Exhibit No.:
Issue: Rate of Return/Capital Structure
Witness: Keith Magee
Type of Exhibit: Surrebuttal Testimony
Sponsoring Party: Liberty Utilities (Midstates Natural Gas) Corp.
d/b/a/ Liberty Utilities
Case No.: GR-2018-0013
Date Testimony Prepared: May 9, 2018

Before the Public Service Commission of the State of Missouri

Surrebuttal Testimony

of

Keith Magee

ScottMadden, Inc.

On Behalf Of

Liberty Utilities (Midstates Natural Gas) Corp. d/b/a Liberty Utilities

May 2018

SURREBUTTAL TESTIMONY
OF
KEITH MAGEE
LIBERTY UTILITIES
BEFORE THE
MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. GR-2018-0013

TABLE OF CONTENTS

I. WITNESS IDENTIFICATION 1

II. PURPOSE OF SURREBUTTAL TESTIMONY 1

III. SUMMARY AND OVERVIEW OF SURREBUTTAL TESTIMONY 2

IV. RESPONSE TO REBUTTAL TESTIMONY OF STAFF WITNESS MR. MURRAY 4

Capital Structure 5
Cost of Equity 14
Business Risks 27

V. RESPONSE TO REBUTTAL TESTIMONY OF OPC WITNESS MR. RILEY 34

VI. CONCLUSIONS AND RECOMMENDATION 36

SURREBUTTAL TESTIMONY
OF
KEITH MAGEE
SCOTTMADDEN, INC.
ON BEHALF OF
LIBERTY UTILITIES
BEFORE THE
MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. GR-2018-0013

1 **I. WITNESS IDENTIFICATION**

2 **Q. PLEASE STATE YOUR NAME, AFFILIATION AND BUSINESS ADDRESS.**

3 A. My name is Keith Magee. I am a Director at ScottMadden, Inc. ("ScottMadden"). My
4 business address is 1900 West Park Drive, Suite 250, Westborough, MA 01581.

5 **Q. ARE YOU THE SAME KEITH MAGEE WHO PREVIOUSLY SPONSORED**
6 **DIRECT TESTIMONY AND REBUTTAL TESTIMONY IN THIS PROCEEDING**
7 **ON BEHALF OF LIBERTY UTILITIES?**[1]

8 A. Yes, I am.

9 **II. PURPOSE OF SURREBUTTAL TESTIMONY**

10 **Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?**

11 A. The purpose of my surrebuttal testimony ("Surrebuttal Testimony") is to respond to the
12 rebuttal testimonies of Staff witness Dave Murray and Office of the Public Counsel
13 ("OPC") witness John S. Riley as they relate to the Company's ROE,[2] cost of debt and
14 capital structure. My analyses and conclusions are supported by the data presented in

[1] I refer to Liberty Utilities (Midstates Natural Gas) Corp. as "Liberty Midstates" or the "Company".

[2] Throughout my Direct Testimony, I interchangeably use the terms "ROE" and "cost of equity."

1 Schedules KM-S1 through Schedule KM-S2, which have been prepared by me or under
2 my direction.

3 **Q. HOW IS THE REMAINDER OF YOUR SURREBUTTAL TESTIMONY**
4 **ORGANIZED?**

5 A. The remainder of my Surrebuttal Testimony is organized as follows:

6 Section III – Provides a summary and overview of my Surrebuttal Testimony;
7 Section IV – Provides my response to Mr. Murray regarding the Company's cost of
8 capital and capital structure;
9 Section V – Provides my response to Mr. Riley regarding the Company's cost of
10 capital;
11 Section VI – Summarizes my conclusions and recommendations.

12 **III. SUMMARY AND OVERVIEW OF SURREBUTTAL TESTIMONY**

13 **Q. PLEASE SUMMARIZE THE KEY RECOMMENDATIONS AND**
14 **CONCLUSIONS ADDRESSED IN YOUR SURREBUTTAL TESTIMONY.**

15 A. My principal recommendations and conclusions are:

16
17 • Mr. Murray's updated equity ratio recommendation of 42.83 percent remains
18 unreasonably low and highly inconsistent with the relevant and observable
19 benchmarks discussed in my Rebuttal Testimony, including:
20 - the equity ratios in place at the proxy companies (mean of 53.70 percent);
21 - the equity ratios in place at the operating utility subsidiaries of the proxy
22 companies (mean of 57.97 percent);
23 - authorized equity ratios in place at the proxy operating gas utilities (mean

1 of 53.37 percent);

2 - authorized equity ratios for natural gas utilities nationally since the
3 beginning of 2017 (mean of 52.18 percent for fully litigated cases, and
4 51.07 percent overall);

5 - and Value Line's projected equity ratios for the proxy companies (mean of
6 56.11 percent).[3]

7 Adoption of such a low equity ratio would likely be seen as a negative outcome to
8 investors, and reduce confidence in the regulatory support for the Company's
9 operations.

10 • Mr. Murray's criticisms of my ROE analyses, and the weight I give to the individual
11 model results, are misplaced for the reasons discussed throughout my Surrebuttal
12 Testimony and have not changed my recommended cost of equity.

13 • While Mr. Murray's 10.00 percent ROE recommendation overlaps my recommended
14 ROE range, and is in line with authorized returns nationally, it is insufficient to
15 maintain an adequate overall rate of return in combination with Mr. Murray's very
16 low equity ratio recommendation. The ROE deficiency is even more pronounced
17 considering the degree to which perception of the Company's business risk would
18 increase if Mr. Murray's recommended equity ratio were adopted, putting upward
19 pressure on the overall cost of capital.

20 • Extraordinarily accommodative Federal Reserve monetary policies have affected the
21 reliability of DCF results as a measure of the Company's cost of equity in the current

---

[3] See Schedules KM-R9, KM-R11, KM-R12 and KM-R13.

1 capital market. Because utility valuation levels have been pushed upward as
2 investors reach for yield in other asset classes, average DCF results have been
3 suppressed. It is therefore particularly important to give due consideration to current
4 market conditions when assessing the inputs used in the model and the interpretation
5 of its results. In my view, more weight should be given to the upper half of the range
6 of DCF results.

7 • Determination of required ROE is a risk-comparable exercise. Neither Mr. Murray
8 nor Mr. Riley adequately consider Liberty Midstates' business and financial risks
9 when determining the Company's ROE.

10 **IV. <u>RESPONSE TO REBUTTAL TESTIMONY OF STAFF WITNESS MR. MURRAY</u>**

11 **Q. PLEASE SUMMARIZE MR. MURRAY'S UPDATED CAPITAL STRUCTURE**
12 **AND COST OF CAPITAL RECOMMENDATION.**

13 A. Mr. Murray has updated his equity ratio recommendation to 42.83 percent, and his cost of
14 debt estimate to 4.572 percent.[4] His cost of debt and capital structure recommendations
15 are based on his calculation of an "adjusted" consolidated capital structure for Liberty
16 Utilities Company ("LUCo"), the parent company of Liberty Midstates, as of December
17 31, 2017.[5] Mr. Murray does not update his ROE analysis, and his recommendation
18 continues to be 10.00 percent, within a range of 9.50 percent to 10.00 percent.[6]

19 Mr. Murray's rebuttal testimony also outlines a number of areas in which he
20 disagrees with the analyses and conclusions in my Direct Testimony, including: (1) the

[4] Rebuttal Testimony of David Murray, at 3.
[5] Rebuttal Testimony of David Murray, at 3. *See also* Staff Report - Cost of Service, Appendix 2, at 1.
[6] Rebuttal Testimony of David Murray, at 2.

1 proposed equity ratio; (2) the application of, and weight to be given to, the DCF, CAPM,
2 bond yield plus risk premium and expected earnings analyses; and (3) the Company's
3 business risks. I will address Mr. Murray's concerns below.

4 ***CAPITAL STRUCTURE***

5 **Q. PLEASE BRIEFLY SUMMARIZE MR. MURRAY'S CONCERNS WITH YOUR**
6 **RECOMMENDED CAPITAL STRUCTURE.**

7 A. Mr. Murray summarizes his concerns with my recommended capital structure as follows:
8 (1) that I did not explain the reason I recommend a hypothetical capital structure based on
9 the proxy group average equity ratios; (2) that I did not exclude companies with diverse
10 operations from my proxy group; and (3) that I did not include short-term debt when
11 estimating the proxy group average equity ratio.[7]

12 **Q. WHY HAVE YOU NOT RECOMMENDED USING LIBERTY MIDSTATES'**
13 **CAPITAL STRUCTURE?**

14 A. Liberty Midstates maintains its own capital structure. However, I found Liberty
15 Midstates' current equity ratio of 73.87 percent (as of December 31, 2017) to be
16 somewhat high relative to industry benchmarks such as those discussed in my Direct and
17 Rebuttal Testimonies.[8] These include the equity ratios in place at the proxy companies,
18 the equity ratios in place at the operating utility subsidiaries of the proxy companies,
19 authorized natural gas utility equity ratios, and Value Line's projected equity ratios for
20 the proxy companies. I therefore recommended an equity ratio more in line with these
21 proxy companies.

---

[7] Rebuttal Testimony of David Murray, at 7.
[8] Source: 2017 balance sheet data provided in response to Staff DR 0117.1.

1 **Q. WHY HAVE YOU NOT RECOMMENDED USING LUCO'S CAPITAL**
2 **STRUCTURE?**

3 A. LUCo's capital structure is also inconsistent with the industry benchmarks noted above.
4 While the Commission authorized an equity ratio based on LUCo's *unadjusted* book
5 capital structure in Case No. GR-2014-0152, LUCo's characteristics and circumstances
6 are not the same as they were at the time of the Company's last case. LUCo has been
7 growing through acquisitions, and it is likely they will continue to do so. In 2017, LUCo
8 completed the acquisition of Empire District Electric Company as well as additional
9 smaller utilities including St. Lawrence Gas Company, Inc., Perris Water Distribution
10 System, and Park Water System.[9] As discussed in my Rebuttal Testimony, LUCo is now
11 an intermediate holding company composed of approximately 30 electric, gas and water
12 distribution utilities regulated across 12 jurisdictions. APUC has also noted that LUCo
13 will continue to seek earnings growth through accretive acquisitions of additional utility
14 systems.[10] This significant change in the number and location of the utilities owned by
15 LUCo means that its capital structure is increasingly a function of the different financing
16 practices and decisions of other utilities and regulatory commissions – a factor that the
17 Commission cited in rejecting the use of a holding company's capital structure in the
18 recent Spire cases.

19 The Company's assets have approximately tripled from the end of 2014.[11]
20 Approximately 80.00 percent of the debt listed in Mr. Murray's Schedule DM-r1 was not

---

[9] Algonquin Power & Utilities Corp., 2017 Annual Report, at 81-83.

[10] Algonquin Power & Utilities Corp., 2017 Annual Report, at 4.

[11] *See* Consolidated Financial Statements of Liberty Utilities Co. for the year ended December 31, 2014 provided in confidential response to DR 0117.1.

1 part of LUCo's, or its then-affiliated companies', capital structures at the time of the
2 Company's last rate case.[12] The equity ratio authorized in the Company's last case was
3 somewhat low relatively to industry averages, but within the range of authorized equity
4 ratios nationally. The 42.83 percent equity ratio proposed by Mr. Murray in this
5 proceeding, however, is below the range of recently authorized equity ratios and is highly
6 inconsistent with peer financing practices.

7 In addition, the equity ratio proposed by Mr. Murray in this case is based on
8 questionable adjustments to LUCo's as-reported book capital structure, including the
9 imputation of a meaningful amount of debt and corresponding deductions to equity.
10 Some of the debt imputed by Mr. Murray is variable rate term facility debt that carries
11 higher risk and uncertainty.[13] As noted in my Rebuttal Testimony, the Company has
12 clarified that no debt issued since APUC's 2012 acquisition of Liberty Midstates from
13 Atmos Energy has been used to finance Liberty Midstates.[14] Removing the imputed debt
14 shown in Mr. Murray's confidential Schedule DM-r1-1 from his calculation of LUCo's
15 adjusted consolidated capital structure would increase the equity ratio to 52.48 percent
16 (excluding short-term debt).[15]

17 **Q. MR. MURRAY CONCLUDES BLACK HILLS CORPORATION ("BLACK**
18 **HILLS"), SEMPRA ENERGY ("SEMPRA"), AND VECTREN CORPORATION**
19 **("VECTREN") ARE NOT SUFFICIENTLY CONFINED TO NATURAL GAS**

---

12 Includes all debt assumed with the acquisition of Empire District Electric Company, and debt which was issued after the January 1, 2015 (LU GP1 Series D and E issuances, and the Liberty Utilities (America) Holdco Inc. term facility).

13 The variable rate term facility is also a relatively short-term loan, with an expiration date of June 1, 2019.

14 Rebuttal Testimony of Keith Magee, at 11. *See* company response to Staff DR 0238.

15 Holding the total capitalization constant and subtracting the highlighted debt issuances from the total debt reported in Mr. Murray confidential Schedule DM-r2-1.

1 **OPERATIONS TO INCLUDE IN THE PROXY GROUP.[16] WHAT IS YOUR**
2 **RESPONSE?**
3 A. As discussed in my Direct Testimony, estimating the cost of capital requires establishing
4 a group of companies that are reasonably comparable to the Company in certain
5 fundamental respects to serve as its "proxy" in cost of capital analysis.[17] The threshold to
6 eliminate companies with non-gas distribution operations must balance the need to
7 develop a group of companies that is fundamentally comparable to Liberty Midstate (a
8 100.00 percent rate-regulated gas utility), with the need to develop a proxy group of
9 sufficient size. In my view, the screening criteria discussed in my Direct Testimony
10 reasonably balances those objectives.[18]
11 Sempra was excluded from the revised proxy group used in my Rebuttal
12 Testimony due to its pending acquisition of Oncor Electric Delivery Company, LLC.[19]
13 With regard to Black Hills and Vectren, both derived more than 80.00 percent of 2017
14 net income from regulated operations and more than half of their regulated income from
15 gas utility operations.[20] Similar to the other proxy companies, both are primarily utility
16 companies that must invest in long-lived assets and maintain sufficient financial health to
17 access capital regardless of market conditions. Black Hills and Vectren also have Value

---

[16] Rebuttal Testimony of David Murray, at 5.
[17] Direct Testimony of Keith Magee, at 10.
[18] Direct Testimony of Keith Magee, at 11-12.
[19] Rebuttal Testimony of Keith Magee, at 39.
[20] *See* Black Hills Corporation SEC Form 10-K for the fiscal year ended December 31, 2017 at 119; and Vectren Corporation SEC Form 10-K for the fiscal year ended December 31, 2017 at 24. Black Hills reports $355,728 in regulated utility operating income out of $416,736 of net operating income (85.36%), with $185,105 of regulated operating income (52.04%) from natural gas utility operations. Vectren reports $190,700 of net income from regulated electric and gas utility operations out of $216,000 in total net income (88.29%), with $115,500 of regulated operating income (60.57%) from natural gas utility operations.

1 Line risk ratings similar to the other companies in my proxy group (*see* Table 1 below).

2 **Table 1: Proxy Group Value Line Risk Ratings**[21]

	Financial Risk Rating	*Safety Rank*
Atmos Energy Corp.	A+	1.00
Chesapeake Utilities	B++	2.00
New Jersey Resources Corp.	A+	1.00
Northwest Natural Gas Co.	A	1.00
One Gas Inc	B++	2.00
Southwest Gas	B++	3.00
Spire Inc	B++	2.00
Mean	A	1.71
Median	B++	2.00
Black Hills	A	2.00
Vectren	A	2.00

3
4 Consequently, I continue to find both companies to be reasonable proxy companies for
5 estimating a recommended ratemaking capital structure for Liberty Midstates.

6 **Q. MR. MURRAY NOTES THAT THE CAPITAL STRUCTURE OF CHESAPEAKE**
7 **UTILITIES CORPORATION (“CHESAPEAKE”) HAS INCLUDED MORE**
8 **THAN 20.00 PERCENT SHORT-TERM DEBT OVER THE PAST SEVERAL**
9 **YEARS.**[22] **DOES THE USE OF SHORT-TERM DEBT MEAN CHESAPEAKE**
10 **SHOULD BE EXCLUDED FROM THE PROXY GROUP?**

11 A. No. Short-term debt is generally used to provide liquidity and finance capital

21 Source: Value Line stock reports as of March 30, 2018. Safety rankings are from 1 to 5, with 1 being the safest ranking. Financial Strength ratings are from C to A++, with A++ being the strongest rating.

22 Rebuttal Testimony of David Murray, at 6.

1 expenditures and other investments. Value Line reports Chesapeake's net plant increased
2 approximately 31.00 percent (from $855 million to $1.12 billion) from the end of 2015 to
3 the end of 2017, so it is not surprising the company would have had a relatively high
4 percentage of short-term debt in its capital structure. Long-lived utility assets, however,
5 are generally financed with long-term capital as they are placed in service, and short-term
6 debt is commonly replaced by a mix of long-term debt and equity over time. In its 2018
7 SEC Form 10-K, Chesapeake notes:

> 8 Our target ratio of equity to total capitalization, including short-term
> 9 borrowings, is between 50 and 60 percent. This target capital structure
> 10 ensures that we maintain a strong balance sheet to support continued
> 11 growth. Over the last several years, we have deployed increased
> 12 amounts of capital on new projects, many of which have longer
> 13 construction periods. We seek to align the permanent financing of
> 14 these capital projects with the in-service dates to the extent feasible.[23]

15 The salient question is what proportion of Chesapeake's long-term capital will be
16 financed with equity over time. To that point, I note Value Line projects a 70.00 equity
17 ratio for Chesapeake through the three- to five- year forecast period. That projection is
18 consistent with the 71.57 percent eight quarter average equity ratio reported for
19 Chesapeake in Schedule KM-R9. Therefore, I continue to believe it is reasonable to keep
20 Chesapeake in the proxy group for purposes of determining an industry average capital
21 structure.

22 **Q. WHAT WOULD BE THE EFFECT ON THE AVERAGE PROXY COMPANY**
23 **EQUITY RATIO IF BLACK HILLS, CHESAPEAKE AND VECTREN WERE**
24 **REMOVED?**

25 A. Notably, as Mr. Murray himself recognizes in his rebuttal testimony, exclusion of these

---

[23] Chesapeake Utilities Corp. SEC Form 10-K for the fiscal year ending December 31, 2017, at 37,

1 companies would actually result in a *higher* equity ratio. Specifically, the mean equity
2 ratio reported in Schedule KM-R9 would increase from 53.70 percent to 54.57 percent.
3 The median equity ratio would increase from 53.63 percent to 54.07 percent.

4 **Q. WHAT IS YOUR CONCERN WITH MR. MURRAY'S SUGGESTION THAT**
5 **THE COMPANY'S CAPITAL STRUCTURE SHOULD INCLUDE SHORT-**
6 **TERM DEBT?**

7 A. Short-term debt includes loans and credit arrangements expiring in less than one year.
8 Aside from financing construction work in progress and supporting working capital
9 needs, gas utilities' use of short-term debt is largely seasonal in nature. Short-term debt
10 is not typically used to finance the type of long-lived assets, such as property plant and
11 equipment, included in rate base. Financing rate base with short-term debt would
12 increase liquidity and refinancing risk.

13 I also note that the Commission has not required short-term debt to be included in
14 other utility companies' capital structures in recent rate cases. For example, no short-term
15 debt was included in Spire's recently authorized capital structure in Case Nos. GR-2017-
16 0215 and GR-2017-0216.[24] Similarly, the final order in Case No. GR-2014-0258 for
17 Ameren Missouri approved a capital structure with no short-term debt, noting no party
18 raised an issue regarding the company's capital structure.[25]

19 **Q. HAVE YOU UPDATED YOUR ESTIMATE OF THE INCREMENTAL**
20 **INCREASE IN ROE NEEDED TO ACCOUNT FOR THE RELATIVE**

---

[24] *See,* Amended Report and Order, Public Service Commission of the State of Missouri, Case Nos. GR-2017-0215 and GR-2017-0216, at 44-45 (Issued March 7, 2018).

[25] *See,* Report and Order, Public Service Commission of the State of Missouri, Case No. ER- 2014-0258, at 61 (Issued April 29, 2015). Note, the Order was for Union Electric Company, d/b/a Ameren Missouri.

1 **FINANCIAL LEVERAGE IMPLIED BY MR. MURRAY'S UPDATED CAPITAL**
2 **STRUCTURE RECOMMENDATION?**
3 A. Yes, I have. Mr. Murray references Spire's recent rate case to determine his ROE
4 recommendation. However, Mr. Murray's updated equity ratio recommendation of 42.83
5 percent (excluding short-term debt from the capital structure) is 11.37 percentage points
6 below the 54.20 percent equity ratio authorized for Spire in Case No. Gr-2017-0216.
7 Using the Hamada Equation discussed in my Rebuttal Testimony,[26] I estimate the
8 increased ROE required to reflect the comparatively higher financial risk resulting from
9 Mr. Murray's updated capital recommendation to be 162 basis points (*see* Schedule KM-
10 S1).
11 I have also updated my adjustments to Mr. Murray's original ROE adder
12 calculation based on credit spreads. The 11.37 percentage point lower equity ratio
13 recommended by Mr. Murray equates to a risk differential of approximately 3.50 credit
14 rating notches.[27] As of April 30, 2018, the 30-day average yield on Moody's "A" and
15 "Baa" rated long-term public utility bonds were 4.16 percent and 4.57 percent,
16 respectively, resulting in a credit spread of 41 basis points (compared to a 33 basis point
17 spread using the January 2018 yields of 3.83 percent and 4.16 percent reported in Mr.
18 Murray's direct testimony).[28] The ratio of Mr. Murray's ROE recommendation to the
19 updated cost of A-rated utility debt is now 2.36 (9.80 percent / 4.16 percent). Adjusting

---

[26] Rebuttal Testimony of Keith Magee, at 19-20. The Hamada Equation adjusts the CAPM to reflect the increased risk associated with increased financial leverage.

[27] As noted at page 19 of my Rebuttal Testimony, Moody's rating guidelines generally indicate a 10.00% difference in equity ratio between ratings grades (three ratings notches). 11.37%/10.00% = 1.14 credit rating grades, or approximately 3.5 credit rating notches.

[28] Staff Report - Cost of Service, Appendix 2, at 8.

1 the credit spread to reflect the new 3.5 credit rating notch differential and factoring for
2 the increased cost of equity relative to debt, the implied increase in required ROE is 113
3 basis points.[29] Averaging together the two estimates produces a required ROE adder
4 estimate of 138 basis points.

5 **Q. CAN YOU ILLUSTRATE THE INSUFFICIENCY OF MR. MURRAY'S**
6 **PROPOSED 20 BASIS POINT ROE ADJUSTMENT RELATIVE TO HIS VERY**
7 **LOW 42.83 PERCENT EQUITY RATIO RECOMMENDATION?**

8 A. Yes. One approach is to look at the effect on the overall rate of return. For illustrative
9 purposes, combining the 9.80 percent ROE and 54.20 percent equity ratio recently
10 authorized for Spire with Mr. Murray's recommended cost of debt of 4.57 percent results
11 in an after-tax rate of return of 7.40 percent. That rate of return is only 3 basis points
12 removed from the mean authorized rate of return from 2017 through the first quarter of
13 2018 of 7.37 percent (excluding limited-issue riders and rate cases in Arkansas and
14 Michigan which include non-investor supplied capital such as deferred taxes in the
15 reported ratemaking capital structure). The mean authorized rate of return for fully
16 litigated cases during that period was 7.51 percent.[30]

17 Assuming Mr. Murray's proposed 42.83 percent equity ratio, a 20 basis point
18 ROE increase would result in a 6.90 percent rate of return – a decrease of 50 basis points
19 from the benchmark scenario. The 138 basis point ROE increase noted above, however,
20 maintains the overall rate of return. *See* Table 2 below.

---

29 41 x 2.36 x (3.5 / 3) = 113.

30 Source: Regulatory Research Associates. *See* Schedule KM-R13, with rate of return average adjusted to remove the two Arkansas and Michigan cases.

1 **Table 2: ROE and Equity Ratio Adjustments – Effect on Rate of Return**[31]

	Benchmark Scenario: Spire ROE / Equity Ratio	***Murray Equity Ratio & ROE + 20bp***	***Murray Equity Ratio & ROE + 138bp***
Benchmark ROE	9.80%	10.00%	11.18%
Murray Cost of Debt	4.57%	4.57%	4.57%
Benchmark Equity Ratio	54.20%	42.83%	42.83%
Rate of Return	**7.40%**	**6.90%**	**7.40%**

2
3 Mr. Murray's 20 basis point ROE adder is clearly insufficient to offset the revenue effect
4 of his lower recommended equity ratio. Moreover, to the extent investor confidence in
5 the regulatory support for Liberty Midstates operations would be negatively affected by
6 an equity ratio below industry norms, there would be upward pressure on the cost of
7 capital suggesting a higher overall rate of return would be required. That is, the 138 basis
8 point estimate likely understates the required incremental increase in ROE to offset such
9 a low equity ratio.

10 ***COST OF EQUITY***

11 **Q. PLEASE BRIEFLY SUMMARIZE MR. MURRAY'S CRITICISMS OF YOUR**
12 **COST OF EQUITY ANALYSES.**

13 A. Mr. Murray's criticisms include: (1) the weight given to the proxy group DCF results; (2)
14 the use of EPS growth rates as the measure of growth in the DCF model; (3) the use of
15 the quarterly growth formulation of the DCF model; (4) the Market Risk Premium
16 ("MRP") estimates used in my CAPM; (5) the use of projected bond yields in the CAPM
17 and bond yield plus risk premium model, particularly the long-term projected yield used

[31] After-tax rate of return = cost of equity x equity ratio + cost of debt x (1 – equity ratio).

1 in the latter model; (6) the use of authorized returns to establish the equity risk premium
2 in the bond yield plus risk premium model; and (7) the application and relevance of the
3 expected earnings analysis. I address Mr. Murray's concerns below.

4 **Q. AS A PRELIMINARY MATTER, MR. MURRAY CLAIMS THAT YOUR ROE**
5 **ESTIMATES ARE "NOT CORROBORATED BY REPUTABLE INVESTORS".[32]**
6 **PLEASE RESPOND.**

7 A. Mr. Murray's claim is incorrect. The analysis in my Direct and Rebuttal Testimonies is
8 based on observable market data and published industry estimates; the results are
9 consistent with recommended and authorized returns nationally. My range of ROE
10 model results are corroborated by reported Value Line analyst expectations for earned
11 returns as illustrated in the expected earnings approach. Mr. Murray's results, which
12 range from 5.89 percent to 7.70 percent,[33] however, are wholly inconsistent with
13 reasonable industry benchmarks. I am aware that Mr. Murray has pointed to certain
14 valuation analyses done by financial analysts as reasonable sources of ROE estimates in
15 prior proceedings, however, those analyses are developed for purposes other than
16 establishing the cost of capital in a regulatory setting and therefore not comparable, and
17 have been rejected by the Commission in the past.[34]

18 It is important to remember that the cost of capital is an opportunity cost.[35]
19 Investors will allocate their capital to the best alternatives amongst their investment
20 opportunities, and businesses must therefore compete for capital. Businesses that don't

---

32 Rebuttal Testimony of David Murray, at 3.

33 Staff Report - Cost of Service, Appendix 2 at 43, 45 and Schedules 11 and 12.

34 *See* Report and Order, Public Service Commission of the State of Missouri, Case No. ER- 2011-0028, at 69-70 (Issued July 13, 2011).

35 Morningstar, Inc. Ibbotson SBBI 2013 Valuation Yearbook, at 21-22.

1 have the opportunity to earn competitive risk-adjusted returns will have difficulty
2 attracting capital over time and their cost of capital will ultimately suffer.

3 **A. DCF Model**

4 **Q. DO YOU HAVE ANY CONCERNS WITH THE WEIGHT MR. MURRAY**
5 **RECOMMENDS GIVING DCF MODEL RESULTS?**[36]

6 A. Yes, I do. As discussed in my Rebuttal Testimony,[37] the mean DCF model results should
7 not be given significant weight under current market conditions. As noted in my Direct
8 Testimony, all financial models are subject to limiting assumptions, and no one model is
9 more reliable than others at all times and under all market conditions.[38] It is therefore
10 important to assess the consistency of model results with alternate ROE estimates,
11 observable market data and industry benchmarks. For example, Brigham and Ehrhardt
12 note in their textbook Financial Management: Theory and Practice:

> 13 … we can employ the principles described in Chapters 6, 7, and 8
> 14 to produce reasonably good cost of equity estimates. Three
> 15 methods typically are used: (1) the Capital Asset Pricing Model
> 16 (CAPM), (2) the discounted cash flow (DCF) method, and (3) the
> 17 bond-yield-plus-risk-premium approach. These methods are not
> 18 mutually exclusive. When faced with the task of estimating a
> 19 company's cost of equity, we generally use all three methods and
> 20 then choose among them on the basis in our confidence in the input
> 21 data available for the specific case at hand.[39]
> 22

23 While the constant growth DCF model is a conceptually sound tool under the right

---

36 Rebuttal Testimony of David Murray, at 8.

37 Rebuttal Testimony of Keith Magee, at 30-32.

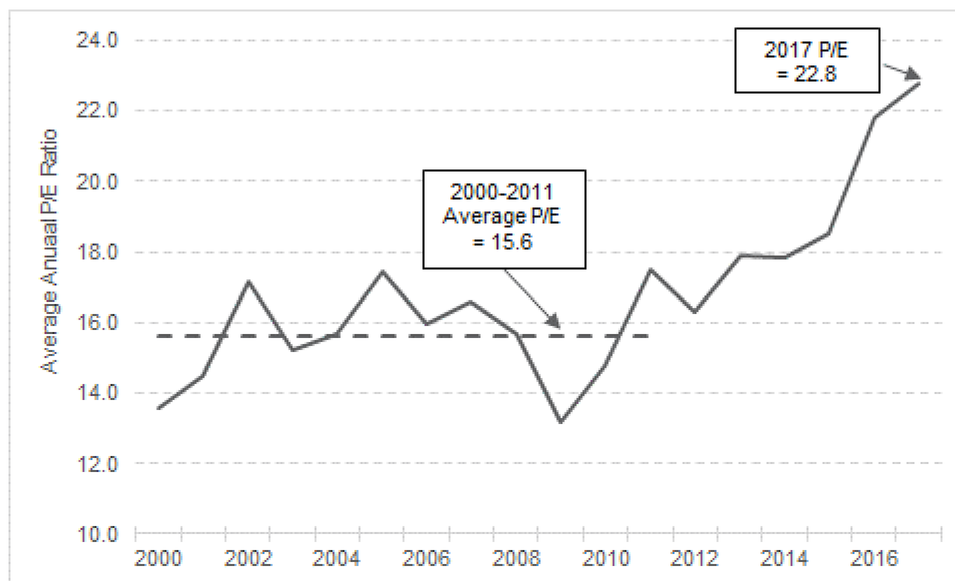
38 Direct Testimony of Keith Magee, at and 5, 13-15, and 38. *See also,* Amended Report and Order, Public Service Commission of the State of Missouri, Case Nos. GR- 2017-0215 and GR-2017-0216, at 31 (Issued March 7, 2018), which states: "Generally, no one method is any more correct than any other method in all circumstances. Analysts balance their use of all three methods to reach a recommended return on equity."

39 Eugene Brigham and Michael Ehrhardt, Financial Management: Theory and Practice, 12th Ed. (Mason, OH: South-Western Cengage Learning, 2008), at 346.

1 market conditions, it relies on a number of restrictive assumptions which do not always
2 hold in practice.[40] Importantly, the constant growth DCF model is highly sensitive to
3 price valuation levels (which effect dividend yields) and growth rate assumptions. Even
4 following the recent decline in utility stock prices, proxy group P/E ratios remain
5 relatively high compared to their historical levels as investors reach for yield in an
6 interest rate environment constrained by Federal Reserve monetary policy.[41] As shown
7 in Chart 1 below, gas utilities' average P/E ratios have recently exceeded their long-term
8 average.

9 **Chart 1: Proxy Group Average P/E Ratio, 2000-2017[42]**

10



11 On average, the companies in my revised proxy group traded at an approximately 10.00

---

40 *See* Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006 at 344. *See also*, P. McLemore, G. Woodward, and T. Zwirlein, "Back-tests of the Dividend Discount Model using Time-varying Cost of Equity," Journal of Applied Finance, No. 2, 2015, pg. 75-94.

41 *See*, for example, Value Line's Electric Utility (West) Industry report, July 28, 2017.

42 Source: Value Line. Based on the revised proxy group discussed on page 39 of my Rebuttal Testimony. The dividend yields in Mr. Murray's DCF study (*see* Mr. Murray's Schedule 11) are calculated using 3-months of data ending January 2018.

1 percent *discount* to the market (as measured by the Value Line universe of stocks) from
2 2000-2011, but traded at a 12.00 percent *premium* in 2017.[43] Those higher valuation
3 levels have weighed on dividend yields and led to "mean low" results that are unduly low
4 relative to observable benchmarks such as recently authorized returns,[44] and expected
5 earned returns on book equity as reported by utility analysts.[45] The "mean low" results
6 are also inconsistent with the increasing cost of capital environment implied by recently
7 increasing Treasury yields. Consequently, I believe it is reasonable to give more weight
8 to alternative ROE estimation methods such as the CAPM and bond yield plus risk
9 premium approach when determining the recommended ROE in the current capital
10 market. To the extent significant weight is given to the DCF model results, it is my view
11 more weight should be given to the upper end of the model results. Averaging the
12 "mean" and "mean high" constant growth and quarterly growth DCF results presented in
13 Table 2 of my Rebuttal Testimony results in an ROE estimate of 10.40 percent. My
14 recommended ROE is moderately below that average.

15 **Q. WOULD USING AN APPROACH SUCH AS THE GRINOLD-KRONER MODEL**
16 **MITIGATE THE EFFECT UNUSUALLY HIGH P/E RATIOS HAVE ON DCF-**
17 **BASED ROE ESTIMATES, AS SUGGESTED BY MR. MURRAY?[46]**

18 A. No. The Grinold-Kroner DCF method modifies the expected earned return to account for
19 an expected percentage change in P/E ratio. Assuming a downward reversion toward
20 long-term average P/E ratios when valuation levels are abnormally high, as they have

---

43 Source: Value Line.
44 *See* Schedule KM-R12 and KM-R13.
45 *See* Schedule KM-R8.
46 Rebuttal Testimony of David Murray, at 9.

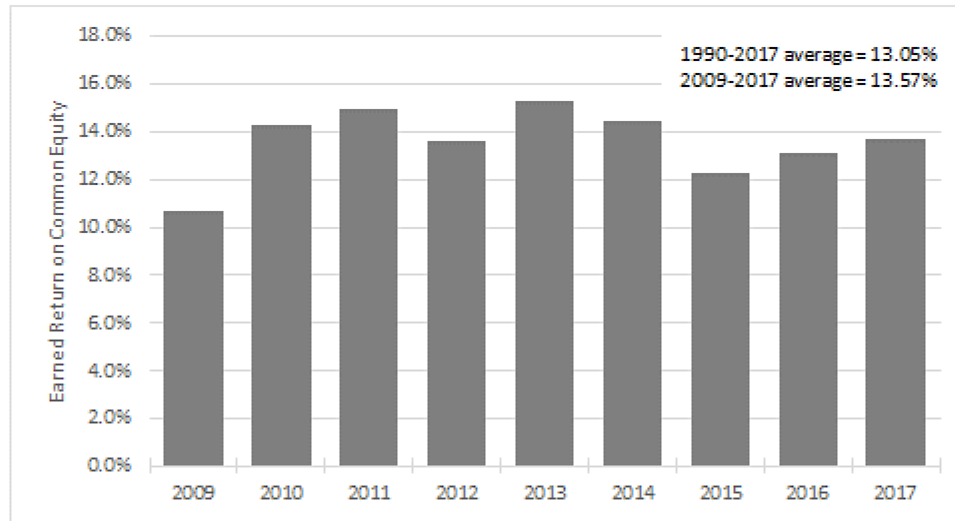
1 recently been, would only serve to exacerbate the downward skew in DCF model results.
2 For example, adjusting the constant growth DCF model to reflect the decline in P/E ratios
3 projected by Value Line for my proxy companies would result in a mean DCF model
4 result of 4.59 percent (using 30-day average prices as of March 29, 2018; *See* Schedule
5 KM-S2). That result is lower than the Company's cost of debt, and clearly inconsistent
6 with the principles of *Hope* and *Bluefield* that require an ROE that is sufficient to
7 maintain financial integrity and attract capital.

8 A more reasonable approach is to take into consideration the effect of high prices
9 on the DCF model when deciding where within the range of model results the required
10 ROE likely lies. In my view, assessment of market data indicates that mean DCF results
11 are understated and the required ROE therefore lies between the "mean" and "mean high"
12 DCF results. Giving more weight to the upper end of the DCF model results is also
13 consistent with the premise that higher valuation ratios are generally a result of higher
14 growth expectations.

15 **Q. HAS THE EARNED RETURN ON COMMON EQUITY BEEN DECLINING FOR**
16 **THE OVERALL MARKET?**

17 A. No, it has not. *See* Chart 2 below.

1 **Chart 2: S&P 500 Index - Earned Return on Common Equity, 2009-2017**[47]



2

3 Consequently, if recent DCF results were a function of a lower investor
4 expectations regarding future utility returns, it is not clear why utilities' relative valuation
5 levels would be higher than historically observed.

6 A company's ability to earn a competitive return on investments is an important
7 consideration when equity investors are determining where to allocate their capital. If
8 investors' expected utility authorized returns to fall (or growth opportunities to slow, as
9 suggested by Mr. Murray)[48], the attractiveness of utility stocks would be expected to
10 decrease relative to the S&P 500 Index, and P/E ratios would logically be lower, not
11 higher.

[47] Source: Bloomberg Professional.
[48] Staff Report - Cost of Service, Appendix 2, at 42.

1 **Q. WHAT IS YOUR RESPONSE TO MR. MURRAY'S CONCERN REGARDING**
2 **THE USE OF ANALYSTS' EPS GROWTH ESTIMATES AS THE MEASURE OF**
3 **GROWTH IN THE DCF MODEL?**

4 A. For the reasons discussed on pages 22 to 26 of my Rebuttal Testimony, I continue to
5 believe earnings per share growth rate estimates are the appropriate measure of growth
6 for the DCF model. First, the cost of capital is forward-looking and should therefore
7 reflect investors' forward-looking growth expectations. Published analyst earnings
8 growth rate estimates reflect a reasonable estimate of consensus market expectations.
9 Second, earnings growth is the fundamental driver of both dividend growth (*i.e.*, through
10 the percentage of earnings paid out) and book value growth (*i.e.*, through the percentage
11 of earnings retained to fund capital growth). The relative importance of earnings growth
12 rate estimates to investors is evidenced by the fact that financial data providers such as
13 Yahoo! Financial and Zacks report long-term earnings growth estimates but not long-
14 term dividend or book value growth estimates. Lastly, both academic research and the
15 analysis presented in Schedule KM-R15 confirm that investor stock valuations are
16 statistically related to earnings growth rates.

17 **Q. DO YOU AGREE WITH MR. MURRAY'S SUGGESTION THAT THE**
18 **QUARTERLY DCF MODEL IS UNECESSARY BECAUSE INVESTORS DO**
19 **NOT ACCOUNT FOR QUARTERLY DIVIDEND PAYMENTS IN PRACTICE?[49]**

20 A. No, I do not. The proxy utility companies pay dividends quarterly.[50] The effect of
21 compounding on valuation is widely taught in financial textbooks, and standard valuation

49 Rebuttal Testimony of David Murray, at 11.

50 Value Line reports four to five years of quarterly dividend payment history in its stock reports for the proxy companies.

1 tools (*e.g.*, spreadsheets and financial calculators) provide investors the ability to account
2 for compounding assumptions when valuing financial securities.[51]

3 It is also clear from market price behavior that investors are aware of quarterly
4 dividend payments and reflect them in stock prices.[52] For example, stock prices
5 commonly adjust to reflect quarterly dividend payments precisely because those cash
6 flows are considered by investors' in their valuation analysis. As Zacks notes:

> 7 When a company declares a dividend, the stock exchanges set a date when
> 8 the stock won't pay a dividend to new buyers. That is the ex-dividend
> 9 date.
>
> 10 …
>
> 11 When the ex-dividend date arrives, the dividend stock tends to drop in
> 12 price by approximately the amount of the dividend per share. That's
> 13 because buyers won't receive the dividend for the current quarter, so they
> 14 want to pay that much less for the stock.[53]

15
16 Not accounting for the quarterly payment of dividends ignores the time value of money
17 and understates investors expected returns.

18 **B. CAPM**

19 **Q. WITH REGARD TO MR. MURRAY'S POSITION THAT THE MRP**
20 **ESTIMATES USED TO DEVELOP YOUR CAPM RESULTS ARE TOO HIGH,**
21 **HAVE YOU CONSIDERED WHERE YOUR ESTIMATES FALL WITHIN THE**
22 **RANGE OF HISTORICAL OBSERVATIONS?**

23 A. Yes, I have. I gathered the annual MRPs reported by Morningstar from 1926 through
24 2017 and charted the observations in a histogram, and calculated the probability that a

---

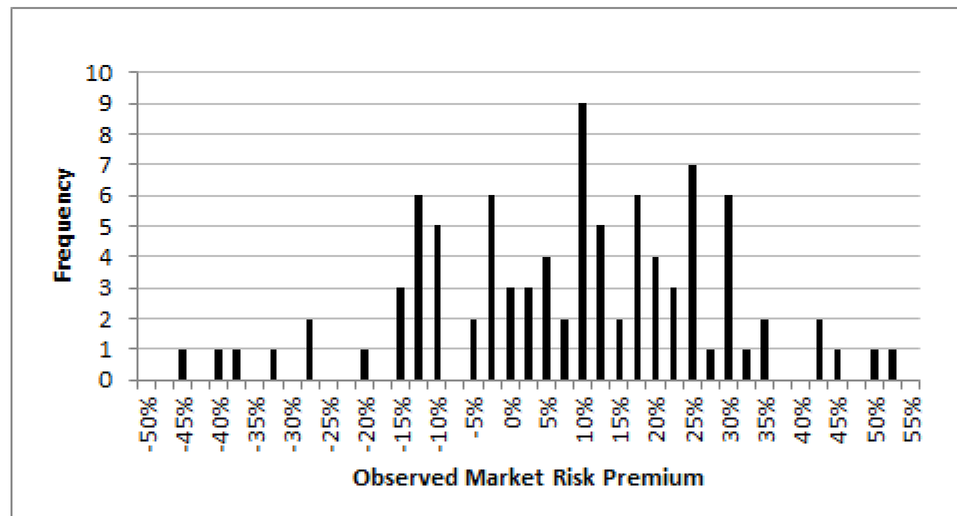
51 Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006 at 344.

52 *See* Direct Testimony of Keith Magee, at 21-22, citing Roger A. Morin, New Regulatory Finance, Public Utility Reports, Inc., 2006 at 344.

53 https://finance.zacks.com/stock-price-change-dividend-paid-3571.html

1 given MRP would be observed. The results of that analysis, which are presented in Chart
2 3 (below), demonstrate that MRP estimates of approximately 11.00 percent and higher
3 occurred quite often.

4 **Chart 3: Distribution of Observed Market Risk Premia, 1926 - 2017**[54]



5

6 In fact, MRP estimates of 11.00 percent and higher represent approximately the 56th
7 percentile of the actual MRPs observed from 1926 to 2017. As noted in my Rebuttal
8 Testimony, the arithmetic average observed MRP over the past five years has been
9 somewhat higher (13.50 percent).[55]

10 **Q. HAVE YOU REVIEWED EXPECTED EARNINGS GROWTH FOR THE S&P**
11 **500 INDEX AS REPORTED BY STANDARD & POOR'S?**

12 A. Yes, I have. As of April 26, 2018, Standard and Poor's reported projected 5-year annual
13 operating earnings growth for the S&P 500 Index of 14.18 percent.[56] That earnings
14 growth estimate is consistent with the weighted average projected growth rate for the

---

54 Duff & Phelps Source: Duff & Phelps, 2018 Stocks, Bonds, Bills and Inflation Yearbook, Table A-1, A-7.
55 Rebuttal Testimony of Keith Magee, at 34.
56 https://us.spindices.com/indices/equity/sp-500

1 companies in the S&P 500 Index using data reported by both Bloomberg and Value Line,
2 as shown in Schedule KM-R4.

3 **C. Risk Premium Analysis**

4 **Q. WHAT IS YOUR RESPONSE TO MR. MURRAY'S POSITION THAT YOUR**
5 **APPLICATION OF THE BOND YIELD PLUS RISK PREMIUM ANALYSIS**
6 **REFLECTS COMMISSION BEHAVIOR RATHER THAN INVESTOR**
7 **REQUIRED RETURNS?**[57]

8 A. The outcomes of the rate cases used in the bond yield plus risk premium analysis reflect
9 the same type of market-based analyses at issue in this proceeding. Moreover, given that
10 authorized returns are publicly available, it is difficult to imagine that such data is not
11 reflected, at least to some degree, in investors' return expectations and requirements. For
12 example, Atmos Energy Corporation and Northwestern Natural Gas Company, which are
13 two of Mr. Murray's proxy companies, disclose authorized returns by jurisdiction in their
14 2017 SEC Form 10-Ks.[58] Consequently, it is reasonable to assume that authorized
15 returns are a reasonable (although not the only) measure of investor-required returns.

16 **Q. WHAT IS YOUR RESPONSE TO MR. MURRAY'S CONCERN REGARDING**
17 **GIVING SOME WEIGHT TO NEAR-TERM AND LONG-TERM PROJECTED**
18 **BOND YIELDS IN YOUR RISK PREMIUM ANALYSIS?**

19 A. As noted in my Direct Testimony, the cost of capital is forward-looking and should

---

[57] Rebuttal Testimony of David Murray, at 15-16.

[58] *See* Atmos Energy Corporation SEC Form 10-K for the fiscal year ended December 31, 2017 at 7; and Northwestern Natural Gas Company SEC Form 10-K for the fiscal year ended December 31, 2017 at 33.

1 reflect investors' expectations.[59] That is particularly true for companies, such as utilities,
2 that are required to commit capital to very long-lived assets. As discussed in my Rebuttal
3 Testimony, expectations for rising rates are evidenced by published forecasts from
4 multiple sources. Market data such as options on the TLT index of government bonds
5 also indicate investors reflect expected increases in interest rates in their investment
6 decisions.[60]

7 With regard to current yields, it is important to recognize that the scope and scale
8 of the Federal Reserve's actions were unprecedented and that the central bank has only
9 recently begun the process of normalization.[61] Although the timing of further monetary
10 policy normalization is uncertain, it is reasonable to believe that rational investors
11 recognize that today's relatively low rates are a temporary manifestation of Federal
12 Reserve market intervention. Consequently, I continue to believe forward-looking rates
13 should be considered in cost of capital analyses.

14 **D. Expected Earnings**

15 **Q. IS THE USE OF EXPECTED EARNINGS CIRCULAR, AS MR. MURRAY**
16 **SUGGESTS?[62]**

17 A. If the expected earnings approach was used as the sole ROE estimation approach, I agree
18 there would be a potential concern regarding circularity. My ROE estimate, however,
19 reflects a balanced consideration of the results of DCF, CAPM, Risk Premium and
20 expected earnings approaches.

---

59 Direct Testimony of Keith Magee, at 24-25.
60 *See*, Rebuttal Testimony of Keith Magee, at 38.
61 *See*, Rebuttal Testimony of Keith Magee, at 31.
62 Rebuttal Testimony of David Murray, at 16.

1 Circularity concerns are not unique to the expected earnings approach. It can also
2 be a concern for the DCF model, which Mr. Murray suggests should be given more
3 consideration in this proceeding. Higher (lower) DCF results lead to higher (lower)
4 authorized returns, which lead to higher (lower) expected growth rates, which lead to
5 even higher (lower) DCF results, and so on. This is another reason it is important to
6 consider multiple ROE methods when determining the required ROE.

7 Lastly, I note Mr. Murray's argument highlights one of the strengths of the
8 expected earnings approach – it is based on analyst projections of the proxy companies'
9 earned returns, which implicitly consider expectations regarding authorized ROEs. It is
10 because the reported earned returns provide direct insight into investor expectations
11 regarding proxy company earned returns that they provide a useful data point to help
12 inform the determination of a risk-comparable competitive ROE for Liberty Midstates.

13 **Q. DO YOU MAKE AN UPWARD ADJUSTMENT TO VALUE LINE'S**
14 **PROJECTED RETURNS, AS MR. MURRAY SUGGESTS?[63]**

15 A. No, I do not. I simply calculate the implied return on average equity, rather than a return
16 on the ending value of equity. Earnings are derived from invested capital, and at the
17 beginning of the year the utility cannot invest capital it does not yet have. Regardless, the
18 average unadjusted ROE is reported in column [1] of Schedule KM-R8. The mean
19 unadjusted reported return on equity for my proxy group is 10.72 percent, and the mean
20 unadjusted reported return for the Value Line gas universe is 10.82 percent. Those
21 results continue to support my recommended ROE of 10.25 percent.

---

[63] Rebuttal Testimony of David Murray, at 16.

1 **Q. MR. MURRAY EXPRESSES CONCERN THAT CONTRIBUTIONS FROM NON-**
2 **REGULATED OPERATIONS "SKEW" THE EXPECTED RETURN UPWARD.[64]**
3 **WHAT IS YOUR RESPONSE?**

4 A. The use of a proxy group is not unique to the expected earnings approach. The only
5 methods used by Mr. Murray and I that do not rely on a proxy group are our respective
6 risk premium analyses (Mr. Murray's "rule of thumb", and my bond yield plus risk
7 premium model). Although we use different approaches, Both Mr. Murray and I apply
8 selection criteria to develop risk-comparable proxy groups from the available universe of
9 publicly traded companies. While the resulting companies do have some non-regulated
10 operations, they are primarily utilities. There is no reason to conclude that non-regulated
11 operations, on average, skew the overall return expectations upward or downward.

12 The expected earnings approach relies on different inputs and assumptions than
13 the DCF, CAPM or bond yield plus risk premium approach, and does not require
14 deducing investor expectations from market prices and published financial estimates. It
15 therefore provides a useful independent benchmark to help assess other ROE model
16 results and inform the overall determination of the required ROE.

17 ***BUSINESS RISKS***

18 **Q. PLEASE SUMMARIZE MR. MURRAY'S CONCERNS WITH THE BUSINESS**
19 **RISKS DISCUSSED IN YOUR DIRECT TESTIMONY.**

20 A. Mr. Murray's concerns include: (1) the effect of small size on the Company's cost of
21 equity; (2) the application of a flotation cost adjustment; (3) and the applicability of

---

64 Rebuttal Testimony of David Murray, at 17.

1 Regulatory Research Associates' rank of Missouri regulatory supportiveness as a
2 measure of regulatory risk for the Company. Mr. Murray also suggests that the
3 Company's ROE should be reduced if the rate mechanism discussed by Company witness
4 Hevert are adopted.

5 **Q. MR. MURRAY NOTES THE SMALL SIZE PREMIUM ADJUSTMENT**
6 **REPORTED BY DUFF & PHELPS IS BASED ON ANALYSIS OF ALL STOCKS.**
7 **HAS ANALYSIS OF THE REGULATED UTILITY INDUSTRY FOUND A**
8 **SIMILAR EFFECT?**

9 A. Yes. As noted in my Direct Testimony, a study published in 1995 by Public Utilities
10 Fortnightly found that size premia do exist for small utilities.[65] A 2002 study by T.M
11 Zepp comes to the same conclusion.[66] In addition, Dr. Roger Morin discusses the small
12 size effect found by Ibbotson Associates in 2005:

> 13 To illustrate, the Ibbotson data suggests that under SIC Code 49,
> 14 *Electric, Gas & Sanitary Services*, the average return for that group
> 15 over an almost 80-year period was 14.03% for the small-cap company
> 16 group and 10.86% for the large-cap group, more than a 300 basis point
> 17 difference. This is true for all 6 industry groups.[67]

18 All three of those studies are highly relevant as they focus specifically on the utility
19 industry and the effect of the size premium in a regulated environment.

---

65 Michael Annin, *Equity and the Small-Stock Effect*, Public Utilities Fortnightly, October 15, 1995.

66 *See,* T.M. Zepp, *Utility stocks and the size effect-revisited*, The Quarterly Review of Economics and Finance, August 29, 2002.

67 *See* Morin, Roger A., New Regulatory Finance, Public Utilities Report, Inc., 2006, at 182.

1 **Q. WHAT IS YOUR RESPONSE TO MR. MURRAY'S CONCLUSION THAT THE**
2 **SMALL SIZE PREMIA IS NOT APPLICABLE TO LIBERTY MIDSTATES**
3 **SINCE IT IS A SUBSIDIARY OF A LARGER COMPANY?**[68]

4 A. I disagree. In this proceeding, we are evaluating the return required for an investment in
5 Liberty Midstates, not LUCo or APUC. Such an approach is consistent with the standard
6 of stand-alone ratemaking, in which the risk of the subject utility is considered, not that
7 of its parent or affiliates. I note that Duff and Phelps, the source of the size premia
8 referenced in my Direct Testimony, states:

> 9 The Risk Premium Report Study can be used to develop estimates of
> 10 cost of equity capital for **<u>divisions, reporting units and closely held</u>**
> 11 **<u>businesses</u>** without "guessing" at the value of the business before one
> 12 begins the analysis. Rather, fundamental measures of firm size (e.g.,
> 13 sales, net income, EBITDA) and risk (e.g., operating margin) can be
> 14 used to directly estimate cost of equity capital for non-public
> 15 businesses.[69] (emphasis supplied)

16 That is, Duff and Phelps' Risk Premium Report Study is intended to be used to estimate
17 the cost of equity for divisions and subsidiaries within a publicly traded parent company,
18 such as is the case for the Company.

19 Investors will allocate capital resources to those investments that are likely to
20 provide the required risk-adjusted returns. Even as a subsidiary of a larger company,
21 Liberty Midstates must compete for capital with other entities, including affiliates and
22 outside investment opportunities. To the degree that Liberty Midstates has more risk by
23 virtue of its comparatively small size, it will need to generate the returns required by its
24 owners as compensation for that risk. While being part of a larger company can help

---

[68] Rebuttal Testimony of David Murray, at 17-18.
[69] Duff and Phelps <u>2018 Valuation Handbook</u>, at Chapter 9, page 1 [emphasis added].

1 mitigate some disadvantages for a smaller business unit, others remain (*i.e.*, a smaller
2 customer base, higher information costs, and a lack of diversification across customers,
3 energy sources, and geography).[70] Consequently, I do not make a specific adjustment to
4 my recommended ROE based on Duff & Phelp's size premia but rather take them into
5 consideration when determining where my recommended ROE falls within the range of
6 proxy group model results.

7 Lastly, I recognize the Commission concluded that small size risk did not apply to
8 Spire Missouri in that company's most recent rate case. Liberty Midstates, however, is a
9 significantly smaller company with approximately 80,000 customers across Missouri,
10 Illinois and Iowa. Even Liberty Midstates' intermediate holding company, LUCo, which
11 has approximately 762,000 total electric, gas and water distribution utility customers has
12 significantly fewer customers than Spire Missouri (1,130,000 gas customers).[71] Looking
13 at just the gas customer counts reported in Schedule KM-10, both Liberty Midstates and
14 LUCo are well below the proxy group mean and median in terms of customers.[72]

---

70 *See* Michael Annin, *Equity and the Small-Stock Effect*, Public Utilities Fortnightly, October 15, 1995.

71 *See,* Amended Report and Order, Public Service Commission of the State of Missouri, Case Nos. GR-2017-0215 and GR-2017-0216, at 10-11 (Issued March 7, 2018). Total reflects 500,000 Missouri Gas Energy customers and 630,000 Laclede Gas Company customers.

72 After removing Sempra Energy and adding New Jersey Resources to reflect the revised proxy group discussed in my Rebuttal Testimony, the mean and median gas customer count would be 1.0 and 1.4 million, respectively. Includes gas customers only.

1 **Q. MR. MURRAY DOES NOT FIND THE "BELOW AVERAGE / 1"**
2 **REGULATORY RISK RATING ASSIGNED TO MISSOURI IN MAY 2017 BY**
3 **REGULATORY RESEARCH ASSOCIATES ("RRA") APPLICABLE TO**
4 **LIBERTY MIDSTATES.[73] DO YOU AGREE?**

5 A. No, I do not. Mr. Murray notes the rating was, in part, a reaction to the fact that utility
6 legislation primarily affecting electric utilities did not pass during the 2017 legislative
7 session. RRA's rankings, however, reflect an overall assessment of the relative risk for
8 both gas and electric utility regulation. As RRA explains:

9 Regulatory Research Associates, or RRA, evaluates the regulatory
10 climates for ***energy utilities*** of the jurisdictions within the 50 states
11 and the District of Columbia, a total of 53 jurisdictions, on an ongoing
12 basis. The evaluations are assigned from an investor perspective and
13 indicate the <u>relative</u> regulatory risk associated with the ownership of
14 securities issued by each jurisdiction's electric and gas utilities.[74]
15 (emphasis supplied).
16
17 The regulatory rank does not apply to just one type of utility, and is not determined by a
18 single factor.

19 Mr. Murray also notes that the company currently has the ability to use the
20 Infrastructure System Replacement Surcharge ("ISRS") to recover investment costs.
21 Importantly, as described above, the rankings are relative. Infrastructure recovery clauses
22 like the ISRS are common among regulated gas utilities. And, as discussed in Company
23 witness Hevert's direct testimony, many gas utilities also have additional supportive rate
24 mechanisms in place such as decoupling. RRA's overall conclusion is that Missouri
25 regulation is "relatively restrictive from an investor point of perspective" and that,

---

[73] Rebuttal Testimony of David Murray, at 18-19.
[74] *See* Regulatory Research Associates, *State Regulatory Evaluations*, May 11, 2017, at 1.

1 Missouri's "traditional approach to ratemaking is less investor-friendly than the more
2 constructive frameworks now being utilized in many other jurisdictions."

3 I note, however, that one of RRA's specific concerns with the relative
4 supportiveness of Missouri utility regulation was that authorized ROEs have historically
5 been below industry averages at the time established.[75] In my view, the recent Spire
6 authorized returns were in line with national averages at the time authorized.
7 Maintaining a consistent level of supportiveness going forward would likely be seen as a
8 positive factor, and address at least a portion of RRA's concerns.

9 **Q. MR. MURRAY PROPOSES AN ROE DECREASE IF THE COMMISSION**
10 **WERE TO APPROVE THE MECHANISMS SPONSORED BY COMPANY**
11 **WITNESS HEVERT.[76] WHAT IS YOUR REPSONSE?**

12 A. I disagree. Adoption of the mechanisms proposed by the Company would only serve to
13 provide Liberty Midstates a more reasonable opportunity to earn its allowed return and
14 make its risk level more comparable to the proxy group.

15 As discussed in the direct testimony of Company witness Hevert, many of the
16 proxy companies already have similar rate mechanisms to those the company proposes as
17 well as other supportive cost recovery mechanisms. While Mr. Murray references a
18 Commission decision to decrease Missouri Gas Energy's allowed ROE in response to a
19 straight-fixed variable rate design in 2006, that was before the wide-spread prevalence of

75 Regulatory Research Associates, Missouri Commission Profile, website accessed May, 4, 2018.
76 Rebuttal Testimony of David Murray, at 19.

1 weather normalization, decoupling and straight-fixed-variable rate designs.[77] Because
2 the cost of equity is a comparative exercise, and those types of mechanisms are
3 commonplace now, there is no need to adjust the ROE if the proposed rate mechanisms
4 are adopted in this proceeding.

5 **Q. WHAT IS YOUR RESPONSE TO MR. MURRAY'S POSITION THAT**
6 **FLOTATION COSTS SHOULD BE RECOVERED AS OPERATING**
7 **EXPENSES?[78]**

8 A. Flotation costs are part of capital costs, which are properly reflected on the balance sheet
9 rather than as current expenses on the income statement. As discussed in my Direct
10 Testimony, because of direct issuance costs (such as those provided in Schedule KM-10),
11 the net proceeds received when companies issue equity in the capital market are less than
12 the market price of the offerings.[79] The majority of flotation costs are incurred prior to
13 the test year and remain a perpetual deficiency on the balance sheet. The ROE therefore
14 should be adjusted to allow recovery of the capital cost associated with the amounts paid
15 by the issuer (such as underwriter fees) to obtain equity capital.

16 In that regard, common stock is closely analogous to long-term debt, both in the
17 sense that its purpose is to provide funding for long-term investments that are part of rate
18 base, and that it remains a part of the utility's operations for long periods of time.
19 Flotation costs are a legitimate part of the cost of the utility in each year after the issuance

---

[77] Based on a review of their most recent annual SEC Form 10-K filings, all of the companies in my proxy group report having weather normalization adjustments, straight-fixed variable rate design or decoupling mechanisms in place that help mitigate weather risk for at least a portion of their gas customer bases. All but one of the proxy companies report using infrastructure recovery mechanisms, with the outlier (Northwest Natural Gas) having a decoupling mechanism.

[78] Rebuttal Testimony of David Murray, at 18.

[79] Direct Testimony of Keith Magee, at 37.

1 of common stock, just as the issuance expenses of long-term debt are legitimate parts of
2 the utility's costs in succeeding years. Because common equity has an indefinite life, the
3 effect of flotation costs (which are a reduction to common equity) is indefinite. In that
4 sense, flotation costs are borne by the utility in each year after the issuance of equity.

5 **V. <u>RESPONSE TO REBUTTAL TESTIMONY OF OPC WITNESS MR. RILEY</u>**

6 **Q. PLEASE SUMMARIZE MR. RILEY'S TESTIMONY AS IT RELATES TO THE**
7 **COMPANY'S COST OF CAPITAL.**

8 A. Mr. Riley disagrees with my assessment of the risk associated with Liberty Midstates'
9 small size and regulatory environment. He recommends an ROE of 9.80 percent for
10 Liberty Midstates based on Mr. Murray's recommended ROE range, suggesting Mr.
11 Murray erred in proposing an ROE at the upper end of his recommended 9.50 percent to
12 10.00 percent ROE range.[80] I should note that in fashioning his recommendation, Mr.
13 Riley performed none of the traditional analyses commonly undertaken to derive an ROE
14 in a rate case proceeding.

15 **Q. DID YOU INCREASE YOUR RECOMMENDED ROE BY 98 BASIS POINTS TO**
16 **ACCOUNT FOR LIBERTY MIDSTATES' SMALLER SIZE RELATIVE TO THE**
17 **PROXY GROUP, AS MR. RILEY STATES?[81]**

18 A. No. I did not make an explicit adjustment to my ROE recommendation based on Duff &
19 Phelp's size premia estimates. As explained in my above response to Mr. Murray, I
20 considered the risk associated with the Company's relatively small size when
21 determining where Liberty Midstates' cost of equity lies within the range of my

[80] Rebuttal Testimony of John S. Riley, at 9-11.
[81] Rebuttal Testimony of John S. Riley at 4.

1 analytical model results.

2 **Q. DO YOU AGREE WITH MR. RILEY'S ASSESSMENT THAT "RRA'S**
3 **PRIMARY FOCUS IN RATING REGULATORY JURISDICTIONS IS FOR**
4 **ELECTRIC UTILITIES?"[82]**

5 A. No. As discussed in my response to Mr. Murray above, RRA states their rankings are
6 evaluations of the regulatory climate for *energy utilities* (that is, both gas and electric
7 utilities). The ratings are assigned from the perspective of investors holding, or
8 considering acquiring, securities issued by the utilities operating in the jurisdiction.[83]

9 In general, Mr. Riley's disregard for RRA's independent regulatory environment
10 rankings is misguided and based on a limited consideration of the factors affecting the
11 rankings. Mr. Riley points to RRA's description of Missouri gas utilities' ability to
12 recover gas commodity costs and certain infrastructure investment costs, and concludes
13 the regulation of Missouri LDCs is "very positive."[84] However, those cost recovery
14 mechanisms are not unusual. All jurisdictions allow recovery of gas commodity costs,
15 and most allow infrastructure cost recovery.[85] Many also have other supportive
16 regulatory mechanisms. As discussed in my response to Mr. Murray, the important
17 consideration for the purposes of assessing Liberty Midstates cost of equity is that RRA's
18 rankings consider the *relative* supportiveness of each jurisdiction. Based on that kind of
19 relative analysis, it would be inaccurate to suggest that RRA considers the regulatory
20 environment in Missouri to be "very positive".

---

82 Rebuttal Testimony of John S. Riley at 6.
83 *See* Regulatory Research Associates, *State Regulatory Evaluations*, May 11, 2017, at 1.
84 Rebuttal Testimony of John S. Riley at 7-8.
85 *See* Schedule RBH-1.

1 **Q. DO YOU HAVE ANY CONCERNS WITH MR. RILEY'S SUGGESTION THAT**
2 **"MR. MURRAY MAKES A VERY THOROUGH CASE FOR A WIDER ROE**
3 **RANGE" OF 9.50 PERCENT TO 10.00 PERCENT?**[86]
4 A. Yes. Mr. Riley has not articulated what "thorough case" he is referring to. The ROE
5 range of 9.50 percent to 10.00 percent is outside of Mr. Murray's ROE model results.
6 Mr. Murray's ultimate ROE recommendation is based on the ROE authorized in Spire's
7 most recent rate case.
8 **Q. DOES MR. RILEY RECOMMEND A SPECIFIC EQUITY RATIO WHEN**
9 **RECOMMENDING THAT LIBERTY MIDSTATES' ROE BE SET AT 9.80**
10 **PERCENT?**[87]
11 A. No, he does not. Capital structure, however, has an important effect on the cost of equity.
12 As discussed in my Direct Testimony, capital structure affects financial leverage (*i.e.*,
13 financial risk) as well as the level of internally-generated funds from operations, which is
14 a key component of financial strength and credit ratings. I discuss the need to consider
15 the ROE in conjunction with the equity ratio in my response to Mr. Murray above.

16 **VI. <u>CONCLUSIONS AND RECOMMENDATION</u>**

17 **Q. WHAT IS YOUR CONCLUSION REGARDING THE COMPANY'S COST OF**
18 **CAPITAL AND CAPITAL STRUCTURE?**
19 A. I continue to believe an ROE of 10.25 percent, within a range of 9.90 percent to 10.35
20 percent is an appropriate estimate of Liberty Midstates' cost of equity. I also continue to
21 recommend a 53.00 percent common equity ratio which is consistent with industry

---

86 Rebuttal Testimony of John S. Riley at 9.
87 Rebuttal Testimony of John S. Riley at 2.

1 practice and, therefore, reasonable and appropriate. Lastly, I continue to conclude that a
2 4.70 percent cost of debt, which is somewhat lower than the average cost of debt
3 reflected in the overall rate of return for other gas utilities, also is reasonable and
4 appropriate.

5 **Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

6 A. Yes, it does.

Effect of Murray's Proposed Leverage on ROE - Using Updated Equity Ratio Recommendation
CAPM Estimate Using Hamada Equation

CALCULATIONS AND ASSUMPTIONS		NOTES
Tax Rate	21.00%	Corporate tax rate under the Tax Cut and Jobs Act
Starting Equity Ratio	54.20%	Spire's equity ratio in Case No. GR-2017-0216
Starting D/E Ratio	0.85	(1 - Current Equity Ratio) / Current Equity Ratio
Adjusted Equity Ratio	42.83%	Murray Schedule 13
Adjusted D/E Ratio	1.33	(1 - Adjusted Equity Ratio) / Adjusted Equity Ratio
Sector Equity Beta	0.68	Murray Schedule 12
Sector Asset Beta (unlevered)	0.41	Equals Equity Beta / (1 + (1 - Tax Rate) * Current D/E Ratio)
Check: Re-Lever Beta	0.68	Equals Asset Beta x (1 + Starting D/E Ratio * (1 - Tax Rate))
Re-Levered Beta at 40.94% Equity	0.84	Equals Asset Beta x (1 + New D/E Ratio * (1 - Tax Rate))
Difference in Re-Levered Beta	0.16	Equals Re-Levered Equity Beta - Sector Equity Beta
Assumed MRP	10.26%	Implied MRP assuming Spire's 9.80% ROE, and Murray's 2.82% risk-free rate and 0.68 beta
Cost of Equity Effect	1.62%	Equals Difference in Re-Levered Beta x MRP

Notes:

Hamada's Equation:

$$B_a = \frac{B_e}{(1 + (1 - \text{T}) \text{ x } \frac{D}{E})}$$

or, rearranged:

$$B_e = B_a \text{ x } (1 + (1 - \text{T}) \text{ x } \frac{D}{E})$$

Where:

B_a	= Asset Beta
B_e	= Equity Beta
T	= Tax Rate
D/E	= Debt/Equity Ratio

DCF Model Results Adjusted for Change in P/E

Company	Ticker	Expected Dividend Yield	Average Earnings Growth	2017 Average Annual P/E	3-5 Year Projected P/E	Annual Valuation % Change	3-5 Year Return
		[1]	[1]	[2]	[2]		
Atmos Energy	ATO	2.48%	7.73%	22.0	21.5	-0.57%	9.63%
Black Hills	BKH	3.73%	5.38%	20.0	15.5	-6.17%	2.94%
Chesapeake Utilities	CPK	1.94%	7.76%	28.2	22.5	-5.49%	4.21%
New Jersey Resources	NJR	2.89%	7.33%	22.4	17.0	-6.66%	3.56%
Northwest Natural Gas	NWN	3.50%	4.91%	19.0	17.0	-2.74%	5.67%
One Gas	OGS	2.90%	5.89%	23.5	25.0	1.56%	10.35%
Southwest Gas	SWX	3.15%	5.98%	22.7	16.0	-8.37%	0.75%
Spire	SR	3.38%	5.92%	19.8	16.0	-5.19%	4.11%
Vectren	VVC	2.98%	6.26%	23.5	16.0	-9.16%	0.08%
						Mean:	4.59%
						Median:	4.11%

Notes:
[1] Source: KM-R1, using 30-day average pricing as of March 29, 2018
[2] Source: Value Line company reports as of March 29, 2018
Value Line did not report a Current P/E for NWN; using the company's reported median P/E as of March 2, 2018

AFFIDAVIT OF KEITH MAGEE

COMMONWEALTH OF MASSACHUSETTS)
) ss
COUNTY OF WORCESTER)

On the 8th day of May, 2018, before me appeared Keith Magee, to me personally known, who, being by me first duly sworn, states that he is a Director at ScottMadden, Inc. and acknowledges that he has read the above and foregoing document and believes that the statements therein are true and correct to the best of his information, knowledge and belief.

Keith Magee

Subscribed and sworn to before me this 8th day of May, 2018.

Notary Public

My commission expires: 11/8/2024

SARA A. DERSTINE
MY COMM. EXPIRES NOVEMBER 8, 2024
NOTARY PUBLIC
COMMONWEALTH OF MASSACHUSETTS