the one he used for his CAPM ROE have

3   little, if any, predictive value and should not be relied upon by the Commission.

4   **Q.   Briefly summarize Mr. D'Ascendis' PRPM analysis.**

5   A.   Mr. D'Ascendis described his PRPM approach beginning on page 26 of his Direct

6   Testimony. According to Mr. D'Ascendis, the PRPM estimates the risk-return

7   relationship by predicting volatility or risk. Mr. D'Ascendis testified that the PRPM

8   is not based on an estimate of investor behavior, "but rather on an evaluation of the

9   results of that behavior (*i.e.*, the variance of historical equity risk premiums.)"[31]

10   The historical annual equity risk premium is generated using GARCH, generalized

11   autoregressive conditional heteroscedasticity, and Eviews© statistical software.

12   Mr. D'Ascendis relied on the monthly risk premiums between historical returns on

13   the Ibbotson large company stocks and average Aaa and Aa corporate monthly

14   bond yields, from January 1928 through February 2025. The PRPM risk premium

15   result was 7.32%.

16   **Q.   Should the Commission rely on the PRPM developed and presented by Mr.**

17   **D'Ascendis?**

18   A.   No. Mr. D'Ascendis did not show that the model he developed is relied upon by

19   investors to determine their required ROE for regulated electric and gas utilities.

20   Neither did he demonstrate that his PRPM is a widely accepted approach by

21   regulatory commissions. The Kentucky Public Service Commission (KY PSC)

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[31] Direct Testimony of Dylan W. D'Ascendis, p. 27, lines 4 to 7.

1   expressly rejected Mr. D'Ascendis' PRPM approach in Case Nos. 2021-00190,

2   2021-00214, and 2024-00276.   In its Order in Case No. 2024-00276, the

3   Commission stated the following:

> 4   Although the Commission supports the use and presentation of
> 5   multiple modeling approaches, the Commission finds that Atmos
> 6   Kentucky's use of the Predictive Risk Premium Model (PRPM)
> 7   should be rejected. Though the PRPM model has been published and
> 8   presented in multiple forums, it has been rejected by this
> 9   Commission and only been addressed by three other regulatory
> 10   commissions thus far and is not universally accepted.[32]

12   Mr. D'Ascendis' PRPM approach was also rejected by the Florida Public

13   Service Commission (FPSC) in Docket No. 20200139-WS, in which the FPSC

14   made the following conclusion with respect to the PRPM:

> 15   The only cost of equity model analysis that supports a 10.75 percent ROE
> 16   is UIF witness D'Ascendis' Predictive Risk Premium Model (PRPM) with
> 17   an average result of 11.66 percent. However, the record showed that the
> 18   PRPM is based on the GARCH model, which used Eviews statistical
> 19   software to derive a predictive equity risk premium, which is added to a
> 20   projected risk-free rate. This method is akin to a black box calculation
> 21   where the inputs were entered and a result was produced using statistical
> 22   software. Witness D'Ascendis and his colleagues developed the PRPM
> 23   method and admitted that it is used primarily by himself and other
> 24   colleagues familiar with the methodology. The record failed to support that
> 25   witness D'Ascendis' PRPM methodology is widely accepted by other
> 26   jurisdictions as a method to estimate the equity risk premium. Therefore,
> 27   we find that the cost of equity models using the PRPM shall be discounted
> 28   in this case.[33]

30   The "black box" aspect of Mr. D'Ascendis' PRPM is indeed a valid concern.

31   Mr. D'Ascendis' workpapers contain variance results, GARCH series, and GARCH

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[32] Case No. 2024-00276, Order, page 36.

[33] Docket No. 20200139-WS, Order No. PSC-2021-0206-FOF-WS, June 4, 2021, page 94.

1   coefficients that were generated from the Eviews© software. Whether or not this

2   information accurately portrays investor required returns and expectations is highly

3   questionable. In fact, the "predictive" part of the PRPM consists of analyzing

4   historical variances in risk premiums. The implicit assumption is that this historical

5   behavior will persist into the future, which may not be correct.

6   In any event, using the 7.32% PRPM risk premium and the bond yield for

7   the Gas Utility Proxy Group results in an excessive ROE result:

8   *(7.32% * .79) + 5.80% = 11.58% PRPM ROE*

9   This ROE result is excessive in light of recent commission-allowed ROEs

10   that I referenced earlier in my testimony and contributed significantly to the

11   overstatement of Mr. D'Ascendis' risk premium ROE results.

12   To conclude, the PRPM is based on historical risk premium relationships

13   that may or may not hold for the future. We do not really know if investors expect

14   the variance of historical risk premiums to continue or if they even use this

15   information to assist them in determining their required ROE. We also do not know

16   if investors would model the PRPM using Mr. D'Ascendis' assumptions. I

17   recommend that the Commission not gamble with considering the PRPM and

18   continue to reject it in this proceeding as it has consistently done in prior cases.

19   **Q.   Did Mr. D'Ascendis' other RP estimates produce unreasonable results with**

20   **respect to his total market using beta RPM ROE?**

21   A.   Yes. Earlier I cited the top end of Mr. D'Ascendis' RP range of 9.88%, which was

22   the result for the combined Value Line, Bloomberg, and S&P Capital IQ-based

1   equity risk premium. Evaluating this RP on its own would render the following

2   RPM ROE:

3   *(9.88% * .79) + 5.80% = 13.61% ROE*

4   This RP ROE result is so far removed from current commission-allowed

5   ROE and from the reality of current capital markets that it should be summarily

6   rejected by the Commission. This ROE result, along with the untenable ROE result

7   from Mr. D'Ascendis' PRPM analysis heavily biases upward his RPM ROE

8   recommendation from the total market approach using beta.

9   To provide the Commission with some perspective, I reviewed the allowed

10   ROEs and corresponding A-rated utility bond yields provided by Mr. D'Ascendis

11   in his electronic work papers. Going back to 1981, the average commission-

12   allowed ROE for electric companies that year was 12.90%. The corresponding

13   average A-rated bond yield was 9.87%. In 1993 the average commission-allowed

14   ROE for electric companies was 11.48% and the average yield on the A-rated

15   Treasury Bond was 7.76% With the July 2025 Mergent A-rated utility bond yield

16   at 5.88%, it is implausible that investors would expect ROEs anywhere near 11.58%

17   - 13.61% in the current economic environment. The 11.58% and 13.61% RP ROE

18   results are outliers, are completely unrepresentative of current investor required

19   ROEs for regulated electric and gas utilities and should be rejected by the

20   Commission.

21   **Q.   Why are Mr. D'Ascendis' projected MRPs from Value Line's *Summary and***

22   ***Index* and Value Line, Bloomberg, and S&P Capital IQ so high?**

1   A.   The problem with Mr. D'Ascendis' projected MRP stems from overstated expected

2   market returns of 11.20% (*Summary and* Index) and 15.23% (Value Line,

3   Bloomberg and S&P).   The expected average earnings growth rates that Mr.

4   D'Ascendis used were 9.16% and 13.84%, respectively. I calculated these expected

5   growth rates from Mr. D'Ascendis' workpapers. These earnings growth rates from

6   Value Line, Bloomberg, and S&P Capital IQ are unsustainably high in that they

7   vastly exceed both the historical capital appreciation for the S&P 500 as well as

8   historical and projected GDP growth rates. Kroll's historical analysis shows that

9   the arithmetic average capital appreciation for the S&P 500 was 7.9% for the

10   historical period 1926 to 2022.[34] Geometric, or compound growth was 6.1%. This

11   historical experience stands in stark contrast to Mr. D'Ascendis' forecasted growth

12   rates of 9.16% to 13.84%.

13   Mr. D'Ascendis' unsustainable earnings growth forecasts are not

14   supportable when one further considers both historical and forecasted GDP growth

15   for the U.S.   Based on data from the Bureau of Economic Analysis, U.S.

16   Department of Commerce, I calculated that the compound yearly growth rate for

17   U.S. GDP from 1929 to 2024 was 6.1%. It is noteworthy that this growth rate

18   matched the historical compound growth rate for capital appreciation for the S&P

19   500 of 6.1% from Kroll.

20   Regarding forecasts of GDP, projections that I referenced in Sections II and

21   III of my testimony show even lower forecasted GDP growth than the historical

---

[34] Summary Statistics of Annual Total Returns, Income Returns, and Capital Appreciation Returns
of Basic U.S. Asset Classes, 1926 - 2022, Cost of Capital Navigator: U.S. Cost of Capital Module.

1   average I calculated. Assuming forecasted long-run nominal GDP growth of

2   around 4.0%, Mr. D'Ascendis' constant growth rates for the market of 9.81% and

3   13.84% simply cannot be sustained over the long-run. Using such inflated growth

4   rates will inevitably lead to an overstatement in the long-run expected market

5   return, the associated MRP, and the MRP ROE result.

6   I cited sources in the Conclusions and Recommendations portion of Section

7   III that caution against using growth rates in the constant growth DCF model that

8   exceed long-run growth in the economy. In *Cost of Capital*, Pratt and Grabowski

9   also noted the following with respect to growth rates that significantly exceed

10   growth in GDP:

11   The growth rate assumed in calculating the terminal value is a
12   compound growth rate *in perpetuity*, which is a very long time. At
13   a growth rate of 20% compounded annually, the company's revenues
14   would soon exceed the gross domestic product (GDP) of the United
15   States and eventually that of the world. Long-term growth rates
16   exceeding the real growth in GDP plus inflation are generally not
17   sustainable. Most analysts use more conservative growth rates in
18   calculating the terminal value. Generally, the long-term growth rate
19   only applies to the existing enterprise or core business net cash
20   flows, consistent with the net cash flow projections in the discounted
21   cash flow method . . . . [35]
22
23   Since the constant growth DCF requires a sustainable long-run growth rate,

24   which Mr. D'Ascendis does not use, his projected market returns and MRP

25   estimates are overstated and should be rejected.

---

[35] Shannon Pratt and Roger Grabowski, <u>Cost of Capital</u> 1195 (Wiley, 5th ed.)

1   **Q.**   **Beginning on page 35 of his Direct Testimony, Mr. D'Ascendis described an**

2   **RP approach based on state utility regulatory commission-authorized ROEs.**

3   **Please summarize and respond to this RP approach.**

4   **A.**   Mr. D'Ascendis explained that he conducted a regression analysis based on

5   regulatory awarded ROEs related to the yields on Moody's A2-rated public utility

6   bonds. This analysis purports to show the inverse relationship between utility bond

7   yields and the investor required ROE. In other words, as bond yields decline the

8   RP increases and vice versa.

9   This analysis assumes that investor required ROEs are deterministically

10   based on historical average state utility regulatory commission-allowed ROEs and

11   the RP relationship posited by Mr. D'Ascendis' regression analyses. Mr.

12   D'Ascendis presented no evidence that investors in electric and gas utility stocks

13   adopt this mechanistic approach to formulate their expected ROEs.

14   Applying Mr. D'Ascendis' regression model to current utility bond yields

15   reveals substantial inaccuracy and overstatement of the investor required ROE.

16   Using electric utility allowed ROEs as an example and the July 2025 Mergent

17   Utility Bond Yield of 5.93%, Mr. D'Ascendis' RP ROE would be:

18   *(5.93% * -0.4737) + 7.4891 = 4.86% + 5.93% = 10.61% RP ROE*

19   Compared to the average commission-allowed ROE for vertically

20   integrated electric companies for the first half of 2025 of 9.74%, Mr. D'Ascendis'

21   regression model overstated the ROE by 0.87%, or 87 basis points.

1   **CAPM and Empirical CAPM (ECAPM)**

2   **Q.   Please summarize the results of Mr. D'Ascendis' CAPM/ECAPM analyses.**

3   A.   Mr. D'Ascendis' Exhibit DWD-5, pages 1 and 2, present summaries of his

4   CAPM/ECAPM analyses for the Gas Utility Proxy Group and the Electric Utility

5   Proxy Group. The results for the Gas Utility Proxy Group range from 11.09% to

6   11.11% excluding the PRPM. The results for the Electric Utility Proxy Group range

7   from 10.70% to 10.79% excluding the PRPM.

8   **Q.   Summarize and describe Mr. D'Ascendis' approach to estimating the expected**

9   **MRP for his CAPM/ECAPM analyses.**

10   A.   Mr. D'Ascendis presented five different MRP analyses that he used to estimate the

11   expected MRP for the CAPM/ECAPM. Mr. D'Ascendis explained on page 41 of

12   his Direct Testimony that his MRPs were derived from an average of three

13   historical data-based MRPs, one Value Line data-based MRP, and one Value

14   Line/Bloomberg/S&P Capital IQ data-based MRP. The MRPs for each method

15   are shown in Table 13 on page 42 of his Direct Testimony. The MRPs ranged from

16   6.65% to 10.68% with an average MRP of 8.15%.

17   **Q.   Referring to the historical MRP from 1926 - 2024 of 7.31%, did Mr.**

18   **D'Ascendis evaluate the potential for overstatement based on the "supply-**

19   **side" MRP and the "supply-side MRP less WWII bias" you discussed in the**

20   **section on the CAPM?**

21   A.   No. I included the 7.31% MRP in my historical MRPs for the CAPM and also

22   included the lower MRPs from the "supply-side" MRP and the "supply-side less

23   WWII bias" MRP. These MRPs should be included in an objective evaluation of

1 historical MRPs in the context of the CAPM. Mr. D'Ascendis' 7.31% Ibbotson

2 MRP is very likely overstated and contributes to an excessive CAPM result.

3 **Q.** **What is the CAPM result using the prospective equity risk premium for the**

4 **S&P 500 of 10.68%?**

5 A. Using Mr. D'Ascendis' risk-free rate of 4.55%, the Gas Utility Proxy Group average

6 beta of 0.79, and the projected S&P MRP of 10.68%, the traditional CAPM result

7 is:

8 *CAPM ROE = 4.55% + (0.79 * 10.68%) = 12.99%*

9 Mr. D'Ascendis' CAPM result using the prospective S&P 500 MRP is not

10 only completely out of line with the allowed ROEs I cited earlier, it is totally

11 implausible given current financial market conditions. Mr. D'Ascendis'

12 methodology is fatally flawed if it produces this kind of CAPM ROE result.

13 The source of the ROE overstatement is the excessive earnings growth rates

14 that I described earlier in my response to Mr. D'Ascendis' MRP results. Mr.

15 D'Ascendis used the same expected market returns here, resulting in the same

16 excessive market ROEs and market risk premiums.

17 **Q.** **Did Mr. D'Ascendis consider the MRPs from sources that you presented in**

18 **your testimony?**

19 A. No. As I cited earlier in my Direct Testimony, Kroll and KMPG currently

20 recommend an MRP of 5.25% - 5.50%, the average of the Damodaran MRPs is

21 4.28%, and the historical MRPs range from 5.31% to 7.31%. The U.S. MRP was

22 5.5% from the IESE Business School Survey in 2025. Mr. D'Ascendis' average

23 recommended MRP of 8.15% is obviously far in excess of these MRPs.

1   Finally, I note that in the authoritative corporate finance textbook by

2   Brealey, Myers, Allen and Edmans, the authors stated: "We have no official

3   position on the issue, but we believe that a range of 5 to 8 percent is reasonable for

4   the risk premium in the United States."[36] Mr. D'Ascendis' recommended average

5   MRP of 8.15% exceeds the top end of this range.

6 **Q.   Please address Mr. D'Ascendis' use of the ECAPM.**

7 A.   The ECAPM is designed to account for the possibility that the CAPM understates

8   the ROE for companies with betas less than 1.0. Mr. D'Ascendis provided a

9   discussion of the ECAPM beginning on page 38 of his Direct Testimony. My

10   review of Mr. D'Ascendis' Exhibit DWD-5 indicates that he applied an ECAPM

11   formula included in *Modern Regulatory Finance* by Dr. Roger Morin, which is set

12   forth on page 39 of his Direct Testimony.

13   The argument that an adjustment factor is needed to "correct" the CAPM

14   results for companies with betas less than 1.0 is further evidence of the lack of

15   accuracy inherent in the CAPM itself and with beta in particular, as I pointed out

16   in Section III of my Direct Testimony. The ECAPM adjustment also suggests that

17   published betas by such sources as Value Line, Bloomberg, and S&P Capital IQ

18   are incorrect and that investors should not rely on them in formulating their

19   estimates using the CAPM. Finally, although Mr. D'Ascendis cited the source of

20   the ECAPM formula he used, he provided no evidence that investors favor this

21   version of the ECAPM over the standard CAPM.

---

[36] Richard A. Brealey, Stewart C. Myers, Franklin Allen and Alex Edmans, *Principles of Corporate Finance*, page 189; McGraw-Hill/Irwin, 14th Edition, 2023.

1   **Non-Utility Group ROE**

2   **Q.   Beginning at page 43 of his Direct Testimony, Mr. D'Ascendis presented a**

3   **proposal for including groups of 49 (Electric Utility Proxy Group) and 47 (Gas**

4   **Utility Proxy Group) domestic, non-price regulated companies in his ROE**

5   **analyses. Is it appropriate to use a group of unregulated companies to estimate**

6   **a fair ROE for the Companies?**

7   A.   No. Mr. D'Ascendis' inclusion of unregulated non-utility companies as an

8   additional method of evaluating the fair rate of return for the Companies is

9   inappropriate and should be rejected by the Commission.

10   Utilities have protected markets, *e.g.*, service territories, and may increase

11   the prices they charge in the face of falling demand or loss of customers. This is

12   contrary to competitive, unregulated companies who often lower their prices when

13   demand for their products decline. Obviously, the non-utility companies face risks

14   that lower risk regulated electric and gas utilities like LGE/KU do not face. As a

15   consequence, non-utility companies will have higher required returns from their

16   shareholders. According to Mr. D'Ascendis' Exhibit DWD-7, page 1, the average

17   ROE results for his non-price regulated groups excluding the PRPM range from

18   11.77% to 11.95%. These results are far higher than the utility proxy group DCF

19   results for both myself and Mr. D'Ascendis and are far in excess of my CAPM

20   results. Mr. D'Ascendis' analysis makes it very clear that investors require higher

21   returns for the members of this group of unregulated companies and that these

22   returns should in no way be applied to LGE and KU.

1   I should also add that Mr. D'Ascendis applied the RPM and CAPM to the

2   two non-utility groups in the same ways that he did with the Electric Utility Proxy

3   Group and the Gas Utility Proxy Group. Thus, my criticisms that I described earlier

4   of his application of the RPM and CAPM would apply to the non-utility groups as

5   well.

6   **Adjustments to the Cost of Equity**

7   **Q.   Did Mr. D'Ascendis propose additional adjustments to his recommended ROE**

8   **in this case?**

9   A.   Yes. Mr. D'Ascendis proposed a size adjustment, a credit risk adjustment, and a

10   flotation cost adjustment. These adjustments are summarized in Table 16, page 61

11   of Mr. D'Ascendis' Direct Testimony.

12 **Q.   Has the KPSC rejected these adjustments in past rate cases?**

13 A.   Yes, the Commission has consistently rejected these adjustments and Mr.

14   D'Ascendis acknowledged this, citing language from the Commission Orders in

15   Case Nos. 2021-00214 and 2022-00432.[37] The Commission also rejected these

16   adjustments in the recently decided Atmos Energy Case No. 2024-00276. Mr.

17   D'Ascendis was the witness for Atmos Energy in that case.

18 **Q.   Did Mr. D'Ascendis provide any additional information in his Direct**

19   **Testimony that, in your view, would be persuasive enough for the Commission**

20   **to reverse its position in this case?**

---

[37] D'Ascendis Direct Testimony, page 30, lines 4 through 17.

1   A.   No. In this case, Mr. D'Ascendis provided similar arguments in favor of these

2   adjustments as he did in the three cases I have referenced above.

3   **Q.   Should the Commission reject these adjustments in this case consistent with**

4   **its Orders in Case Nos. 2021-00214, 2022-00432, 2024-00276?**

5   A.   Yes. Although these adjustments should be rejected by the Commission consistent

6   with these three past rate cases, I will continue to offer my arguments as to why

7   these adjustments should be rejected in this case in order to supply the Commission

8   with a complete record.

9   **Size Adjustment**

10 **Q.   Beginning on page 49 of his Direct Testimony, Mr. D'Ascendis presented his**

11   **position on including a small size RP adjustment designed to compensate for**

12   **the alleged additional risk associated with the small size of LGE and KU's**

13   **regulated utility operations relative to the Utility Proxy Groups. Should the**

14   **Commission consider increasing the ROE for LGE/KU's operations based on**

15   **its smaller size relative to the Utility Proxy Groups?**

16 A.   No. The ROE size premium adjustment calculated by Mr. D'Ascendis is

17   inappropriate for regulated electric and gas utilities such as LGE and KU. Kroll's

18   size decile calculations are not limited to regulated companies and include many

19   unregulated companies, all of which are taken from the Center for Research in

20   Securities Prices ("CRSP") data base. Kroll also publishes average betas for each

21   decile group. Mr. D'Ascendis used the 4th, 5th, and 7th deciles in order to estimate

22   the size premium for LGE/KU's electric and gas ROEs. For the 7th decile that Mr.

1   D'Ascendis used to measure LGE's gas operations size premium, the average beta

2   ranged from 1.25 to 1.38. For the 5ᵗʰ decile, the average beta ranged from 1.17 to

3   1.24. For the 4ᵗʰ decile, the average beta ranged from 1.13 to 1.19. These decile

4   average betas far higher than the average proxy groups betas of 0.70 to 0.77 that I

5   used in my CAPM analysis for the proxy groups. Although we do not know what

6   LGE/KU's stand-alone beta would be, we do know that the current Value Line beta

7   for the Companies parent, PPL Corporation, is 0.80, which is also far lower than

8   the betas for the deciles used by Mr. D'Ascendis to calculate his size adjustment.

9   What this means is that regulated electric and gas companies have far lower risk

10   than the companies in the deciles analyzed by Mr. D'Ascendis and that his proposed

11   small size adjustment should be rejected by the Commission.

12 **Q.   Is Mr. D'Ascendis' size adjustment consistent with his credit risk adjustment?**

13 A.   No. Mr. D'Ascendis proposed a credit risk adjustment of -0.07% to reflect the

14   higher credit ratings of LGE and KU relative to the Electric Utility Proxy Group.

15   He proposed no credit risk adjustment for LGE's gas operations. Credit ratings from

16   S&P and Moody's reflect a comprehensive risk assessment of the companies that

17   receive these ratings. LGE's credit ratings of A3/A- from Moody's and S&P reflect

18   strong, lower risk utilities relative to the utility proxy groups. An increase in

19   LGE'KU's ROE for a size adjustment is inconsistent with their higher credit

20   ratings.

1 **Flotation Costs**

2 **Q. Beginning on page 58 of his Direct Testimony, Mr. D'Ascendis discussed**

3 **flotation costs and the need for including a flotation cost adjustment to the**

4 **Company's allowed ROE. Are flotation costs a legitimate consideration for the**

5 **Commission's determination of ROE in this proceeding?**

6 A. No. Mr. D'Ascendis recommended that the Commission consider adding an

7 adjustment of 0.15% to the Companies' ROE to recognize flotation costs. A

8 flotation cost adjustment attempts to recognize and collect the costs of issuing

9 common stock. Such costs typically include legal, accounting, and printing costs as

10 well as broker fees and discounts.

11 It is likely that flotation costs are already accounted for in current stock

12 prices and that adding an adjustment for flotation costs is double counting. A DCF

13 model using current stock prices should already account for investor expectations

14 regarding the collection of flotation costs. Multiplying the dividend yield by a 4%

15 flotation cost adjustment, for example, essentially assumes that the current stock

16 price is wrong and that it must be adjusted downward to increase the dividend yield

17 and the resulting cost of equity. This is not an appropriate assumption regarding

18 investor expectations or current stock prices. Stock prices most likely already

19 account for flotation costs, to the extent that such costs are even considered by

20 investors.

21 As I stated previously, the Commission has consistently rejected a flotation

22 cost adjustment in past cases.

23 **Q. Does this complete your Direct Testimony?**

1   A.   Yes.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF KENTUCKY	)	
UTILITIES COMPANY FOR AN	)	
ADJUSTMENT OF ITS ELECTRIC RATES,	)	CASE NO. 2025-00113
AND APPROVAL OF CERTAIN	)	
REGULATORY AND ACCOUNTING	)	
TREATMENTS	)	

In the Matter of:

ELECTRONIC APPLICATION OF LOUISVILLE	)	
GAS AND ELECTRIC COMPANY FOR AN	)	
ADJUSTMENT OF ITS ELECTRIC AND GAS	)	CASE NO. 2025-00114
RATES, AND APPROVAL OF CERTAIN	)	
REGULATORY AND ACCOUNTING	)	
TREATMENTS	)	

EXHIBITS

OF

RICHARD A. BAUDINO

ON BEHALF OF THE
OFFICE OF THE ATTORNEY GENERAL OF THE COMMONWEALTH OF KENTUCKY AND
KENTUCKY INDUSTRIAL UTILITY CUSTOMERS

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

AUGUST 2025