

Exhibit No.: _____
Issue(s): Rate of Return (ROR)/Capital Structure
Witness/Type of Exhibit: Murray/Direct
Sponsoring Party: Public Counsel
Case No.: GR-2024-0106

DIRECT TESTIMONY

OF

DAVID MURRAY

Submitted on Behalf of the Office of the Public Counsel

**LIBERTY UTILITIES (MIDSTATES NATURAL GAS) CORP.
D/B/A LIBERTY UTILITIES'**

FILE NO. GR-2024-0106

**

Denotes Confidential Information that has been redacted

**

July 18, 2024

PUBLIC

TABLE OF CONTENTS

| Testimony | Page |
|------------------------------|-------------|
| Capital Structure | 4 |
| Fair Return on Common Equity | 13 |
| Cost of Equity Methods | 26 |
| Proxy Group Cost of Equity | 30 |
| Overall Rate of Return | 37 |
| Summary and Conclusions | 37 |

DIRECT TESTIMONY

OF

DAVID MURRAY

**LIBERTY UTILITIES (Midstates Natural Gas) CORP.
d/b/a LIBERTY UTILITIES**

FILE NO. GR-2024-0106

1 **Q. What is your name and what is your business address?**

2 A. My name is David Murray, and my business address is P.O. Box 2230, Jefferson City,
3 Missouri 65102.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am employed by the Missouri Office of the Public Counsel (“OPC”) as a Utility
6 Regulatory Manager.

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

8 A. I am testifying on behalf of the OPC.

9 **Q. What aspect of ratemaking do you address in your testimony?**

10 A. My testimony will address the appropriate rate of return (“ROR”) for purposes of setting
11 Liberty Utilities (Midstates Natural Gas) Corp. (“Liberty Midstates”) revenue requirement
12 for its regulated natural gas distribution utility operations.

13 **Q. What experience, knowledge and education qualify you to sponsor ROR testimony in
14 this case?**

15 A. Please see the attached Schedule DM-D-1 for my qualifications as well as a summary of
16 the cases in which I have sponsored testimony on ROR and other financial issues.

17 **Q. What aspects of ROR will you address?**

18 A. I will address a fair and reasonable allowed return on common equity (“ROE”) and a fair
19 and reasonable capital structure.

1 **Q. What is your main conclusion after analyzing Liberty Midstates' specific financial**
2 **situation as well as the current state of capital markets?**

3 A. Liberty Midstates' allowed ROE should be set at 9.5%, based on my recommended
4 authorized ROE range of 9.25% to 9.75%. My recommended range reflects the following
5 considerations:

- 6 • the local natural gas distribution ("LDC") industry's stock valuation levels
7 are similar to the electric utility industry's stock valuation levels;
- 8 • my cost of common equity ("COE") estimates for the LDC industry are very
9 similar to my COE estimates for the electric utility industry in the
10 concurrent Evergy Missouri West ("EMW") rate case (Case No. ER-2024-
11 0189);
- 12 • my COE estimates are lower than average authorized ROEs of around 9.6%;
13 and
- 14 • the Commission's determinations in 2015 that authorized ROEs of
15 approximately 9.5% were fair and reasonable for Missouri's electric
16 utilities, which was the last time electric and LDC industry's Price-to-
17 Earnings ("P/E") ratios traded at levels consistent with current valuation
18 levels.

19 Under the Commission's typical zone of reasonableness ("ZOR") standard, a
20 recommended ROE in the range of 8.6% to 10.6% is considered fair and reasonable.

21 **Q. Before you discuss the details supporting your analysis, can you summarize the**
22 **rationale for your conclusions?**

23 A. Yes. Although capital structure and the allowed ROE are interrelated as to the ultimate
24 impact on Liberty Midstates' revenue requirement, I will first briefly explain my rationale
25 for each component, separately.

26 I recommend that the Commission set Liberty Midstates' allowed ROE for its Missouri
27 natural gas distribution operations at 9.5% based on a range of 9.25% to 9.75%. During
28 most of 2020 to 2022, utility stocks had not traded consistent with their typical negative

1 correlation to changes in long-term bond yields. However, since the end of 2022, utility
2 stock valuation levels resumed their typical negative correlation to interest rates. Further,
3 utility stocks have been significantly underperforming the S&P 500 since the end of 2022.
4 The S&P 500's P/E ratios during 2023 to 2024 have been higher than modern historical
5 averages, which implies a lower market risk premium than in 2022. Based on my
6 application of several cost of equity methods and corroborating information from investors,
7 I estimate the COE ("Cost of Equity") for LDCs to be around 8.5%, which is similar to my
8 COE estimate for the electric utility industry in EMW's rate case.

9 I recommend that the Commission set Liberty Midstates authorized common equity ratio
10 at 47.5% rather than Algonquin Power & Utilities Company's ("APUC") consistent request
11 of approximately 52.5% to 53% for its Missouri utility companies. APUC manages its
12 operating utility subsidiaries' capital structures through affiliate financing transactions.
13 Liberty Midstates, as well as its Missouri sister subsidiaries, do not issue their own debt or
14 equity to third parties. In past rate cases involving APUC's regulated Missouri utility
15 subsidiaries, the Commission cited this fact when deciding to authorize a capital structure
16 consistent with the ratios APUC targeted and maintained for Liberty Utilities Co.
17 ("LUCo"), which directly and indirectly issues debt on behalf of its United States'
18 regulated utilities.

19 While LUCo's average capital structures at the time of Liberty Midstates', Liberty Water's
20 and Empire's past rate cases were consistent with their low business risks, this dynamic is
21 no longer true. APUC has not been financially stable since its third quarter earnings
22 conference call on November 11, 2022, after which its stock price declined by
23 approximately 40% through the end of 2022. As a result, activist investors prodded APUC
24 to undergo a strategic review, which resulted in APUC announcing its plan to divest its
25 non-regulated generation assets directly owned by its subsidiary, Algonquin Power
26 Company ("APCo"). However, even after divestiture, APUC will likely still have a
27 sizeable amount and proportion of holding company debt outstanding.

28 APUC's strategic intent to transition to an owner of only regulated utility companies should
29 eventually stabilize its business and financial risk, as well as simplify its capital structure.

1 Until that occurs, the Commission should set APUC’s authorized ROR for its Missouri
2 utilities based on APUC’s own past communications to investors as to the proportion of
3 debt that its low-risk regulated utility segment can support, which is in the range of 50% to
4 55% of its capital structure.

5 **Q. What allowed ROE, long-term cost of debt, capital structure, and, ultimately, allowed**
6 **ROR are you recommending that the Commission use to set Liberty Midstates’**
7 **revenue requirement?**

8 A. I recommend a ROE of 9.50%, which is within my recommended ROE range of 9.25% to
9 9.75%, a long-term debt cost of 3.97%, a capital structure consisting of 47.5% common
10 equity, and 52.5% percent long-term debt, and a ROR of 6.60%.

11 **Q. How is your testimony organized?**

12 A First, I address a fair and reasonable ratemaking capital structure. Next, I discuss the
13 context of current utility capital market conditions as it relates to the longer-term trend
14 since 2015, when the Commission generally deemed a 9.5% allowed ROE fair and
15 reasonable for Missouri’s large electric utility companies. Following, I provide the details
16 of the approaches and analysis I performed to estimate Liberty Midstates’ COE. Finally, I
17 summarize my overall ROR recommendation.

18 **CAPITAL STRUCTURE**

19 **Q. What is capital structure?**

20 A. Capital structure represents how a company’s assets are financed. A typical, simple capital
21 structure consist of common equity, long-term debt, and short-term debt. Some utilities’
22 capital structures may include a small portion of preferred stock. Although short-term debt
23 is a typical component of a utility company’s capital structure, if it is fully supporting
24 construction work in progress (“CWIP”), then it is typically excluded from the rate making
25 capital structure, and, instead, is reflected in the allowance for funds used during
26 construction (“AFUDC”) rate.

1 **Q. What is a market-based capital structure?**

2 A. A capital structure in which third-parties can directly purchase securities funding a
3 company's assets.

4 **Q. Does Liberty Midstates have a market-based capital structure?**

5 A. No. As I will explain in more detail in my testimony, Liberty Midstates is financed
6 completely by affiliate financing transactions. Therefore, it does not have an investable
7 capital structure.

8 **Q. Is Liberty Midstates owned by any companies that can be used as a proxy to estimate
9 a fair and reasonable ratemaking capital structure for Liberty Midstates?**

10 A. Yes. In Liberty Midstates' 2018 rate case, Case No. GR-2018-0013, I recommended the
11 Commission use the capital structure of Liberty Midstates' intermediate holding company,
12 LUCo, for purposes of setting Liberty Midstates' ROR. Although I still consider LUCo an
13 appropriate proxy, as I will explain in further detail, the Commission should use LUCo's
14 communicated targeted ratios rather than recent actuals.

15 APUC's capital structure can also be used as a proxy, but it is a very complex capital
16 structure that is in a state of transition due to APUC's announced plan to divest its non-
17 regulated operations. Part of APUC's rationale to transition to a holding company that
18 only owns rate-regulated utility companies is to reduce its cost of capital. In order to
19 accomplish lowering its cost of capital, APUC plans to eventually utilize more leverage at
20 the holding company. Because APUC is in a state of transition, with recapitalization
21 accompanying this transition, I do not consider it to be an appropriate proxy for this case.

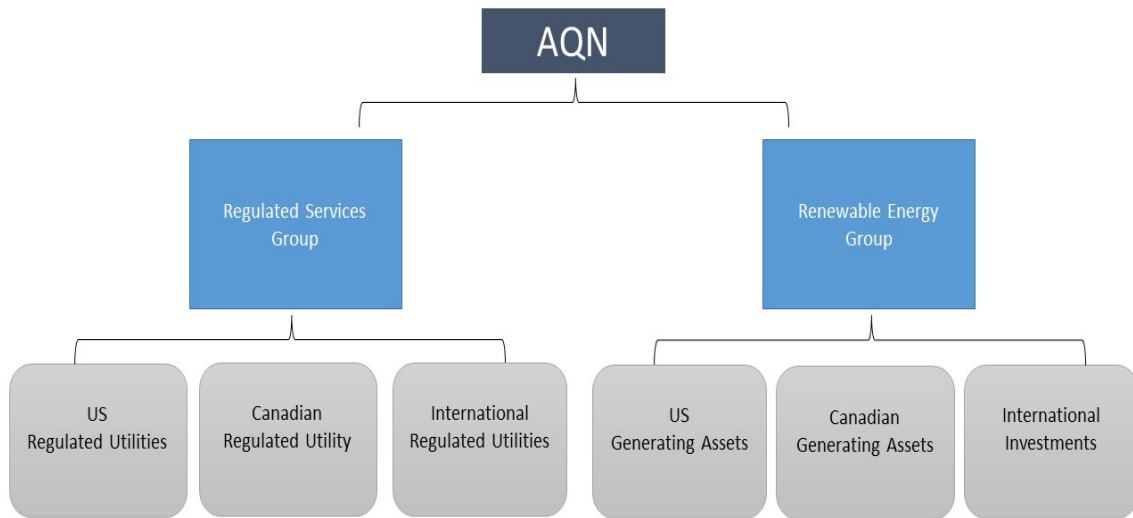
22 **Q. What capital structure ratios do you recommend for purposes of setting Liberty
23 Midstates' ROR?**

24 A. I recommend the Commission use a capital structure consisting of 47.5% common equity
25 and 52.5% long-term debt to set Liberty Midstate's authorized ROR. This capital structure
26 is ** _____
27 _____

**

Q. Can you describe the corporate structure in which Liberty Midstates resides?

A. Yes, but it is not an easy task. APUC provided the following simplified version of its organizational structure in its 2023 Annual Report:



APUC’s Renewable Energy Group typically consists of approximately 25% to 30% of APUC’s operations, depending on the metric used to measure the concentration. LUCo is the main holding company for APUC’s indirect ownership of its United States regulated utilities. As shown in Schedule DM-D-2 there are four other holding companies between LUCo and APUC. In past rate cases involving Liberty Midstates and its Missouri affiliates, I discovered that the Company made affiliate loans to some of these intermediate holding companies for purposes of making equity contributions to LUCo, despite the fact that LUCo guaranteed the third-party debt issued for purposes of these equity infusions.

As illustrated in Schedule DM-D-2, APUC is the ultimate parent company of Liberty Midstates, as well as that of its Missouri affiliates, The Empire District Electric Company (“Empire-Electric”), The Empire District Gas Company (“Empire-Gas”), and Liberty Utilities (Missouri Water) LLC (“Missouri Water”).

1 It is important to understand and consider APUC’s corporate structure, business segments,
2 and financing strategy for purposes of setting a fair and reasonable ROR for APUC’s
3 Missouri utilities. This context is especially necessary for the purposes of this and other
4 pending and upcoming Liberty Midstates’ Missouri affiliates rate cases. APUC’s financial
5 condition has been tenuous since it released and discussed its third quarter 2022 earnings
6 with investors during its earnings call on November 11, 2022. These financial concerns
7 have prompted several activist investor groups¹ to pressure APUC to undergo a strategic
8 review to explore the best path forward to improve APUC’s stock value. Consequently,
9 APUC formed a Strategic Review Committee in May 2023 to evaluate various options
10 related to its business and financing strategies. Unfortunately, to date, Liberty Midstates
11 has resisted providing OPC access to the Strategic Review Committees’ documents and
12 analysis.

13 After APUC’s management and board of directors’ (“BOD”) analyzed and evaluated
14 APUC’s current operations and need to limit accessing third-party capital markets, APUC
15 announced it would pursue a sale of its non-regulated generation operations held at APCo.
16 While the sale of these assets should include assumption and/or elimination of APCo debt,
17 because APUC has issued a sizeable amount and proportion of holding company debt over
18 the last several years, APUC’s financial risk profile after the divestiture is uncertain.
19 APUC has communicated to investors that it is committed to maintaining ‘BBB’ credit
20 ratings, but the ability to do so likely depends on successful execution of the sale of its non-
21 regulated assets. The uncertainty related to the amount of proceeds that can be raised to
22 reduce APCo and APUC debt creates a financial conflict of interest for APUC’s
23 management to optimize LUCo’s capital structure.

24 APUC manages Liberty Midstates’ capital structure, as well as that of its Missouri
25 affiliates, through affiliate company financing transactions. As it relates to affiliate
26 promissory notes issued by Liberty Midstates, APUC imputes a cost of long-term debt to
27 Liberty Midstates based on third-party debt issued by LUCo and its financing affiliate
28 Liberty Utilities Finance GP1 (“LUF”). Although rating agencies have not changed

¹ Starboard Value, Corvex and Ancora.

1 LUCo's and/or LUF's investment-grade credit rating ('BBB') since APUC's stock price
2 declined precipitously, this fact alone is not dispositive as to whether LUCo's cost of debt
3 or capital structure have been affected by APUC's financial difficulties.

4 **Q. Do investors and rating agencies expect that post APUC's divestiture of its non-**
5 **regulated operations, APUC will have more financial risk (i.e. debt) in its capital**
6 **structure?**

7 A. Yes. APUC has issued a significant amount of holding company debt over the last several
8 years. Fitch Ratings stated the following in a December 1, 2023 ratings report regarding
9 APUC's holding company debt: "APUC's parent debt is also elevated at roughly 40% of
10 total debt and is projected to remain elevated over the forecast period [2025-2026]."²

11 The forecast period includes Fitch's expectation of APUC's divestiture of its renewable
12 business in 2024 and APUC's expected recapitalization of its capital structure with
13 estimated proceeds from the divestiture. Consequently, rating agencies and debt investors
14 are factoring in these expectations into their risk assessments.

15 S&P Global Ratings – RatingsDirect states the following about its expectations:

16 Following APUC's divestiture of its nonutility, we expect business
17 risk will decrease but be offset by weaker financial measures.
18 Currently, our assessment of the company's business risk profile as
19 strong reflects the combination of APUC's utility businesses (about
20 75% of EBITDA), offset by its weaker nonutility business (about
21 25% of EBITDA). Following the sale of its renewable business, we
22 expect to revise our business risk profile assessment to excellent.
23 We also expect that APUC's financial measures will weaken
24 partially because we expect the company will use a portion of the
25 asset sale proceeds to repurchase shares. Under our base case,
26 following the divestment, we expect the company's funds from
27 operations (FFO) to debt will be 11%-13% through 2026....³

28 ...APUC's planned divestment is an important assumption for
29 maintaining credit quality. If the company does not successfully
30 execute on the asset sale of its renewable asset portfolio and

² Ivana Ergovic and Zhihua Zhang, "Algonquin Power & Utilities Corp.," Fitch Ratings, December 1, 2023, p. 2

³ Omar El Gamal, CFA, et. al., "Algonquin Power & Utilities Corp.," S&P Global Ratings – RatingsDirect, December 13, 2023, pp. 1-2.

1 financial measures continue to weaken, credit quality would likely
2 be pressured.
3

4 I still consider it appropriate to analyze LUCo's adjusted actual capital structures for
5 purposes of determining a reasonable ratemaking capital structure. However, to the extent
6 they are inconsistent with communicated targets before APUC's financial instability, it
7 should be scrutinized. APUC has been much more active in issuing additional holding
8 company financing, such as credit facilities, subordinated debt, and mandatory convertible
9 debt, since past rate cases in which I recommended LUCo's adjusted actual capital
10 structure be used to set the ROR for APUC's Missouri utilities. Additionally, APUC's
11 exposure to variable rate debt throughout the consolidated company has contributed to its
12 financial underperformance. Although LUCo does not guarantee APUC's holding
13 company debt, this debt causes APUC's management to be conflicted in taking full
14 advantage of LUCo's debt capacity.

15 **Q. Can you explain APUC's and LUCo's debt and treasury functions in more detail?**

16 A. Yes. Liberty Utilities Services Corp. manages Liberty Midstates' treasury needs along
17 with those of APUC's other regulated utility companies, predominately at the LUCo level.
18 LUCo has a \$1 billion credit facility, which in part supports LUCo's \$500 million
19 commercial paper program. LUCo also executed a \$1.11 billion delayed draw credit
20 facility in December 2021, from which it drew \$610.386 million on January 3, 2022, to
21 partially fund its acquisition of New York American Water Company.

22 Historically, LUCo relied on APUC's financing subsidiary, Liberty Utilities Finance GP 1
23 ("LUF"), for its long-term debt financing needs. LUF issued debt directly to third parties
24 to raise capital for indirect investment in LUCo through affiliate loan agreements and
25 equity infusions from Liberty Utilities (America) HoldCo Inc. LUCo guarantees all LUF
26 debt, including debt issued solely to purchase equity in LUCo.⁴ However, beginning in
27 January 2024, LUCo began issuing bonds directly to third-party debt investors.

⁴ Liberty Midstates response to Staff DR No. 117.3 in Case No. GR-2018-0013.

1 On a stand-alone basis (*i.e.* not consolidated) APUC had the following debt and hybrid
2 securities outstanding as of March 31, 2024:

3 (1) \$1 billion credit facility of which it has drawn \$641.841 million;

4 (2) \$1.4 billion of 60-year subordinated debt outstanding that matures in
5 2079 and 2082;

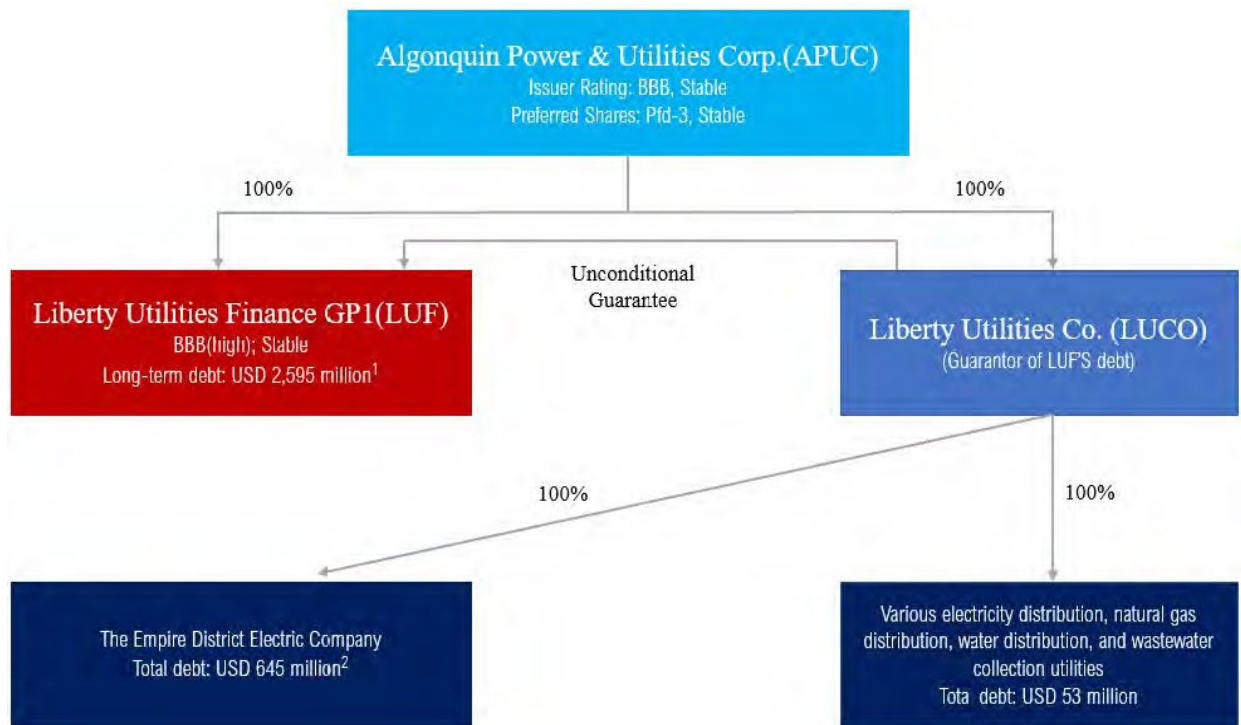
6 (3) \$1.15 billion in mandatorily convertible equity units that mature on June
7 15, 2026; and

8 (4) \$184.299 million of preferred stock.

9 In essence, APUC has debt supporting its utility investments at three different levels-
10 APUC, LUCo (both direct-issued debt and debt issued through its financing affiliate, LUF)
11 and legacy debt held at its operating utilities. APUC's increased use of holding company
12 debt and hybrid financing activity makes it difficult to assess APUC's capitalization
13 strategies for its various investments. Consequently, any deviation from past targeted
14 capital structures requires careful scrutiny.

15 **Q. Can you provide an illustration of LUCo's relationship with LUF, its past long-term**
16 **debt financing vehicle?**

17 A. Yes. In its February 24, 2024, LUF ratings report, DBRS provided the following chart
18 illustrating LUF's relationship within APUC's corporate structure:



1

2 **Q. What was the Commission’s past basis for authorized ratemaking capital structures**
 3 **for APUC’s Missouri utilities?**

4 A. The Commission set Liberty Midstates, Liberty Water, and Empire’s authorized ROR
 5 based on LUCo’s adjusted capital structure. The Commission’s decisions were consistent
 6 with recommendations made by Staff and/or OPC in those cases, which was to rely on
 7 LUCo’s adjusted capital structure because it was the only capital structure in which third-
 8 party debt investors could directly invest to gain direct exposure to LUCo’s regulated utility
 9 subsidiaries.

10 **Q. Is LUCo’s capital structure consistent with its past capital structures in which it had**
 11 **targeted a 45% to 50% common equity ratio?**

12 A. No. As shown in Schedule DM-D-3, LUCo’s capital structure has recently consisted of as
 13 much as 60% common equity during 2022 and 2023. Despite having this high of a common
 14 equity ratio, LUCo is still rated ‘BBB’.

1 **Q. Has APUC recognized that its Regulated Utility Services Group has higher debt**
2 **capacity than its Renewable Energy Group?**

3 A. Yes. In presentations to fixed-income investors, APUC indicated that it targeted a long-
4 term debt to total capital ratio in the range of ** _____ **
5 for its Regulated Utility Services Group and a long-term debt ratio of ** _____
6 _____ ** for its Renewable Energy Group. After consolidating the two
7 segments of the company, APUC indicated it targeted a long-term debt ratio in the range
8 of ** _____ ** These targeted capital structures are
9 consistent with the fundamental principles of the interaction of business and financial risk.

10 The Regulated Services Group has the lowest business risk of all three entities—LUCo,
11 APUC, and Algonquin Power Company—because it only owns price-regulated monopoly
12 utilities, which includes the utilities it owns in the United States. Therefore, these assets
13 typically supported more leverage than the rest of APUC’s assets and still carried a stable
14 investment-grade credit rating. The Renewable Energy Group owns independent power
15 projects, which are not protected by price-regulation. Therefore, the Renewable Energy
16 Group’s riskier assets (*i.e.* business risk) should be offset by less leverage (*i.e.* financial
17 risk).

18 **Q. Has APUC made any statements, internally or externally, about how it manages its**
19 **regulated operating utility company (e.g. Liberty Midstates) capital structures?**

20 A. ** _____
21 _____
22 _____
23 _____
24 _____
25 _____
26 _____
27 _____
28 _____

⁵ Liberty Utilities Fixed Income Presentation, September 2017, p. 12 and Liberty Power Co. Fixed Income Update Presentation, September 2017, p. 12

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

**

Q. Based on your analysis and consideration of all of the factors you discussed regarding APUC’s, LUCo’s and Liberty Midstates’ capital structures, what capital structure do you recommend be used to set Liberty Midstates’ ROR?

A. I recommend the Commission use a common equity ratio of 47.5% and a long-term debt ratio of 52.5%. My recommended common equity ratio is the mid-point of the common equity ratio that APUC had typically communicated to investors it targets for its Regulated Services Group. This common equity ratio captures the amount of debt capacity APUC recognized its regulated utility operations normally can support and still maintain a BBB credit rating.

Q. What cost of debt should be applied to your recommended capital structure?

A. LUCo’s embedded cost of debt should be applied to my recommended capital structure because it is based on all third-party debt issuances. As of December 31, 2023, LUCo’s embedded cost of debt was 3.97%.

FAIR RETURN ON COMMON EQUITY

Q. How did you decide what approach to take for estimating a fair and reasonable allowed ROE for purposes of setting Liberty Midstates’ rates in this case?

A. I reconciled the principles established in *Hope* and *Bluefield*⁶ with modern financial models used to estimate the COE. While setting the allowed ROE based on the COE is at least theoretically sufficient to allow a company to attract capital in efficient markets, because average allowed ROEs have been set higher than the COE, this fact must be considered when determining a fair and reasonable allowed ROE. In fact, this Commission has set a “zone of reasonableness standard”⁷ for purposes of setting an allowed ROE with the

⁶ *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 64 S.Ct. 281, 88 L.Ed. 333 (1943); *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679, 43 S.Ct. 675, 67 L.Ed. 1176 (1923).

⁷ *State ex rel. Missouri Gas Energy v. Public Service Commission*, 186 S.W.3d 376, 383 (Mo App. W.D. 2005)

1 starting point for this zone of reasonableness being a recent industry average allowed ROE.
2 Considering these principles, I first estimated Liberty Midstates' current COE based on my
3 analysis of proxy companies, then I compared this estimated COE to the utility COE
4 environment since late 2014 to early 2015 to determine if recent changes in utility capital
5 markets imply a fundamental change in the cost of capital. My analysis also includes
6 consideration of other recently authorized ROEs.

7 **Q. What is your estimate of Liberty Midstates' current COE?**

8 A. Based on my analysis, it is around 8.5%.

9 **Q. Based on your analysis, your awareness of capital market conditions, investor**
10 **expectations and recent average allowed ROEs for LDCs, what do you consider to be**
11 **a fair and reasonable allowed ROE for Liberty Midstates' Missouri natural gas**
12 **distribution operations?**

13 A. I consider 9.25% to 9.75% to be a reasonable range. My recommended allowed ROE is
14 within the range of the Commission's typically defined ZOR range of 100 basis points
15 above and below recent average authorized ROEs of approximately 9.6% for the last
16 twelve months ended March 31, 2024⁸ (*i.e.* 8.6% to 10.6%). After considering my COE
17 estimates, the Commission's authorized ROE of approximately 9.5% for Missouri's major
18 electric utilities for rate cases decided in 2015, the Commission's 10% authorized ROE for
19 Liberty Midstates in its 2014 rate case (GR-2014-0152), and the Commission's 9.37%
20 authorized ROE for Spire Missouri in Case No. GR-2021-0108, I consider a 9.5% ROE to
21 be fair and reasonable.

22 **Q. How did you inform yourself for purposes of determining the best methods and**
23 **approaches to use to estimate Liberty Midstates' COE?**

24 A. I attempted to review APUC's and Liberty Midstates' board of directors' ("BOD")
25 materials and minutes since January 1, 2021. However, at the time I prepared my
26 testimony, Liberty Midstates had only provided OPC access to 15 pages of APUC's BOD

⁸ RRA Major Rate Case Decisions Quarterly Updates, April 19, 2024.

1 materials for this entire period. In Liberty Midstates' view, these were the only pages
2 relevant to Liberty Midstates because these pages specifically mentioned Liberty Midstates
3 by name. Of course, considering that Liberty Midstates and its Missouri affiliates are
4 financed by APUC and LUCo through consolidated security issuances, OPC disagrees that
5 information related to APUC's strategic and financing decisions are not relevant. The
6 OPC will continue to pursue broader access to APUC's BOD materials and its committees'
7 (especially its Strategic Committee) materials as this case progresses. Liberty Midstates
8 did provide access to LUCo's central division's quarterly directors/managers meeting
9 materials. However, because third-party financing is not issued at this level, this
10 information provided limited insight into market-based capital structures and cost of capital
11 issues.

12 I also reviewed investment-industry research covering APUC, APCo, and LUCo since the
13 end of 2022. I mainly relied on reports Liberty Midstates provided in response to Staff
14 Data Request No. 73. Although Liberty Midstates provided many reports published on
15 APUC since the end of 2022, I discovered that several reports published after APUC's third
16 quarter 2022 earnings conference were not included. I find this troubling considering the
17 30% decline of APUC's stock price within two days of the 2022 third quarter earnings
18 conference call. Because APUC's business and financial risks may cause an increase to its
19 subsidiaries' cost of capital, it is important to perform due diligence into investors'
20 views/concerns about APUC's financial underperformance.

21 After performing my research on the information that was made available to me, I decided
22 the best approach for estimating Liberty Midstates' COE is to perform a COE analysis on
23 a proxy group of publicly-traded utility companies whose operations are comparable to
24 Liberty Midstates' natural gas distribution operations.

25 **Q. What models did you use to estimate Liberty Midstates' COE?**

26 A. I used a multi-stage discounted cash flow ("DCF") method, with a specific emphasis on
27 consensus analysts' estimated dividends and the modeled growth of dividends. A DCF
28 method that focuses on dividends as the proxy for cash flow is more precisely defined as
29 the dividend discount model ("DDM"). I also applied the Capital Asset Pricing Model

1 (“CAPM”) to the proxy group. Finally, I performed simple and logical reasonableness
2 checks of my COE estimates. These reasonableness checks recognize the basic
3 characteristics of utility stocks, mainly that the investment community perceives them as
4 yield/income investments. One such reasonableness check is a straightforward bond-yield-
5 plus-risk-premium method, a method that is included in the Chartered Financial Analyst
6 (“CFA”) Program curriculum.

7 **Q. Did you perform a company-specific analysis of APUC’s COE?**

8 A. No.

9 **Q. Why not?**

10 A. APUC is currently a diversified, Canada-based company with domestic and international
11 regulated and non-regulated utility investments. APUC’s exposure to non-regulated
12 generation operations through its APCo subsidiary always caused it to have a higher cost
13 of capital than its regulated utility segment (*i.e.* business risk). Additionally, APUC’s
14 complex capital structure, which includes significant holding company debt, project debt,
15 tax equity and significant variable interest rate debt (*i.e.* financial risk), caused additional
16 uncertainty as to the potential impact of a decline in revenues on APUC shareholders.
17 These risks materialized when APUC surprised investors with unexpected financial
18 underperformance at the end of 2022. These events also caused APUC to lower its forward
19 earnings guidance and hint that APUC may lower its dividend, which it did by 40% in
20 2023. It is wholly inappropriate to directly or indirectly charge utility ratepayers any
21 increased costs caused by APUC’s financial weakness.

22 **Q. Is APUC irrelevant to ensuring Liberty Midstates’ authorized ROR is reasonable?**

23 A. No. APUC’s business and financing strategies impact Liberty Midstates’ cost of capital.
24 Liberty Midstates does not perform its own independent financing functions and does not
25 directly access the capital markets. Therefore, for purposes of evaluating the amount of
26 debt Liberty Midstates’ assets, it is important to evaluate APUC’s financing activities.
27 Also, because APUC has more business risk than Liberty Midstates, analyzing and
28 understanding APUC’s capitalization and cost of capital tests the credibility of whether

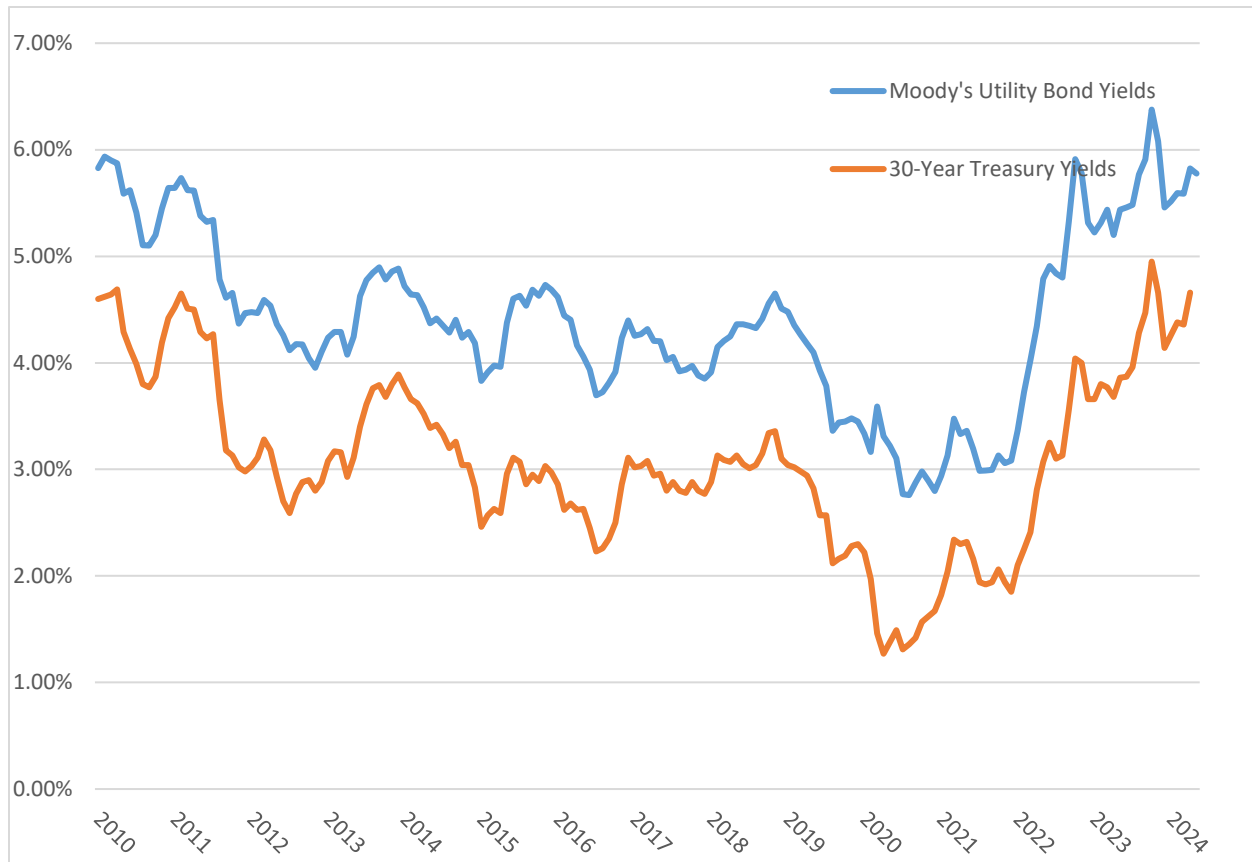
1 Liberty Midstates’ requested ratemaking capital structure is consistent with APUC’s
2 current capital structure strategies or its anticipated capital structure after sale of its non-
3 regulated generation operations.

4 **Q. Can you describe and illustrate recent and long-term changes in long-term bond**
5 **yields?**

6 A. Yes, long-term bond yields have increased dramatically over the last couple of years after
7 declining to historically low levels during the Covid-19 pandemic (2020 – 2021). In fact,
8 during the Fall of 2023, investment grade utility bond yields and long-term United States
9 Treasury (“UST”) bond yields increased to their highest levels since 2010.

10 The below graph shows long-term bond yields since January 1, 2010. Some considered
11 the early stages of lower long-term interest rates in the first half of this decade to be
12 anomalous because of the Federal Reserve Bank’s (“Fed”) quantitative easing (“QE”)
13 programs⁹ through October 2014. However, for the last half of the past decade, long-term
14 interest rates continued an overall declining trend, until they reached all-time lows in 2020
15 and 2021. However, as I previously described, long-term rates have since increased
16 dramatically, peaking in October 2023.

⁹ QE involved three rounds of the Fed’s direct intervention in bond markets beyond just lowering the Fed Funds rate. The Fed’s QE programs had the express intent of reducing long-term interest rates.



1

2

3

4

Average utility long-term bond yields had declined to modern all-time lows in the latter half of 2020, to levels not experienced since the late 1940s and early 1950s. But, in less than three years, utility long-term bond yields have more than doubled.

5

6

7

8

9

10

Although more simplistic COE methods may imply that the COE for utilities whipsawed along with bond yields, utility valuation levels over this period do not support this notion. As I will explain in more detail later in my testimony, the post Covid-19 economic and capital market conditions have been atypical. This is likely a consequence of both the Fed's and U.S. Congress's massive interventions through monetary and fiscal policies during the Covid-19 pandemic.

11

Q. Why is it typically important to evaluate trends in long-term interest rates when evaluating the utility industry's COE?

12

13

A. The investment community typically regards utility stocks as bond proxies/pseudo bonds, meaning that if long-term bond yields decline, that decline typically causes regulated utility

14

1 stock prices to increase. Although investors' total returns in utility stock investments do
2 include some capital gains, because of the slow, steady growth in earnings, utility
3 companies have typically distributed approximately 2/3 of their earnings as dividends to
4 shareholders, causing utility stocks to be characterized as yield investments. Therefore,
5 changes in utility stock valuation levels have historically had a strong inverse correlation
6 to changes in bond yields, *i.e.* as bond yields decline, utility stock prices increase.

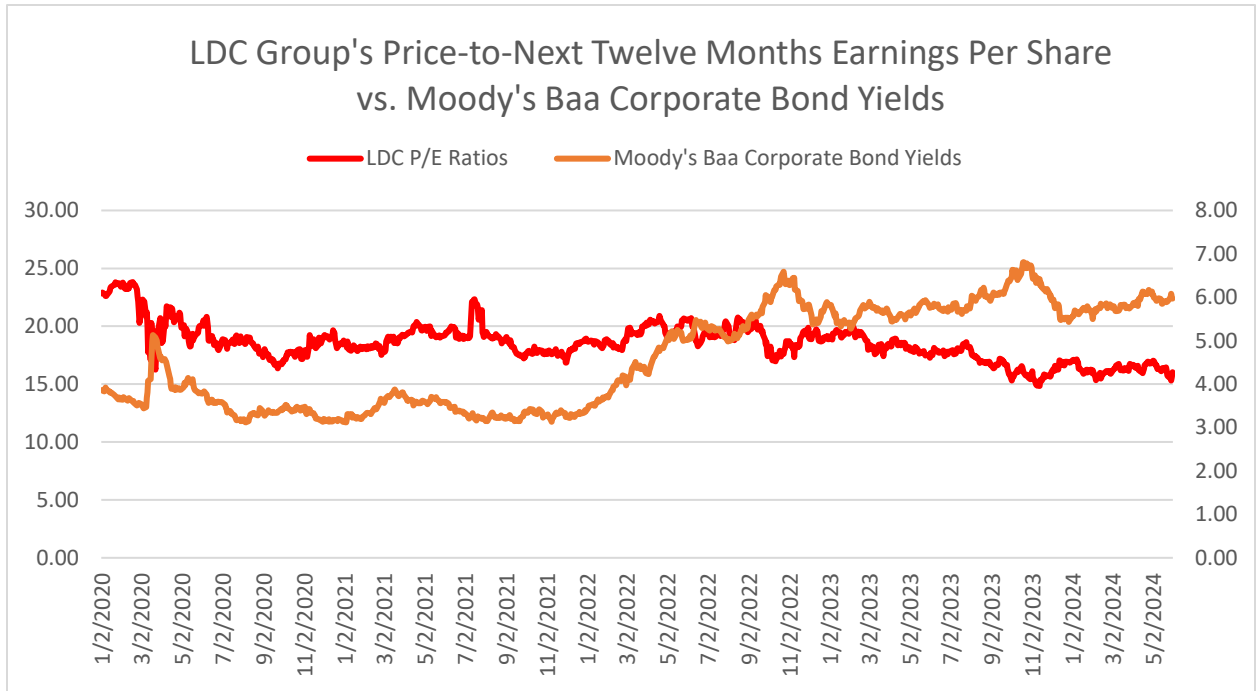
7 **Q. From April 2020 through August 2022, did utility stock valuations and bond yields**
8 **provide traditional and consistent signals about utilities' cost of capital?**

9 A. No. Following drastic and significant intervention by the Fed in monetary policy and the
10 UST in fiscal policy, in reaction to Covid-19 and its associated mitigation measures, the
11 yield-to-maturity ("YTM") on utility and corporate bonds traded at 70-to-80 year lows.
12 However, at the same time, broader utility stocks (mainly local natural gas distribution
13 companies ("LDC") and electric utility stocks) underperformed the S&P 500. The same
14 atypical trading pattern occurred as long-term bond yields began a dramatic increase in
15 2022. Utility stocks significantly outperformed the S&P 500 on a relative basis, despite
16 long-term yields increasing through much of 2022. The increase in yields caused the S&P
17 500 to contract significantly, while causing only a slight decline in utility stock prices,
18 allowing them to maintain similar P/E ratios as before the rapid increase in long-term
19 interest rates.

20 Consequently, while the utility industry's debt costs fluctuated along with the macro
21 changes in interest rates, the same was not true for the utility industry's cost of equity. For
22 example, as I will discuss later in my testimony, use of the CAPM with standard
23 assumptions, implied that the utility industry's COE fluctuated along with long-term bond
24 yields since 2020, but such indications were not corroborated by utility equity market
25 valuations. However, recent contractions in utility P/E ratios indicate investors may now
26 be expecting long-term bond yields to remain higher for longer.

27 **Q. What about since August 2022?**

28 A. Starting around mid-September 2022, LDC P/E ratios finally resumed their more typical
29 inverse correlation with long-term yields, as illustrated in the following chart:



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

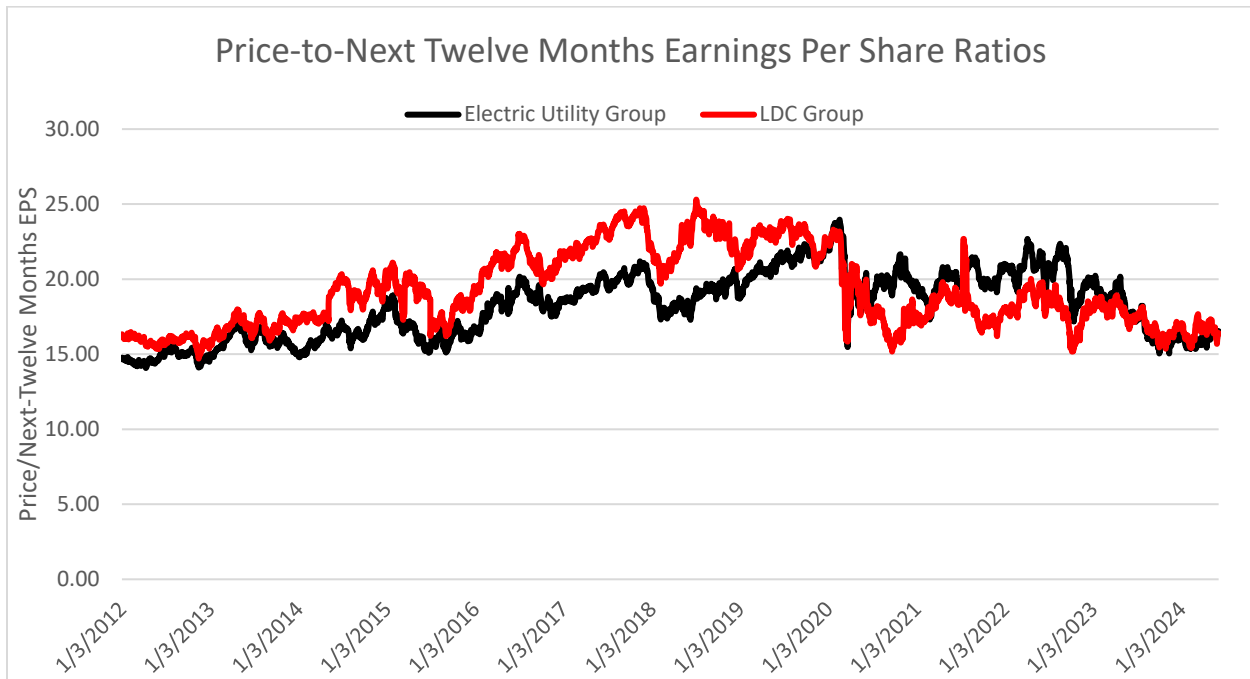
During the all-time low bond yield environment, the utility industry was able to take advantage of these extremely low debt capital costs. For example, on September 23, 2020, LUCo, through its financing entity LUF, issued 10-year, \$600 million bonds at an annual coupon rate of only 2.05%. However, during this period, utility equity valuation levels did not increase in response to the decline in bond yields, which implied investors did not expect extremely low interest rates to be sustained. Similarly, as bond yields increased significantly in 2022, utility equity valuation levels did not contract as typically expected – perhaps because investors understood that the extremely low cost of debt during 2020 to 2021 was not sustainable.

To illustrate the significant increase in utility bond yields, on January 12, 2024, LUCo issued 10-year, \$350 million bonds at an annual coupon rate of 5.87%, which is higher than the coupons on other 10-year bonds issued in 2024 by Missouri’s major utilities.

Q. Can you provide a graphic illustration that shows the electric utility and LDC industries’ price-to-next-twelve-months-earnings (P/E) ratios since January 1, 2012?

A. Yes. First, I should note that P/E ratios are often used to evaluate the relative cost to the investor to buy a share of earnings and the potential growth of those earnings. Also, for

1 context regarding the favorableness of utility P/E ratios over the past several years, utility
2 P/E ratios averaged 14.4x since 1995.¹⁰ A graph of the P/E ratios for the LDC and electric
3 utility industry follows:



4
5 As illustrated in the above graph, LDCs and the electric utility industry have been trading
6 in line since the spring of 2023. This parity occurred after the electric utility industry had
7 been trading at a premium to the LDC industry since the beginning of 2020. Assuming
8 both subsectors of the utility industry have similar growth profiles and dividend payout
9 ratios, P/E ratios at parity for the subsectors implies similar costs of equity.

10 **Q. Why is it important to be aware of the historical context of the utility industry’s P/E**
11 **ratios?**

12 **A.** Because the Commission deemed a 9.7% to 9.8% authorized ROE as fair and reasonable
13 for Missouri’s large electric utilities around 2012, whereas the Commission deemed an
14 approximate 9.5% authorized ROE as fair and reasonable for Missouri’s large electric
15 utilities around 2015. Considering that both the electric and gas distribution utility

¹⁰ Durgesh Chopra, et. al., “Utes Close To Fair Value In Our Bond Model,” Evercore ISI, April 18, 2021, p. 8.

1 industries are trading in line with the electric utility valuation levels around 2015, this
2 supports the reasonableness of a 9.5% authorized ROE in the current capital market
3 environment.

4 **Q. Considering the Commission authorized Liberty Midstates a 10% ROE in its 2014**
5 **rate case, why should the Commission give more weight to the 9.5% ROEs it awarded**
6 **electric utilities in 2015 in determining a fair and reasonable ROE in this case?**

7 A. Because the Commission's authorized ROEs of approximately 9.5% were awarded to
8 Ameren Missouri and Evergy Metro, which both directly access third-party debt markets.
9 These awarded ROEs supported each company's ability to continue to access capital at
10 reasonable prices. Additionally, based on comparing the LDC and electric utility P/E ratios
11 in late 2014 and early 2015, LDC's P/E ratios implied that their COE was lower than the
12 electric utility industry at that time. Therefore, despite the Commission's decision to award
13 Liberty Midstates a higher ROE in its 2014 rate case, in my opinion, an ROE below 9.5%
14 would have been fair and reasonable.

15 **Q. What are utility equity investors' reactions to the current interest rate environment?**

16 A. Based solely on interpreting/evaluating utility stock price changes, as compared to that of
17 the broader market, stronger economic conditions and optimism about potential
18 productivity benefits from artificial intelligence have been causing the S&P 500, especially
19 the constituents in the information technology sector, to significantly outperform the
20 utilities sector. Until 2022, most utility equity analysts had projected that low interest rates
21 justified a continued reduction of authorized ROEs. However, given the fact that long-
22 term bond yields have remained higher since late 2022, now investors expect regulators to
23 at least hold the line on awarded ROEs.

24 **Q. Why would investors expect utility commissions to hold the line on authorized ROEs**
25 **if the cost of capital has increased?**

26 A. Due to the fact that utility commissions did not reduce authorized ROEs much when the
27 cost of capital was declining. Barclays recently indicated the following about authorized
28 returns while the cost of capital was declining from 2010 to the early 2020s:

1
2 **High Returns Unlikely as ROEs Sticky While Rates Were at Decade Lows**
3

4 Simplistically, from 2010 to early 2020s long term risk free yields have only
5 declined, while utility ROEs remained steady at an average 9.8% authorized
6 rate on the electric side. Utilities were arguably over-earning during this
7 timeframe in our view. We believe over a long term (10yr+) time horizon
8 there should be a case for higher ROEs if risk free yields remain elevated or
9 move higher, but we see it unlikely that regulated ROEs return to 12%+
10 levels anytime soon. This likely leads to an extended CoC [cost of capital]
11 crunch for the utility industry, which will pressure management teams'
12 abilities to raise capex budgets materially in the five-year window. Please
13 see our additional work below highlighting the CoC crunch.¹¹

14 **Q. What COE have equity analysts been using to estimate a fair price to pay for LDC**
15 **stocks in today's higher-interest rate environment?**

16 A. A COE in the range of 7.5% to 8.5%. Wells Fargo applied a COE of 8.5% to Spire Inc.'s
17 ("Spire") expected dividends when it recently estimated a fair price for Spire's stock.¹²
18 Morningstar Equity Research applied a COE of 7.5% for purposes of its fair value estimate
19 for Atmos Energy Corp's stock.¹³

20 **Q. Can utilities still create value for their shareholders at a narrower spread between**
21 **the COE and allowed ROEs?**

22 A. Yes. Even at a narrower spread, as long as a company has the opportunity to earn more
23 than its cost of capital, it will create value above the initial book value investment (*i.e.*
24 investment in rate base for utility companies). The ratemaking principle of setting an
25 authorized ROE at or near parity with the COE is that utility companies will only invest in
26 projects that are expected to be economically efficient based on the merits of the projects
27 rather than simply being authorized a return higher than the cost of capital (or a jurisdiction
28 that authorizes a higher return than another jurisdiction). Morningstar's discounted cash
29 flow analysis recognizes this principle should at least hold over the long-term. Specifically,

¹¹ Nicholas Campanella, et. al., "U.S. Power & Utilities: Initiating Coverage: Down but Not Out," Barclays, August 22, 2023, p. 23.

¹² Sarah Akers, et. al., "SR: Underwhelming Q2 Update, but LT Outlook Intact," Wells Fargo, May 1, 2024.

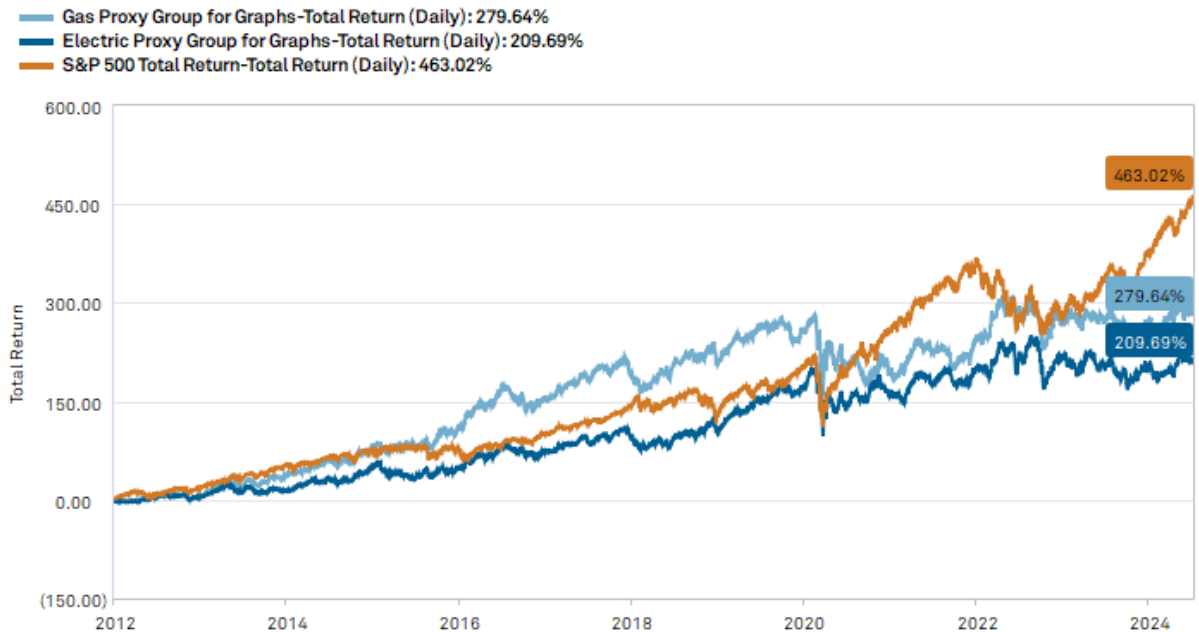
¹³ Andrew Bischof, "Atmos Energy's Strong Growth Operating Regions Support Significant Capital Investment," Morningstar, May 9, 2024.

1 as it relates to estimating growth in cash flows in the perpetuity stage, Morningstar states
2 the following:

3 Once a company's marginal ROIC [Return on Invested Capital] hits
4 its cost of capital, we calculate a continuing value, using a standard
5 perpetuity formula. At perpetuity, we assume that any growth or
6 decline in revenue is an NPV [Net Present Value] = 0 proposition.
7 Stated differently, in the perpetuity period, we assume that any
8 growth or decline or investment in the business neither creates nor
9 destroys value and that any new investment provides a return in line
10 with estimated WACC.¹⁴

11 **Q. Can you provide information on how LDC shareholder returns have compared to**
12 **electric utilities and the S&P 500?**

13 **A.** Yes. See the following chart for a graphic illustration of LDCs' total return as compared
14 to an electric utility proxy group and the S&P 500 index:



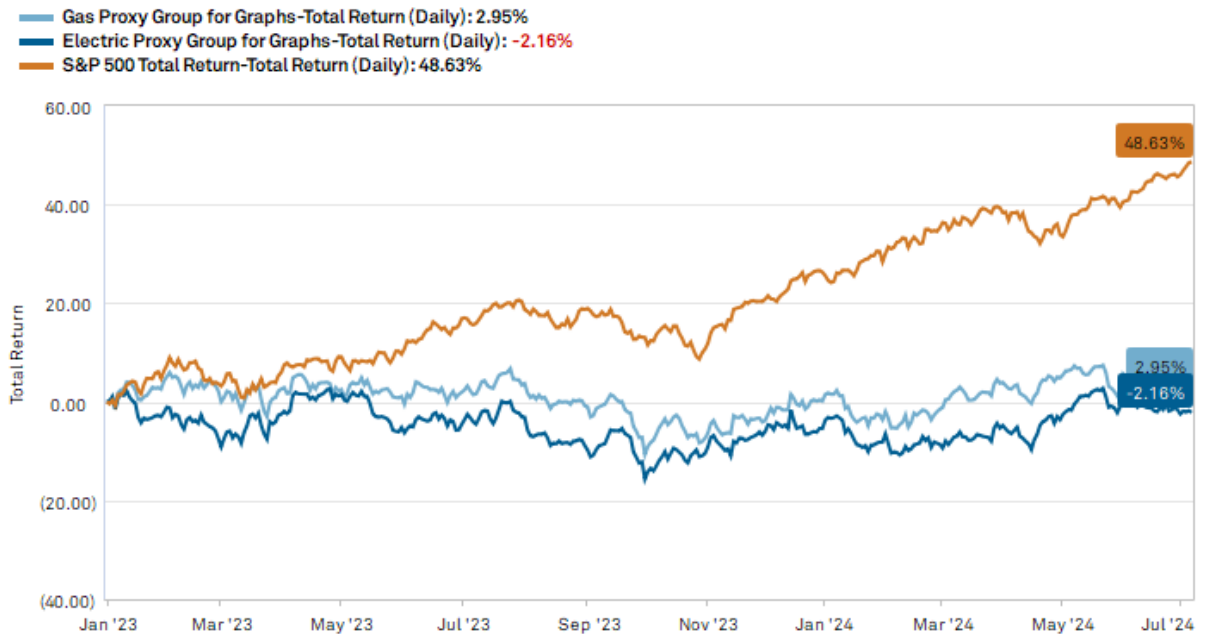
15
16 The key takeaways from the above chart is the fact that until the pandemic, the LDC
17 industry achieved total returns above the electric utility industry and even the S&P 500's

¹⁴ "Morningstar Equity Research Methodology," Morningstar Equity Research, September 2022, p. 4.

1 total returns, despite the fact that the utility industry does not typically achieve as high a
2 proportion of total returns from capital gains as compared to growth stocks.

3 The utilities' high total returns over this period were largely due to the sustained long-term
4 decline in interest rates over this period, which also caused higher capital gains for bond
5 investments. Because bond coupons are typically fixed, this phenomenon clearly
6 demonstrated that yield investments achieved capital gains mainly due to a decline in long-
7 term yields. However, post the pandemic, and, more importantly, post the response of the
8 Federal Reserve and the U.S. Congress to support the economy during the pandemic,
9 aggressive stimulus measures caused the S&P 500 to significantly outperform the LDC
10 and the electric utility industries. This outperformance is largely attributed to the Fed
11 providing a tremendous amount of capital market support, which caused negative real bond
12 yields during much of this period. The fiscal and monetary support had the impact of
13 reducing the discount rates (*i.e.* COE) for the broader markets, which made potential future
14 profits worth more in present value terms. However, becoming concerned about sustained
15 inflationary pressures, the Fed began to aggressively tighten monetary policy, which
16 caused investors to fear a recession in 2023. This fear explained utility stocks' stronger
17 performance relative to the S&P 500 for much of 2022, despite increases in long-term bond
18 yields.

19 However, since the beginning of 2023, the S&P 500 has significantly outperformed the
20 LDC and electric utility industries' stocks, as highlighted in the below chart which limits
21 the period to January 1, 2023 to July 8, 2024:



1

2 COST OF EQUITY METHODS

3 **Q. Now that you have provided some context on changes in the utility capital markets,**
4 **would you explain how you decided to approach estimating Liberty Midstates' COE?**

5 A. Yes. I performed a multi-stage, DCF analysis and a CAPM analysis on a proxy group of
6 LDC companies. Then, I tested the reasonableness of my estimates by using simple
7 reasonableness checks, such as the straightforward bond-yield-plus-risk-premium
8 (“BYPRP”) method discussed in the CFA Program curriculum.

9 **Q. What have you done to make informed decisions as to rational and reasonable inputs**
10 **for your COE analyses?**

11 A. The objective of a ROR witness is to emulate investors' approaches to analyzing and
12 making investment recommendations as it relates to investing in utility stocks. Therefore,
13 I have made it a priority to review, analyze, and understand how equity research analysts
14 estimate fair prices for utility stocks. My analysis has allowed me to test the theory of cost
15 of capital estimation in utility ROR testimony, as it compares to practice. I have discovered
16 investment analysts use multi-stage DCF approaches to estimate fundamental values of

1 utility stocks, and/or they use relative valuation techniques that compare a company's P/E
2 ratios to averages for the industry and/or potentially a more tailored subset of peer
3 companies.

4 In my experience, professional equity ("Wall Street") analysts project long-term compound
5 annual growth rate ("CAGR") in EPS to determine whether a company's P/E ratio deserves
6 a premium or a discount to its peers. Wall Street analysts do not use these estimated long-
7 term CAGRs in EPS for purposes of projecting a perpetual dividend growth rate, as some
8 ROR witnesses suggest. When performing an absolute valuation analysis, such as a
9 DCF/DDM, Wall Street analysts assume rational perpetual growth rates in the 2.5% to
10 3.3% range for electric utility companies and LDCs. Finally, and most relevant to the task
11 at hand, they estimate LDC's COE to be in the 7.5% to 8.5% range.¹⁵

12 **Q. What equity research firms cover Liberty Midstates' ultimate parent company,**
13 **APUC?**

14 A. According to APUC's website, the following firms cover its stock: BMO Capital Markets,
15 CIBC, Desjardins Securities, J.P. Morgan, Morgan Stanley, National Bank, Peters & Co.
16 Limited, Raymond James, RBC Capital Markets, Scotia Capital, TD, and Wells Fargo.¹⁶

17 **Q. Is it important to analyze the information these equity research firms rely on to**
18 **determine a fair and reasonable ROE for Liberty Midstates?**

19 A. Yes.

20 **Q. Why?**

21 A. Analyzing this information is important because these Wall Street analysts are the very
22 individuals that underlie various consensus estimates widely considered by investors. ROR
23 witnesses recognize the influence Wall Street analysts have on utility stock prices by the
24 very fact that they use consensus earnings per share ("EPS") forecasts for purposes of
25 estimating the COE.

¹⁵ *Id.*

¹⁶ <https://investors.algonquinpower.com/news-market-information/analyst-coverage/default.aspx>

1 **Q. Did you review research by any of these firms for purposes of performing your cost**
2 **of equity analysis?**

3 A. Yes. I mainly relied on reports Liberty Midstates provided in response to Staff Data
4 Request No. 0073. However, over my career I have established relationships with equity
5 investment firms/analysts who have distributed this material to me directly through their
6 email distribution lists. These relationships were borne from my role as a regulator in
7 which many of these analysts seek information related to general and specific Missouri
8 regulatory issues. I have also interacted with these analysts through my participation in
9 organizations, such as the Society of Utility and Regulatory Financial Analysts
10 (“SURFA”).

11 **Q. Are the equity research firms that follow APUC the same firms that typically follow**
12 **publicly traded, United States utility companies?**

13 A. Not entirely. I am familiar with the following firms’ coverage of publicly traded, United
14 States utility companies: Morgan Stanley, Wells Fargo, and JP Morgan.

15 **Q. Do firms perform capital market analyses for Canadian utility companies similarly**
16 **to how they perform them for United States utility companies?**

17 A. Yes. The fundamentals of valuation analyses do not vary by country, even if the strategies
18 of Canada-based utilities may be a bit different from those of their U.S. counterparts. For
19 example, I discovered many of these investment analysts perform DCF analyses to estimate
20 a fundamental value for the companies they cover. They also compare the P/E ratios of
21 their covered companies to their peers in Canada and to their peers in the United States.
22 Of course, to perform a DCF analysis an investor must estimate his/her own COE. Because
23 APUC is riskier than Liberty Midstates, an investor’s COE that is used to discount expected
24 APUC cash flows should be higher than a COE used to discount Liberty Midstates’ cash
25 flows.

26 **Q. What type of growth has the LDC industry been able to achieve historically?**

27 A. For the period 1968 through 2016, the 10-year rolling compound growth rates in dividends
28 per share (“DPS”), earnings per share (“EPS”) and book value per share (“BVPS”) for the

1 LDC group were in the range of 2.5% to 5.5% with an average of around 4.25%.¹⁷ This
2 information suggests a constant growth rate of approximately 4% could be achieved.
3 However, in recent years, there has been significant debate in the investment community
4 as to what value, if any, should be assigned to the LDC industry several decades into the
5 future, let alone a constant-growth rate as high as 4%. However, for sake of testing the
6 reasonableness of my multi-stage DDM and CAPM, a constant-growth DDM estimate can
7 be easily determined by adding the LDC group's average dividend yield to the 4% growth
8 rate. The broad LDC proxy group average dividend yield is approximately 4.2%. A simple
9 constant-growth DDM using a 4% growth rate suggests an LDC COE of approximately
10 8.2%.

11 **Q. Are there any logical relationships related to regulated utility stocks that prove the**
12 **above-mentioned constant-growth DCF/DDM COE estimate is likely too high?**

13 A. Yes. A Bernstein analysis showed that, between 1974 to 2010, approximately 68% of
14 returns from utility stocks were from the income received through dividends, with the
15 remaining from capital gains.¹⁸ The above constant-growth DCF/DDM COE estimate
16 implies that an investor expects to achieve over 50% of their expected return from capital
17 gains. This assumption defies the fundamental investment characteristics of yield
18 investments, such as regulated utility stocks. If LDCs were to achieve 33% of their returns
19 from capital gains, it would imply an expected return of around 6.3% (4.2%/.6667).

20 **Q. What is a rational and reasonable perpetual growth rate for LDCs?**

21 A. Anywhere from 0% to 3.3%. However, I primarily rely on perpetual growth rates of 2%
22 (inflationary growth) to 3.3% (highest growth rate that had been used by Wells Fargo to
23 estimate a fair value for LDCs).¹⁹ A perpetual growth rate within this range is also
24 consistent with the "sustainable growth model," which estimates EPS growth by

¹⁷ See Schedules 9-5 to 9-8 in Appendix 2 Attached to Staff's Cost of Service Report filed in Case No. GR-2017-0215.

¹⁸ Hugh Wynne, Francois D. Broquin, and Saurabh Singh, "U.S. Utilities: Our Dividend Growth Model Identified Utilities Poised to Pay More," May 20, 2011, Bernstein Research.

¹⁹ Neil Kalton, Sarah Akers, and Jonathan Reeder, "DDM Analysis Supports Sector Valuation & Quality/Growth Trade," August 19, 2019, Wells Fargo.

1 multiplying an average long-term industry retention rate by an expected book ROE.
2 Assuming the LDC industry reverts to its long-term earnings retention rate of
3 approximately 30% and allowed ROEs stabilize at around 9.50%, this supports a 2.85%
4 perpetual growth rate (9.50% terminal ROE multiplied by 30%).

5 Accordingly, my range of assumed perpetual growth rates range are consistent with the
6 assumed rates used by Evercore ISI²⁰ and Wells Fargo.²¹

7 **Q. What is your basis for an assumed terminal ROE of 9.5%?**

8 A. In recent rate cases, I had assumed a terminal ROE of 9.25%, which was generally
9 consistent with terminal ROE assumptions used by Wells Fargo (9.0%) and Evercore ISI
10 (9.25%). However, due to recent, sustained increases in long-term bond yields, and the
11 fact that average authorized ROEs generally did not decline to 9% to 9.25% when the cost
12 of capital was at all-time lows, I determined a 9.5% terminal ROE is a more reasonable
13 assumption at this time.

14 **PROXY GROUP COST OF EQUITY**

15 **Q. How did you select the proxy group that you used for purposes of estimating Liberty**
16 **Midstates' COE?**

17 A. The number of publicly traded companies generally classified as LDCs is fairly small, with
18 Value Line classifying only nine companies as LDCs. Additionally, based on my review
19 of equity research reports covering the LDC industry, equity analysts typically only include
20 eight to nine companies in their LDC peer groups. I decided to use the same proxy group
21 I used in Spire Missouri's last rate case, Case No. GR-2022-0179. My LDC proxy group
22 consists of the following seven companies: Atmos Energy Corporation ("Atmos"), New
23 Jersey Resources Corporation ("New Jersey"), NiSource Inc. ("NiSource"), Northwest
24 Natural Holding Company ("Northwest"), ONE Gas Inc. ("One Gas"), Southwest Gas
25 Holdings Inc. ("Southwest") and Spire Inc.

²⁰ *Id.*

²¹ *Id.*

1 **Q. How does your proxy group's credit ratings compare to the credit rating assigned to**
2 **the third-party debt provided to Liberty Midstates through affiliate loans?**

3 A. The average S&P issuer credit rating for the LDC proxy group is in the range of 'BBB+'
4 to 'A-'.

5 **Q. What is the average common equity ratio of your proxy group?**

6 A. The simple average common equity ratio as a percentage of total capital is 42.91%. The
7 simple average common equity ratio as a percentage of long-term capital is 45.59%.

8 **Q. Do any of the companies in the LDC proxy group have a common equity ratio similar**
9 **to the approximate 60% maintained at LUCo over the last couple of years?**

10 A. Yes. Atmos Energy Inc. has a common equity ratio of around 60%.

11 **Q. What credit rating is assigned to Atmos' unsecured debt?**

12 A. 'A-'.

13 **Q. What methods/models did you use to estimate the proxy group's COE?**

14 A. I used the DCF method and the CAPM.

15 **Q. What version of the DCF did you use for your DCF analysis?**

16 A. For my DCF analysis, I used the multi-stage version because it allows for a modeling of
17 changes in dividend growth due to varying capital expenditure cycles occurring within the
18 LDC industry.

19 For the first stage (June 30, 2024 through June 30, 2028), I used Wall Street analysts'
20 consensus DPS estimates to the extent they were available. For the second stage (June 30,
21 2028 through June 30, 2038), I allowed for a gradual decline from Wall Street analysts'
22 projected 5-year CAGR in EPS to a perpetual growth rate in the range of 2% to 3.3%,
23 starting on June 30, 2038. In order to estimate investors' anticipated annual DPS over the
24 second stage, I determined consensus analysts' estimated dividend payout ratios as of 2028.
25 I then allowed the dividend payout ratios to gradually converge to a sustainable payout
26 ratio in the range of 65.26% (3.3% perpetual growth at 9.5% terminal ROE) to 78.95%

1 (2% perpetual growth at 9.5% terminal ROE) starting in 2038. The terminal payout ratios
2 are consistent with the constant/sustainable-growth DCF theory that requires DPS, EPS
3 and BVPS to grow in perpetuity at the same rate.

4 My industry COE estimate, based on application of the multi-stage DCF to the proxy
5 group, shows a COE of around 8.5% to 8.6% (see Schedules DM-D-4 through DM-D-6).

6 **Q. Are there any other models that investors typically use to estimate the utility**
7 **industries' COE?**

8 A. Yes. In my experience, many Wall Street analysts use the CAPM to determine a discount
9 rate, *i.e.*, the COE, to apply to expected cash flows to the equity investor. The CAPM
10 shows the specific impact of lower interest rates on the cost of capital. Although CAPM
11 COE estimates can be manipulated by using unreasonable market risk premium estimates,
12 there are a variety of authoritative sources that provide market-risk premium estimates that
13 can form the basis for a consensus view on reasonable risk premium based on current
14 capital-market conditions.

15 **Q. What is the underlying theory that supports the use of the CAPM to estimate the cost**
16 **of equity for utilities?**

17 A. The CAPM is based on capital market theory in which it is recognized that although the
18 total risk of a company and/or industry consists of market (“systematic”) risk and
19 asset/business-specific (“unsystematic”) risk, investors are only compensated for
20 systematic risk because holding a diversified portfolio allows the investor to avoid
21 unsystematic risk. Systematic risks are unanticipated events in the economy, such as
22 economic growth, changes in interest rates, demographic changes, etc., that affect almost
23 all assets to some degree. The required risk premium for incurring the market risk as it
24 relates to the investment/portfolio is determined by adjusting the market-risk premium by
25 the beta of the stock or portfolio. The adjusted-risk premium is then added to a risk-free
26 rate to determine the cost of equity. The CAPM is typically expressed in equation form as
27 follows:

1 $K_e = R_f + \beta (RP_m)$
2 Where: K_e = the cost of equity for a security;
3 R_f = the risk-free rate;
4 β = beta; and
5 RP_m = market risk premium.
6

7 For purposes of my CAPM analysis, I relied on Kroll’s recommended equity risk premium
8 of 5.0% provided as of June 6, 2024²² and a range of realized historical equity risk
9 premiums of 5.14% (geometric historical mean for 1926 through 2023) to 6.56%
10 (arithmetic historical annual mean for the period 1926 through 2023) derived from data
11 provided by Ibbotson Associates’ Stocks, Bonds, Bills and Inflation database.

12 Although each of these equity risk premium estimates use various methods and risk-free
13 rates to arrive at their final estimates, I do not consider any estimate outside these to be
14 consistent with the investment community’s “consensus.” I specifically used a market risk
15 premium range of 5% to 6% to estimate the COE for the LDC industry. One of the primary
16 drivers causing a higher market-risk premium versus a lower market-risk premium is due
17 to whether this market-risk premium is applied to a normalized risk-free rate or a current
18 risk-free rate (higher market risk premiums applied to lower current low risk-free rates).
19 Long-term-expected nominal market returns for the S&P 500 are as low as 7%.²³
20 Therefore, market-risk premiums in the 5.0% to 6.0% range may be excessive for purposes
21 of a CAPM analysis.

22 **Q. What does the beta represent in a CAPM analysis?**

23 A. Beta is statistically defined as the covariance of the returns on an asset (in this case an
24 individual stock or group of stocks) with the return on the S&P 500 divided by the variance
25 of the returns on the S&P 500. This statistical measure is intended to provide investors
26 with insight regarding expected volatility of a security (or portfolio of securities) as it

²² <https://www.kroll.com/-/media/kroll-images/pdfs/kroll-lowers-its-recommended-us-equity-risk-premium-effective-june-5-2024.pdf>

²³ First Quarter 2024 Survey of Professional Forecasters, Philadelphia Federal Reserve Board (Feb. 9, 2024), <https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/spf-q1-2024> and John Bilton et al., *2024 Long-Term Capital Market Assumptions: Time-tested projections to build stronger portfolios*, J.P.Morgan (October 17, 2023), <https://am.jpmorgan.com/us/en/asset-management/adv/insights/portfolio-insights/ltema/>

1 relates to market volatility. A beta of less than one implies less expected volatility than the
2 market, with the trade-off of a lower expected return than the market. The reverse is
3 expected for a beta greater than one.

4 **Q. Have utility stock betas exhibited a wide range since the onset of the Covid-19**
5 **pandemic?**

6 A. Yes. In Liberty Midstates' 2018 rate case, I determined the average LDC beta to be around
7 0.68. Betas for the LDC industry at the end of 2019 were as low as approximately 0.6.
8 After the market swooned in synchronization at the beginning of the Covid-19 pandemic,
9 it caused utility betas to increase dramatically. In Spire Missouri's 2021 rate case, LDC
10 betas had increased to 0.77 with published Value Line betas reaching close to 0.9. LDC's
11 current historical 5-year stock betas are around 0.85 to 0.90.

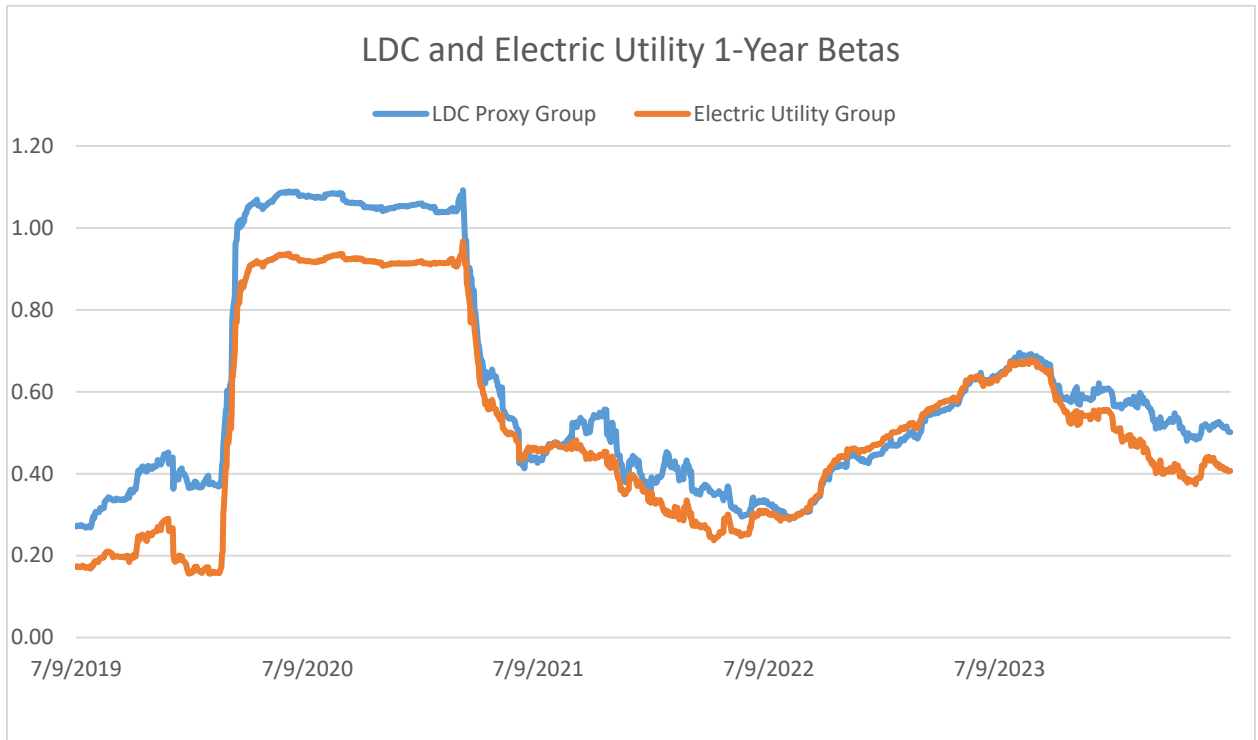
12 **Q. What was the primary cause of the increase in utility stock betas?**

13 A. The spike in utility stock betas occurred when the market plummeted at the onset of the
14 pandemic, in March 2020. It is quite common for all securities, both higher-risk and lower-
15 risk securities, to move in tandem during significant market corrections. Because betas
16 measure the relative volatility of a company or a portfolio as it relates to the market, if all
17 securities rapidly decline at the same time, this causes all betas to converge toward one.

18 For example, the semiconductor equipment industry typically has betas that significantly
19 exceeds one. However, when all securities declined at the start of the pandemic, the
20 semiconductor equipment industry's betas decreased towards one. After the stock market
21 data associated with the synchronized decline of equity markets during March and April of
22 2020 began to drop off of 1-year beta calculations, the semiconductor equipment industry's
23 betas started to increase back to their normal higher levels.

1 **Q. How much have the utility industry’s one-year raw betas changed over the last few**
2 **years due to the market contraction at the onset of the pandemic?**

3 A. Please see the following chart for one-year raw betas since mid-2019 for both the LDC
4 industry and the electric utility industry:



5
6 **Q. How do you interpret the one-year raw beta data shown in the chart?**

7 A. First, I decided to compare LDC 1-year betas to electric utility 1-year betas because I
8 analyzed and discussed this issue in EMW’s pending electric rate case. Although there
9 are times in which LDCs and electric utility company stocks trade differently, usually both
10 subsectors have similar betas over the long-term. As is evident from the chart, after the
11 market data from the spring of 2020 (onset of Covid-19 and associated severe market
12 contraction) drops off the beta calculations, both electric and LDC betas were more similar
13 to betas experienced before Covid-19.

1 **Q. Did you determine longer-term LDC betas which exclude the abnormal situation**
2 **which occurred during the broad market decline at the onset of the Covid-19**
3 **pandemic?**

4 A. Yes. I determined LDC betas based on data for the last four years, which captures the
5 market dynamics of the period impacted by monetary and fiscal policies in response to
6 Covid-19, but excludes the market swoon in March 2020. The LDC betas based on the
7 past four years of data were around 0.7, which is consistent with the four-year betas for the
8 electric-utility proxy group I analyzed in the concurrent EMW rate case. A beta of around
9 0.7 is consistent with historical betas for both the electric and natural gas subsectors of the
10 utility industry.

11 **Q. Based on your CAPM analysis using four-year betas, what is the estimated COE for**
12 **the LDC proxy group?**

13 A. My CAPM COE analysis indicates that the LDC industry's COE is in the range of 8% to
14 8.8%. (*see* Schedule DM-D-7).

15 **Q. Are there any other reasonableness tests to show your COE estimates are rational**
16 **and logical?**

17 A. Yes. As I indicated earlier in my testimony, a simple rule of thumb the CFA Program
18 curriculum suggests to estimate the COE is to add 3% to 4% risk premium to a company's
19 bond yield to provide a fairly simple, but objective cost of equity. Being that the investment
20 community views utility stocks as bond surrogates/substitutes, it is logical and reasonable
21 not to add a risk premium any higher than 3% to the bond. Simply adding a 3% risk
22 premium to the annual coupon rate of 5.87% on Liberty's 10-year unsecured bonds issued
23 on January 12, 2024, implies a COE of around 8.87%.

24 **Q. Based on your analyses and understanding of the LDC industry's COE, investor**
25 **expectations on allowed ROEs, average LDC authorized ROEs, and your**
26 **recommendation in EMW's concurrent electric utility rate case what would be a fair**
27 **and reasonable allowed ROE range for Liberty Midstates in this case?**

28 A. 9.25% to 9.75% would be justified with 9.5% being my point recommendation.

1 **OVERALL RATE OF RETURN**

2 **Q. What is your recommended ROR for Liberty Midstates?**

3 A. My recommended ROR of 7.76% is based on an ROE of 9.5% applied to a 47.5% common
4 equity ratio and cost of debt of 3.97% applied to the remaining 52.5% of the capital
5 structure (see Schedule DM-D-8).

6 **SUMMARY AND CONCLUSIONS**

7 **Q. Can you summarize your main conclusions and views as it relates to an allowed ROR**
8 **for Liberty Midstates in this case?**

9 A. Yes. The cost of equity for utilities has increased since the end of 2022, but it is still below
10 average authorized ROEs. A fair and reasonable authorized ROE for Liberty Midstates
11 must consider the current context of utility stock valuation levels compared to past
12 historical valuation levels.

13 Starting around 2015, the Commission generally considered a 9.5% ROE to be fair and
14 reasonable for Missouri's electric utilities. At that time, LDCs were valued higher than
15 electric utilities implying LDCs had a lower cost of equity. Despite such implication, the
16 Commission authorized Liberty Midstates a 10% ROE in Case No. GR-2014-0152. The
17 fact that Ameren Missouri and Evergy Metro, two companies which directly access third-
18 party debt markets, were still able to attract reasonably-priced capital after being authorized
19 approximately 9.5% ROEs during the same period, should provide the Commission with
20 assurance that 9.5% is the more appropriate benchmark. Additionally, considering that
21 authorized ROEs in Missouri have not declined much since 2015, despite the continued
22 decline in the cost of capital until 2022, this fact supports not increasing authorized ROEs
23 due to the recent increase in the cost of equity. Consequently, I recommend the
24 Commission set Liberty Midstates' utility rates based on a 9.5% ROE.

25 The Commission has set APUC's Missouri utilities ratemaking capital structures premised
26 on the proportion of common equity and long-term debt APUC had typically targeted for
27 its regulated utility segment. While APUC's non-regulated operations and associated

1 capital structure issues have caused APUC to become less financially stable, the same is
2 not true for APUC's regulated utility segment. Therefore, although LUCo's actual capital
3 structures have consistently contained around 60% common equity in recent quarters, this
4 capital structure is not rational, considering these regulated utility operations are still
5 considered low-risk. Therefore, the Commission should still authorize a common equity
6 ratio for Liberty Midstates based on the common equity ratios APUC had considered
7 consistent with the lower business risk of its regulated utility segment.

8 **Q. Does this conclude your testimony?**

9 A. Yes.

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**


In the Matter of the Request of Liberty)
Utilities (Midstates Natural Gas) Corp.)
d/b/a Liberty to Implement a General) Case No. GR-2024-0106
Rate Increase for Natural Gas Service)
in the Missouri Service Areas of the)
Company)

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

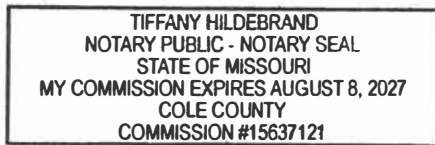
David Murray, of lawful age and being first duly sworn, deposes and states:

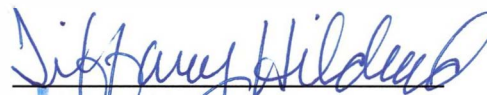
1. My name is David Murray. I am a Utility Regulatory Manager for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my direct testimony.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.



David Murray
Utility Regulatory Manager

Subscribed and sworn to me this 17th day of July 2024.





Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2027.