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

REBUTTAL 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

August 22, 2024

PUBLIC

TABLE OF CONTENTS

Testimony	Page
Cost of Debt and Capital Structure	2
Return on Common Equity	9
John Cochran's Recommended ROE	9
Discounted Cash Flow Assumptions	12
CAPM Assumptions	15
Bond Yield Plus Risk Premium Analysis	17
Flotation Costs	17
Summary and Conclusions	18

REBUTTAL TESTIMONY

OF

DAVID MURRAY

LBERTY UTILITIES (MIDSTATES NATURAL GAS) CORP D/B/A LIBERTY

CASE NO. GR-2024-0106

1 **Q. Please state your name and 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. Are you the same David Murray who previously filed Direct Testimony in this case?**

5 A. Yes.

6 **Q. What is the purpose of your testimony?**

7 A. To respond to the direct testimony of Liberty Utilities (Midstates Natural Gas) Corp.
8 ("Liberty Midstates") witness, John Cochrane, as it relates to rate of return ("ROR"),
9 capital structure and cost of debt. I will also address Staff witness Christopher C. Walters'
10 cost of debt recommendation.

11 **Q. How will you approach the presentation of your rebuttal testimony?**

12 A. I will address cost of debt and capital structure jointly because both are impacted by Liberty
13 Midstate's internal bookkeeping processes. As Mr. Cochrane and Mr. Walters both
14 recommend using Liberty Midstates' internally assigned cost of debt, my rebuttal on cost
15 of debt applies to each of their direct testimonies. Then, I will address Mr. Cochrane's
16 recommended ROE.

COST OF DEBT AND CAPITAL STRUCTURE

Q. What cost of debt does Mr. Cochrane and Mr. Walters recommend be applied to the debt ratio in their recommended ratemaking capital structures?

A. Liberty Midstates and Staff both recommend a 5.58% cost of debt. This is based on affiliate Promissory Notes Liberty Midstates had outstanding to Liberty Utilities Co. ("LUCo") as of December 31, 2023.

Q. Before discussing the details of the problems with LUCo's cost of debt assignment process, can you provide recent embedded cost of long-term debt data for some of Missouri's other utilities?

A. Yes. In the Evergy Missouri West ("EMW") rate case (Case No. ER-2024-0189) that is running concurrently to this one, its embedded cost of long-term debt as of the updated test year was around 4%. As of the true-up date, June 30, 2024, EMW's embedded cost of long-term debt had increased, but this information had not been made public at the time I prepared this testimony so I will disclose this information later. Ameren Missouri's embedded cost of long-term debt as of June 30, 2024 was 4.24%.

These embedded costs of long-term debt are fairly similar to LUCo's embedded cost of long-term debt of 3.97% as of December 31, 2023. LUCo's embedded cost of long-term debt as of March 31, 2024, was 4.48%.

Q. Do the affiliate financing transactions LUCo executes with Liberty Midstates have a legitimate economic purpose other than creating an internally assigned capital structure and cost of debt?

A. No. In fact, in the past, Liberty Midstates' affiliate Promissory Notes matured months, if not years, before they were replaced with other affiliate Promissory Notes. The most recent example of this illegitimacy is a $25.6 million affiliate note that matured on August 1, 2022. Instead of replacing the affiliate Promissory Note, LUCo simply extended the maturity to May 1, 2023. LUCo had to extend the maturity on the Promissory Note a second time, after which it finally replaced the Promissory Note on December 15, 2023. Based on the timing of Liberty Midstates' execution of these updated affiliate Promissory

1 Notes, LUCo's primary goal was to update Liberty Midstates' capital structure ratios (*i.e.*
2 reclassify short-term debt to long-term debt) and assigned costs of debt to support its
3 application for a rate increase.

4 **Q. Did LUCo have the same issue before Liberty Midstates' last rate case, Case No. GR-**
5 **2018-0013?**

6 **A.** Yes. In preparing its rate case application, which Liberty Midstates filed on September 29,
7 2017, Liberty Midstates realized its affiliate Promissory Note from LUCo had matured on
8 July 31, 2017. Consequently, Liberty Midstates filed a financing application (GF-2018-
9 0091) on October 3, 2017, to request Commission authority to replace the matured
10 Promissory Note with another Promissory Note. Liberty Midstates did not execute the new
11 affiliate Promissory Note until May 4, 2018.

12 **Q. How is the capital LUCo advances to Liberty Midstates initially booked?**

13 A. It is initially booked as a money pool borrowing, regardless of how LUCo and/or APUC
14 raise the capital. As of December 31, 2021, Liberty Midstates had accumulated ** ______
15 ______ ** of "money pool" borrowings from LUCo through capital transfers. Liberty
16 Midstates accumulated "money pool" borrowings were ** ____________ ** on June 30,
17 2022 and ** ____________ ** on December 31, 2022.

18 **Q. If the terms assigned to Liberty Midstates' $25.6 million affiliate Promissory Note**
19 **had been updated at its August 1, 2022, maturity date, could Liberty Midstates and**
20 **LUCo have upsized the affiliate Promissory Note to reclassify at least a portion of the**
21 **capital initially advanced as money pool borrowings?**

22 A. Yes.

23 **Q. What do these events establish?**

24 A. These events establish the illegitimacy of these internal transactions. Algonquin Power &
25 Utilities Corp. ("APUC") is much more careful and deliberate in considering the timing
26 and impact third-party financing transactions have on its cost of capital. If APUC has a
27 higher than optimal cost of capital, this higher cost reduces the intrinsic value of APUC's
28 common stock.

P

1 **Q. Based on the timeline of internal financing transactions, what is LUCo's main**
2 **purpose for executing these instruments?**

3 A. LUCo executes these promissory notes in order to rebook internal capital transfers to
4 support the ROR requested for Liberty Midstates.

5 **Q. Although these affiliate financing transactions do not have ramifications for accessing**
6 **third-party capital, could they have an economic impact on the revenue requirement**
7 **Liberty Midstates requests from its ratepayers?**

8 A. Yes.

9 **Q. How do these transactions affect Liberty Midstates' customers?**

10 A. LUCo could have executed new and updated long-term affiliate Promissory Notes with
11 Liberty Midstates much sooner than December 15, 2023. The potential interest rates
12 assigned to the affiliate Promissory Notes can vary widely based on the timing of these
13 affiliate transactions.

14 **Q. Have Liberty Midstates' "money pool" capital advances had high sustained balances**
15 **at least since December 31, 2021?**

16 A. Yes. Liberty Midstates had ** ____________ ** of "money pool" borrowings outstanding
17 on December 31, 2021, increasing to ** ____________ ** by December 31, 2022, and
18 peaking at approximately ** ___________ ** in March 2023.

19 **Q. Did Liberty Midstates experience higher deferred gas costs during this period, which**
20 **is typically funded with short-term capital?**

21 A. Yes. These costs represented approximately 43% of money pool balances in the first
22 quarter of 2022, 32% in the fourth quarter of 2022 and declining to 6% in the second quarter
23 of 2023.

P

1 **Q. Were you able to readily discern Liberty Midstates' money pool borrowings from**
2 **Liberty Midstates' quarterly financial statements, which were provided in response**
3 **to Staff Data Request No. 0057?**

4 A. No.

5 **Q. Then how did you determine Liberty Midstates' money pool balances?**

6 A. For the quarterly periods March 31, 2022 through December 31, 2023, I relied on Liberty
7 Midstates' response to Staff Data Request No. 0059, which identified the quarterly money
8 pool balances. For the period-ended December 31, 2021, I relied on Liberty Midstates'
9 response to Staff Data Request No. 17 in Case No. GF-2023-0280.

10 **Q. Did Liberty Midstates qualify its response to Staff Data Request No. 0059?**

11 A. Yes. Liberty Midstates included a note at the bottom of its response stating the following:
12 "Please always refer to the face of Financial Statements." As I indicated in my previous
13 answer, Liberty Midstates' quarterly financial statements do not clearly identify capital
14 booked as "money pool" borrowings.

15 **Q. Can you show the percentages of Liberty Midstates' total capital which are classified**
16 **as "money pool" borrowings for quarterly periods since December 31, 2021?**

17 A. Yes. See Schedule DM-R-1. As shown on this schedule, the capital booked to Liberty
18 Midstates balance sheet as "money pool" borrowings has been approximately 20% to 30%
19 of its capital structure.

20 **Q. Would such a situation occur for a utility company accountable to third-party**
21 **investors?**

22 A. No. Again, this situation demonstrates the inconsequential nature of LUCo's internal
23 bookkeeping, at least from a cost of capital perspective.

P

1 **Q. How did LUCo determine the 5.774% cost it assigned to the affiliate Promissory**
2 **Notes?**

3 A. In response to OPC DR No. 3035 (attached as Schedule DM-R-2), Liberty Midstates
4 indicated LUCo relied on indicative pricing information J.P. Morgan provided on
5 December 15, 2023.

6 **Q. When did Liberty Midstates issue the Promissory Notes to LUCo?**

7 A. December 14, 2023.

8 **Q. Regardless of the discrepancy in the dates, does the price LUCo assigned to the**
9 **Promissory Notes seem consistent with the indicative pricing information received**
10 **from JP Morgan?**

11 A. Yes. JP Morgan provided its estimate that a 10-year LUCo bond would be priced to yield
12 in a range of ** ______________ ** which represents a spread of ** _________ ** basis
13 points over the 10-year UST yield of 3.91% at that time.

14 **Q. How does this spread compare to the spreads of the other holding company unsecured**
15 **bonds shown on Schedule DM-R-2?**

16 A. **____
17 ____
18 ____
19 ____
20 __________________________________**

21 **Q. Why would LUCo's bonds be priced closer to 'BBB-' fixed-income securities rather**
22 **than the fixed income securities assigned the same rating 'BBB' rating as LUCo?**

23 A. Because of the significant financial uncertainty related to APUC's investment and
24 divestment strategies over the last couple of years.

P

1 **Q. Has APUC itself recognized that the yields on LUCo's bonds have increased relative**
2 **to stable investment grade utility bonds during this period?**

3 A. ** ____
4 ____
5 ____
6 ____
7 ____
8 ____
9 ____
10 ____
11 _____ **

12 **Q. Are the higher costs required on LUCo's outstanding bonds assigned to Liberty**
13 **Midstates' affiliate Promissory Notes?**

14 A. Yes. The yields assigned to the affiliate Promissory Notes were based on cost estimates
15 sometime in mid-December 2023. LUCo issued bonds on January 12, 2024.

16 **Q. Does APUC analyze and evaluate the capital markets for purposes of determining the**
17 **most cost-efficient timing, types of capital and tenors of capital to issue?**

18 A. Yes. ** ____
19 ____
20 ____
21 ____
22 ____
23 ____
24 ____
25 ______________________________________ **

26 **Q. Does APUC's internal promissory note assignment process follow this same careful**
27 **consideration to reduce the cost of capital charged to its operating subsidiaries?**

28 A. No.

P

1 **Q. Has the Office of Public Counsel ("OPC") discovered past instances in which APUC's**
2 **debt assignment process violated affiliate transaction rules?**

3 A. Yes. In Case No. ER-2019-0374, the OPC discovered that LUCo attempted to charge The
4 Empire District Electric Company ("Empire") a higher cost for credit facility borrowings
5 by assigning a long-term interest rate to these capital advances.[1] The Commission agreed
6 with the OPC that this transaction violated the affiliate transaction rules.[2]

7 **Q. What is the most effective method for the Commission to use to ensure Liberty**
8 **Midstates' customers are not charged for financing costs that are higher than cost or**
9 **market rates?**

10 A. By using LUCo's cost of debt and previous targeted capital structures to set Liberty
11 Midstates' authorized ROR.

12 **Q. But hasn't APUC's financial instability impacted LUCo's embedded cost of debt?**

13 A. Not as of the update period in this case, which is December 31, 2023. Although, LUCo
14 issued bonds in January 2024, this was the first time LUCo issued long-term debt since
15 2020.

16 **Q. Are you recommending the use of LUCo's cost of debt because it is lower than the**
17 **cost of debt assigned to Liberty Midstates?**

18 A. No. In Empire's last rate case, Case No. ER-2021-0312, I recommended LUCo's
19 embedded cost of debt of 4.09% be applied to my recommended debt ratio, despite the fact
20 that APUC's debt assignment process implied Empire's cost of debt was 3.76%.

---

[1] Case No. ER-2019-0374, Direct Testimony of Robert E. Schallenberg, p. 11, ln. 12 – p. 16, ln. 14.
[2] *Id.,* Report and Order, July 1, 2020, pages 77-84 and 122.

P

1 **RETURN ON COMMON EQUITY**

2 *JOHN COCHRANE'S RECOMMENDED ROE*

3 **Q. What is Mr. Cochrane's recommended allowed ROE for Liberty Midstates?**

4 A. Mr. Cochrane recommends an authorized ROE of 10.80%, which is the midpoint of his
5 suggested reasonable ROE range of 10.43% to 11.28%.[3]

6 **Q. What is the premise underlying Mr. Cochrane's recommended allowed ROE?**

7 A. Mr. Cochrane estimates the cost of equity ("COE") for Liberty Midstates to be in the range
8 of 10.43% to 11.28% based on his application of three primary COE methodologies: (1)
9 discounted cash flow ("DCF") analyses – constant-growth and multi-stage versions, (2) the
10 Capital Asset Pricing Model ("CAPM") and (3) a Bond Yield Plus Risk Premium analysis.

11 **Q. Has Mr. Cochrane sponsored ROR testimony in Missouri before this case?**

12 A. No.

13 **Q. Are his approach, methodologies, and assumptions fairly similar to other recent**
14 **company ROR witnesses who have testified before this Commission?**

15 A. Yes. Other than Mr. Cochrane's use of a multi-stage DCF methodology, his approach,
16 methodologies and assumptions are fairly consistent with other recent company ROR
17 witnesses.

18 **Q. Do you have concerns with Mr. Cochrane's proxy group?**

19 A. Only to the extent I have concerns with my own proxy group. Mr. Cochrane and I have
20 only one difference in our proxy groups. Where Mr. Cochrane includes Chesapeake
21 Utilities Corporation in his proxy group, I include New Jersey Resources Corporation in
22 my proxy group. Although both companies have exposure to non-regulated energy
23 operations, as a practical matter, there are very few LDC companies that do not have non-
24 regulated business exposure. If the ROR witness recognizes such exposure when

[3] Cochrane Direct, p. 4, lns. 6-19.

P

recommending company-specific adjustments for a pure-play subject company, then I do not object.

Q. Does Mr. Cochrane recommend company-specific considerations to his LDC industry COE estimate?

A. Yes. Although Mr. Cochrane does not make discrete adjustments to his COE estimate, he testifies that the Commission should consider Liberty Midstates' small size when determining a fair and reasonable authorized ROE.

Q. Does Liberty Midstates have any affiliate natural gas distribution companies of similar size, which raises third-party capital based primarily on its stand-alone risk profile?

A. Yes. APUC owns Liberty Utilities Gas New Brunswick LP ("LUNB") through its holding company Liberty Utilities (Canada) LP ("LUCA"). LUNB is a rate-regulated pure-play natural gas distribution company in Canada. It has 12,400 customers as compared to Liberty Midstates' approximately 78,000 customers (52,711 Missouri customers, approximately 21,000 Illinois customers and approximately 4,000 Iowa customers). LUNB had a rate base of approximately $200 million United States Dollars ($272.6 million Canadian dollars) as of December 31, 2022. Liberty Midstates requested Missouri jurisdictional rate base in this case is approximately $167 million.[4]

Q. What is LUNB's authorized ROE?

A. 9.8%.

Q. What was the authorized common equity ratio?

A. 45%.

Q. What cost of debt is charged to LUNB ratepayers?

A. 3.315%.

[4] Liberty Midstates Revenue Requirement Model.

P

1 **Q. When does this debt mature?**

2 A. February 14, 2050.

3 **Q. What entity issued the debt?**

4 A. LUCA, which receives "substantially all cash flow" from LUNB.

5 **Q. What is LUCA's credit rating?**

6 A. 'BBB'.[5]

7 **Q. Does this affiliate-allowed ROE, capital structure and cost of debt information**
8 **establish the unreasonableness of Mr. Cochrane's recommended ROR in this case?**

9 A. Yes. LUCA's 'BBB' credit rating is based primarily on LUNB's credit profile. LUNB's
10 authorized common equity ratio of 45% is consistent with the common equity ratios LUCo
11 had communicated to investors is consistent with the low business risk of its regulated
12 utilities. Despite its small size, more leveraged capital structure and a 9.8% authorized
13 ROE, LUNB was able to issue third-party debt at a reasonable cost consistent with its credit
14 rating.

15 LUNB's market-based capital structure and cost of debt parameters refute not only Mr.
16 Cochrane's argument for a small-size risk premium adjustment, but also his equity-rich
17 ratemaking capital structure and the unreasonably high affiliate cost of debt. In fact, these
18 data points alone imply that even my ROR recommendation may be too generous.
19 Nevertheless, I will briefly address some of the technical disagreements I have with Mr.
20 Cochrane's cost of equity testimony and analysis.

[5] Eric Eng, et.al., "Ratings Report: Liberty Utilities (Canada) LP," Morningstar-DBRS, March 16, 2023.

P

1 *DISCOUNTED CASH FLOW ASSUMPTIONS*

2 **Q. What is the most glaring mis-specification in Mr. Cochrane's constant-growth DCF**
3 **analysis?**

4 A. His opinion that utility investors expect perpetual annual stock price gains at parity with
5 equity analysts' projected 3-5 year CAGR in EPS. For his mid constant-growth DCF COE
6 estimate of 10.26% (mean) and 10.18% (median), he assumes the perpetual stock price
7 appreciation will be 6.42% per year and 6.50% per year, respectively.

8 However, as Mr. Cochrane acknowledges on page 13 of his testimony, utility companies
9 pay out a high percentage of their income as dividends. The average dividend payout ratio
10 for his proxy group, without Southwest Gas Holdings due to restructuring/divestment
11 anomalies, was 61.44% for the 2023 fiscal year. Based on the fundamentals of the
12 constant-growth DCF formula, this difference implies that investors' returns from capital
13 gains should be 38.66% (1 – 61.44%) of the total. Mr. Cochrane's assumed growth rate in
14 his constant-growth DCF analysis implies that utility investors will achieve approximately
15 62% to 64% of their returns from capital gains. This fundamental flaw in his constant-
16 growth DCF assumptions causes his COE estimates to be inflated.

17 **Q. Are you aware of any equity analysts that assume a utility's DPS can grow in**
18 **perpetuity at the same rate as their own projected 3-to-5 year CAGR in EPS?**

19 A. No.

20 **Q. What is the primary flaw in Mr. Cochrane's multi-stage DCF analysis?**

21 A. His assumed perpetual (*i.e.* Stage 3) growth rate of 5.5%.

22 **Q. What is the basis for Mr. Cochrane's perpetual growth rate?**

23 A. Mr. Cochrane assumes utility company dividends will grow in perpetuity at the same rate
24 as overall United States' economic growth.

P

1 **Q. Perpetual annual growth of the U.S. economy of 5.5% seems high. How did Mr.**
2 **Cochrane arrive at this estimated nominal GDP growth rate?**

3 A. He calculated the historical real GDP annual growth rate for the period 1929 to 2023 at
4 3.18% and then added a projected inflation rate of 2.32% over the next 10 to 25 years to
5 arrive at a 5.5% growth rate.

6 **Q. Why did Mr. Cochrane mix projected inflation rates with historical GDP growth to**
7 **arrive at a projected GDP growth of 5.5%?**

8 A. Great question. Although I do not agree that utilities will grow at parity with GDP, if Mr.
9 Cochrane believes utility investors make this assumption, then there are several reputable
10 sources that provide projected sustainable GDP growth for the U.S. economy. The
11 consensus from these sources is a sustainable GDP CAGR of around 4%.

12 **Q. Is one of the sources for projected nominal GDP growth the same source Mr.**
13 **Cochrane used to project the CAGR in inflation?**

14 A. Yes. Mr. Cochrane used the Energy Information Administration ("EIA") to estimate the
15 inflation rate for nominal GDP. The EIA directly estimates real GDP and the GDP Chain-
16 type Price Index, which combined is a direct estimate of nominal GDP. For the period
17 through 2050, EIA estimates a CAGR in nominal GDP of 4.25%.

18 **Q. If Mr. Cochrane had assumed a 4.25% perpetual growth rate in his multi-stage DCF,**
19 **how does this impact his COE estimates?**

20 A. It would cause his multi-stage DCF COE estimates to be approximately 95 basis points
21 lower. Therefore, this would cause his "mid level" COE estimate (see Table 7 in Mr.
22 Cochrane's Direct Testimony) to be around 8.95% rather than 9.9%.

1 **Q. Do investors assume LDC dividends will grow in perpetuity at the same rate as GDP?**

2 A. No. As I testified in my direct testimony, the investment community has debated whether
3 LDCs will have any terminal value in fifty years, let alone the ability to grow in perpetuity
4 at the same rate as GDP.[6]

5 **Q. Why is Mr. Cochrane's assumption that utilities can grow at the same rate as the**
6 **economy illogical?**

7 A. The simplest way to illustrate the fallacy of Mr. Cochrane's use of GDP growth in his DCF
8 analyses as a proxy for long-term growth of the regulated LDC industry is to consider the
9 impact of the appropriate application of this logic to the S&P 500 index. Because the S&P
10 500 index is considered a proxy for the U.S. stock market, it is logical that the expected
11 long-term growth of the S&P 500 would be constrained by the expected growth in GDP.
12 However, because on average, the companies in the S&P 500 tend to have better growth
13 prospects than the LDC industry, the dividend payout ratio and the dividend yield is lower.
14 This fact implies that the growth rate for LDCs should be lower than an aggregate growth
15 rate, *i.e.*, the GDP, used for the U.S. market, *i.e.*, the S&P 500. Adding Mr. Cochrane's
16 expected GDP growth rate of 5.5% to his determination of the S&P 500 dividend yield at
17 1.44%, results in a market COE estimate of approximately 7%. Because LDC utilities have
18 a higher dividend yield due to the fact that they have a higher payout ratio and lower growth
19 expectations than the S&P 500, adding the same GDP growth rate of 5.50% to Mr.
20 Cochrane's determination of an approximate 4% dividend yield for his LDC group, results
21 in a COE estimate of approximately 9.50%. These results are illogical based on the well-
22 accepted and supported understanding that the regulated utility industry is the lowest-risk
23 sector in the S&P 500.

[6] Murray Direct, p. 28, ln. 26 – p. 29, ln. 10.

P

1 *CAPM ASSUMPTIONS*

2 **Q. Why are Mr. Cochrane's CAPM cost of equity estimates so high?**

3 A. Because the expected market returns are not rational. Mr. Cochrane estimates a total
4 compound annual market return for the S&P 500 of 13.96% for the foreseeable future
5 (perpetually based on his use of a constant-growth DCF to estimate S&P 500 returns).[7]
6 Subtracting long-term risk-free rates from Mr. Cochrane's estimated market return results
7 in his market risk premium estimates of 9.43% to 9.77%.[8]

8 **Q. How is Mr. Cochrane able to achieve such high market risk premium estimates?**

9 A. Because he assumes that the S&P 500 can grow its earnings at a compound annual rate of
10 12.45% in perpetuity.[9]

11 **Q. Are you aware of any authoritative sources, academic or practical, that use Mr.**
12 **Cochrane's approach for estimating market returns?**

13 A. No. I know of no authoritative source that suggests this is a rational or reasonable approach
14 for purposes of estimating market returns. In fact, I know of several authoritative sources
15 that recommend against using a growth rate higher than GDP for purposes of determining
16 the long-term expected return for a broad index, such as the S&P 500.

17 **Q. What academic support are you aware of?**
18
19 A. The 2010 curriculum for Level III of the Chartered Financial Analyst ("CFA") Program
20 discusses how analysts often use the Gordon growth model (synonymous with the constant
21 growth DCF model used in utility ratemaking) to formulate the long-term expected return
22 for the broader equity markets. In the case of a broad-based equity index, such as the S&P
23 500, it is reasonable to estimate the long-term potential capital gains for the index by using
24 estimated nominal GDP over a long-term period. The curriculum specifically provides the
25 following formula for estimating the constant growth rate with an explanation that follows:

[7] Cochrane Direct., Schedule JC-7.
[8] *Id.*, Schedule JC-8.
[9] *Id.,* Schedule JC-7.

P

> Earnings growth rate = GDP growth rate + Excess corporate growth (for the index companies)
>
> where the term *excess corporate growth* may be positive or negative depending on whether the sectoral composition of the index companies is viewed as higher or lower growth than that of the overall economy. If the analyst has chosen a broad-based equity index, the excess corporate growth adjustment, if any, should be small.[10]

Considering the S&P 500's current dividend yield of approximately 1.32% as of June 30, 2024,[11] and projected long-term growth in U.S. nominal GDP is around 4.0%, it seems that investment professionals' forecasts of long-term returns for the S&P 500 of around 7%[12] may be a bit optimistic based on current market valuation levels.

Q. Are you aware of any common valuation metrics that illustrate Mr. Cochrane's market-growth-rate assumption is irrational?

A. Yes. The comparison of a broad equity market capitalization amount to that of the total size of the U.S. economy. This valuation metric provides a sanity check on potential growth for capital markets. Warren Buffett made it popular when he provided insight on how high the market, as measured by the Wilshire 5000, became valued as compared to U.S. GDP at the time of the "dot com" bubble around March 2000. At that time, the Wilshire 5000 was around 1.4x that of GDP. As of June 30, 2024, it was around 1.9x, which demonstrates investors are currently requiring lower market risk premiums than usual.

Q. What would this ratio be in 50 years if the market grew at the 12.45% compound annual growth rate Mr. Cochrane suggests is consistent with investor expectations?

A. The Wilshire 5000 index would be approximately 95x times the GDP level, which is over twice as high as the irrational assumptions Ms. Anne Bulkley made in the concurrent EMW rate case. Based on the market capitalization of the Wilshire 5000 of approximately $54.47 trillion as of June 30, 2024, the Wilshire 5000 would have a market capitalization of $19.24 quadrillion in 50 years. U.S. GDP was $28.63 trillion as of the same date. Based on a

[10] 2010 CFA® Program Curriculum, Level III, Volume 3, p. 34.
[11] https://ycharts.com/indicators/sp_500_dividend_yield
[12] Murray Direct, p. 23, ln. 19.

1 4.0% long-term growth rate for the U.S. economy, GDP would be approximately $203.46
2 trillion in 50 years. It is not rational to assume corporate wealth will become much larger
3 than the economy in which it operates, let alone 95x the size of the economy. This explains
4 why the CFA Program advises not using a perpetual growth rate much, if any, higher than
5 the GDP growth rate of the economy(ies) in which a company operates.

6 *BOND YIELD PLUS RISK PREMIUM ANALYSIS*

7 **Q. What are your thoughts on Mr. Cochrane's Bond-Yield-Plus Risk Premium**
8 **("BYPRP") analysis?**

9 A. Mr. Cochrane's BYPRP analysis is a regression analysis of allowed ROEs to interest rates.
10 He concludes from his regression analysis that because allowed ROEs haven't changed as
11 much as interest rates, an adjustment needs to be made to recognize that regulators have
12 been hesitant to adjust allowed ROEs as much as interest rates would suggest. This
13 approach is circular in that the regression coefficient is dependent on commissions'
14 regulatory decisions rather than on market required returns. As I testified in my direct
15 testimony, the investment community recognizes that authorized ROEs did not decline
16 along with the COE.

17 *FLOTATION COSTS*

18 **Q. Mr. Cochrane recommends the authorized ROE be adjusted for flotation costs. How**
19 **does he define flotation costs?**

20 A. Mr. Cochrane defines flotation costs as explicit/hard costs for issuing common equity such
21 as underwriting expenses, legal expenses, issuance preparation, etc. (hereinafter referred
22 to as "issuance costs" rather than "flotation" costs).[13]

[13] Cochrane Direct, p. 27, lines 9-12.

P

1 **Q. How have Missouri's utility companies traditionally recovered common equity**
2 **issuance costs?**

3 A. If common equity proceeds can be specifically reconciled to beneficial investments in their
4 Missouri utility systems, then assuming the common equity was issued within the test year,
5 or any updates to the test year, then issuance costs are allowed to be recovered through an
6 amortization over a reasonable period. Liberty Midstates relies on APUC for indirect
7 access to equity markets. However, Liberty Midstates has not received common equity
8 contributions from its parent companies for at least the last couple of years.

9 **Q. Does APUC plan to issue new common equity anytime soon?**

10 A. No. APUC's current strategy is to avoid issuing common equity because the market value
11 of its common equity has declined significantly since the end of 2022. If anything, APUC
12 plans to buy back common shares if it believes it can do so without having its credit rating
13 downgraded from 'BBB.'

14 **Q. Just to be clear, should Mr. Cochrane's flotation cost adjustment be rejected?**

15 A. Yes.

16 **SUMMARY AND CONCLUSIONS**

17 **Q. Can you summarize your main conclusions related to your rebuttal testimony in this**
18 **case?**

19 A. Yes. The Commission should reject Liberty Midstates requested assigned cost of debt and
20 assigned capital structure for purposes of setting its ROR. The Commission correctly did
21 so in the following cases involving APUC's Missouri utility companies: (1) Liberty
22 Midstates 2014 rate case, Case No. GR-2014-0152,[14] (2) Liberty Water 2018 rate case,
23 Case No. WR-2018-0170,[15] and (3) The Empire District Electric Company' 2019 rate case,
24 Case No. ER-2019-0374.[16] The facts and evidence in this case are the same as they were

---

[14] Case No. GR-2014-0152, Report and Order, December 3, 2024, pages 15-19 (item 183 in EFIS).
[15] Case No. WR-2018-0170, Report and Order, October 24, 2018, pages 26-30 (item 144 in EFIS).
[16] Case No. ER-2019-0374, Amended Report and Order, July 23, 2020, pages 24-39 (item 617 in EFIS).

P

1 in those cases. Liberty Midstates still relies entirely on affiliate financing transactions to
2 fund its rate base and the cost assigned to the affiliate financing transactions is based on
3 LUCo's consolidated risk profile. Further, the timing of the affiliate financing transactions
4 is not determined based on a prudently and efficiently managed capital structure, but rather
5 for purposes of organizing the books for an anticipated rate case.

6 Liberty Midstates' capital structure is not market-based. Therefore, the appropriate
7 ratemaking capital structure and cost of debt for purposes of setting Liberty Midstates'
8 authorized ROR is that which is consistent with LUCo's typical targeted capital structure
9 and embedded cost of debt as of December 31, 2023.

10 Mr. Cochrane's COE estimates are inflated due to several fundamental flaws and irrational
11 assumptions. It is widely recognized in the investment community that commissions have
12 consistently authorized ROEs higher than the COE. Mr. Cochrane's COE estimates for
13 the LDC industry are as high as approximately 12.5%. This is approximately 285 basis
14 points higher than authorized ROEs of around 9.65%. Clearly Mr. Cochrane's COE
15 estimates are not in line with the investment community. While the utility industry's COE
16 has increased since 2022, they are still below authorized ROEs.

17 My recommended 9.5% authorized ROE is above my COE estimate of 8.5%. This
18 dynamic allows Liberty Midstates to attract capital. Therefore, my ROE recommendation
19 is fair and reasonable.

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

21 A. Yes.

P

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 Rate Increase for Natural Gas Service in the Missouri Service Areas of the Company	))))))	Case No. GR-2024-0106

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

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

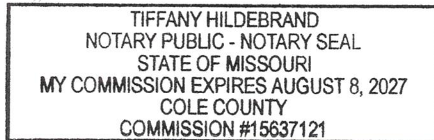
1. My name is David Murray. I am a Utility Regulatory Manager for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my rebuttal 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 21st day of August 2024.



Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2027.