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MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF DIVISION

FINANCIAL ANALYSIS

REBUTTAL TESTIMONY

OF

DAVID MURRAY

SPIRE MISSOURI, INC., d/b/a SPIRE

LACLEDE GAS COMPANY and MISSOURI GAS ENERGY
GENERAL RATE CASE

CASE NOS. GR-2017-0215 AND GR-2017-0216

Jefferson City, Missouri
October 2017

** Denotes Confidential Information **

TABLE OF CONTENTS

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Q. Please state your name.

A. My name is David Murray.

Q. Are you the same David Murray who prepared the Rate-of-Return Section of Staff's Cost of Service Report ("Staff Report")?

A. Yes, I am. I filed rate-of-return ("ROR") testimony on September 8, 2017.

Q. What is the purpose of your Rebuttal Testimony?

A. The purpose of my rebuttal testimony is to respond to the direct testimonies of LAC's and MGE's (the "Company") witnesses Pauline M. Ahern and Glenn W. Buck. Ms. Ahern primarily sponsors testimony related to Spire Missouri's requested allowed return on common equity ("ROE"), but she also testifies as to the reasonableness of the Company's requested capital structure. Mr. Buck sponsors the Company's recommended capital structure and its requested return on its debt capital.

EXECUTIVE SUMMARY

Q. What are the main areas of disagreement you have with the Company witnesses as they relate to a fair and reasonable allowed ROR in these cases?

A. Staff disagrees with the Company's requested ROE. Although Ms. Ahern applies three general cost of equity methods (the discounted cash flow method ("DCF"), the

natural gas utility proxy group to arrive at her industry cost of equity estimate of 10.0%, only one specific variant of her risk premium analyses, the Predictive Risk Premium Method ("PRPM"), implies a ROE higher than 9.5%. If not for the results of this one method, the mid-point of her other cost of equity methods imply a fair and reasonable ROE in the low 9% range. Ms. Ahern also applies these methods to a proxy group consisting of non-price regulated companies she considers to have a similar risk profile as a natural gas distribution utility. Staff is not aware of a situation in which the Commission has determined an allowed ROE based on an analysis of a non-regulated proxy group. Ms. Ahern then makes two separate upward adjustments of 16 basis points for flotation costs and 20 basis points for a business risk adjustment. This forms the basis for her recommended ROE of 10.35%. Staff will show the Commission why the information Ms. Ahern introduces in this case does not discredit the reasonableness of the 9.5% allowed ROEs the Commission applied to Missouri's large electric utility companies in recent cases.

Perhaps the Commission's more difficult decision as it relates to the allowed ROR is the appropriate ratemaking capital structure.[1] Staff considers this more difficult because this element of rate of return tends to vary depending on how management chooses to organize the ownership and financial management of its assets. Although there may be some common generalities in ownership and financial management across companies, typically there are unique circumstances for each corporate/ownership structure as well as the financial management of the assets owned within each structure. In deciding a fair and reasonable capital structure, Staff recommends the Commission authorize a common equity ratio that is consistent with the amount of financial risk (debt capacity) that Spire, Inc.'s gas distribution

[1] Staff notes that it is the Company that has changed its past position as it relates to capital structure. Until this case, Staff and the Company had agreed on how to set the capital structure.

operations allow, which is best determined by using Spire, Inc.'s consolidated common equity ratio.

STAFF RESPONSE TO GLENN BUCK'S RECOMMENDED CAPITOL STRUCTURE AND COST OF DEBT FOR SPRIRE MISSOURI

Q. What capital structure does Mr. Buck recommend the Commission use for purposes of setting Spire Missouri's allowed ROR?

A. Mr. Buck recommends the use of Spire Missouri's capital structure. Because Mr. Buck only had financial information through the test-year, December 31, 2016, his initial capital structure recommendation consists of 57.2% common equity. Mr. Buck's recommended common equity ratio should be lower after updating Spire Missouri's capital structure through the true-up period of September 30, 2017, due to Spire Missouri's issuance of $170 million of long-term debt on September 15, 2017. Because the specific ratios will not be known until Staff receives true-up data, Staff's rebuttal testimony will focus on the general concerns Staff has with Mr. Buck's recommended use of Spire Missouri's capital structure, as well as his position to exclude short-term debt from the allowed capital structure.

Q. Did Mr. Buck recommend the use of Spire Missouri's capital structure in Case Nos. GR-2014-0007 and GR-2013-0171?

A. No.

Q. What capital structure did Mr. Buck recommend in those cases?

A. Mr. Buck recommended the use of the holding company's consolidated capital structure (previously The Laclede Group, but now Spire, Inc.).

Q. Did Mr. Buck provide testimony in past rate cases on why the holding company's consolidated capital structure was the most appropriate?

A. Yes. Mr. Buck's rebuttal testimony in Case No. GR-2014-0007 provided his most extensive explanation as to why the holding company capital structure was the most appropriate for ratemaking.

Q. Why did Mr. Buck recommend using the holding company capital structure in past rate cases?

A. For many of the same reasons Staff has consistently recommended the use of consolidated capital structures. It is the only true investable capital structure, which Mr. Buck cited as support in his rebuttal testimony in Case No. GR-2014-0007.[2] Mr. Buck specifically stated the following:

> When making decisions, they [investors] are looking at the business risks and capital structure of the entire organization. This is the primary reason that the consolidated capital structure should be used in the ratemaking process.

Mr. Buck also cited the use of double-leverage as a reason not to use a subsidiary-capital structure. While Mr. Buck did not specifically admit that Spire, Inc. was directly employing double-leverage by issuing debt at the holding company level to invest in the equity of the subsidiary, he indicated it was "solid policy" for the Commission to use the holding company consolidated capital structure in order to avoid the risk of this occurring. In fact, Mr. Buck even cited a court case in which the Western District Court of Appeals upheld the Commission's consideration of capitalization at the parent company level in setting the allowed ROR. Mr. Buck went on to state that:

> The Commission's solid policy decision was affirmed in that proceeding and should be utilized in setting rates in this proceeding.

[2] Glenn W. Buck Rebuttal Testimony in Case No. GR-2014-0007, p. 14, ll. 1-5.

Mr. Buck also discusses one of the primary concerns Staff addressed in its investigative report in File No. GM-2016-0342, which is that Standard & Poor's ("S&P") does not view Spire Missouri as being sufficiently insulated from Spire, Inc. to warrant being rated consistent with its stand-alone credit profile ("SACP"), which is one notch higher than that of Spire, Inc. ('A' vs. 'A-'). Mr. Buck specifically states the following in his rebuttal testimony in Case No. GR-2014-0007:

> In fact, S&P recognizes that given the nature of our corporate structure, there is really no practical "ring-fencing" that would differentiate the business risk between Laclede Group and Laclede Gas. Further, although they refer to the Company's interest in growing the unregulated lines of business, the reality is that, with the acquisition of MGE, our regulated businesses now represent roughly 95% of the consolidated earnings potential of the combined entities. As a consequence, the percentage of unregulated business done under the Laclede Group umbrella is at its lowest level in two decades. This makes The Laclede Group one of the most "pure play" gas utility companies in the industry. Accordingly, even if there was some merit to Mr. Gorman's hypothesis that Laclede Gas should be separated from its parent in terms of developing a capital structure for ratemaking purposes, this would be a singularly inappropriate time to do it.[3]

Although Mr. Buck's testimony in 2014 was firmly in support of the use of the holding company's consolidated capital structure, Mr. Buck is now supporting the use of Spire Missouri's subsidiary capital structure. Although this is a significant change to Mr. Buck's past position, he does not offer testimony on why this is now the appropriate time to effectuate such a change.

Although he didn't explain why he changed his position, at least two of the three reasons Mr. Buck cited in his 2014 testimony are still applicable to the current ownership structure and financial management of Spire, Inc. and its subsidiaries. First, S&P still rates

[3] *Id*, p. 12, l. 22 through p. 13, l. 10.

Spire Missouri based on the consolidated credit profile of Spire, Inc. Second, Spire, Inc. is an even more "pure-play" local natural gas distribution utility than it was in 2014. Finally, although Mr. Buck never admitted that the holding company employed double leverage, he indicated that the mere risk of it occurring was support for using a consolidated capital structure.

Because the concept of "double leverage" can have various meanings, I will discuss it in more detail. This should help the Commission evaluate whether Spire Missouri's current circumstances contains more risk of "double leverage" as compared to its situation in 2014.

Double-leverage, in the broadest sense, is defined as the issuance of debt at the subsidiary as well as at the holding company level. Under this broad definition, Spire, Inc. and its subsidiaries are double-levered because Spire, Inc. issues debt and its subsidiaries issue debt. However, a more refined definition of double-leverage, and one consistent with how Mr. Buck defined it in his 2014 testimony, is the issuance of debt at the holding company level for the specific purpose of making equity infusions into the subsidiary to cause a higher equity ratio at the subsidiary. Because a higher equity ratio at the utility subsidiary level can result in a higher revenue requirement for the utility if a commission uses this equity ratio to set the ROR, the incentive for the utility to employ such schemes is obvious. This allows the company to earn the margin of the pre-tax allowed ROE on the equity infusion over the cost of the debt the holding company issued to make the equity infusion. As Staff will show in the scenario below, this margin can be well over 10%. Although some would claim that the servicing of the debt issued by the holding company is a risk borne separately by the holding company's shareholders and not the subsidiary, the constraint on Spire Missouri's credit rating caused by the holding company debt contradicts

this argument. Quite simply, the holding company is using the utility subsidiary's debt capacity at the expense of the subsidiary and its ratepayers for the benefit of shareholders. Because Spire, Inc. wholly owns the equity in Spire Missouri, and Spire, Inc. has a fiduciary responsibility to its shareholders, there is no legitimate reason to expect Spire Missouri to maintain the most economical capital structure that results in a lower cost charged to ratepayers. However, because Spire, Inc. is tasked with maximizing shareholder value for its shareholders, it is reasonable to expect that Spire, Inc. will manage its consolidated capital structure to achieve a low cost of capital. This is the capital structure ratepayers should be charged to maintain, not the less economical capital structure of the subsidiary.

As of June 30, 2017, Spire, Inc. had $877 million of long-term debt outstanding at the holding company level. $87 million of this long-term debt was issued prior to Spire, Inc.'s acquisition of Alagasco and EnergySouth. An example of direct double leveraging employed by Spire, Inc. occurred in the last half of the of the 2012 calendar year. The holding company issued $25 million of long-term debt during the fourth quarter of the 2012 calendar year. In the third quarter of the 2012 calendar year, Spire, Inc. issued approximately $40 million of short-term debt and during the same quarter infused approximately the same amount of equity into Spire Missouri. The weighted average cost of the debt financing used to infuse $40 million of equity in Spire Missouri was 2.14%, which Staff determined based on the 3.31% coupon on the long-term debt and the .2% average cost of short-term debt for the quarter ending June 30, 2012. If Laclede was allowed an ROE of 9.7%, ratepayers would also fund an assumed income tax expense to allow an after-tax return of 9.7%. This results in a pre-tax allowed ROE of 15.74% for a total cost of capital difference of approximately 13.6%. Applying the 13.6% difference to the $40 million equity infusion would allow

Spire's shareholders to receive an additional $5.44 million of cash flow from Spire Missouri's ratepayers due to its management of the subsidiary capital structure for ratemaking purposes.

Another supporting factor for using Spire, Inc.'s consolidated capital structure has emerged since Spire Missouri's previous rate cases for LAC and MGE. As of January 2017, Spire, Inc. formed a consolidated commercial paper program. Before January 2017, Spire Missouri borrowed directly from the commercial paper markets. Under Spire, Inc.'s consolidated commercial paper program, Spire, Inc. borrows from the commercial paper markets and then lends the proceeds, at cost, to its subsidiaries. Although Spire, Inc.'s commercial paper is rated the same as Spire Missouri's since July 2013, it illustrates Spire, Inc.'s strategy of financially managing its subsidiaries on a consolidated basis. While there are certainly efficiencies in doing so, it is still important to recognize the consolidated nature of its financial management when determining the appropriate capital structure to use for the purposes of setting Spire Missouri's ROR.

Q. Did Mr. Buck include any short-term debt in his recommended capital structure?

A. No.

Q. Does he explain why?

A. Yes. He claims that after he makes a pro-forma adjustment to consider $170 million of long-term debt that will be issued before the true-up date in this case, a recent 13-month average of all of the assets that are typically funded by short-term debt will be in excess of the short-term debt balance. In order to arrive at this conclusion, Mr. Buck

deducted $170 million from his short-term debt balances in order to reflect Spire Missouri's planned debt issuance of $170 million on September 15, 2017.

Q. Did Spire Missouri issue the long-term debt as planned?

A. Yes.

Q. Do you agree that this transaction should preclude the inclusion of short-term debt in the authorized capital structure?

A. No.

Q. Why?

A. But for the issuance of long-term debt to refinance short-term debt in time for the true-up date, Spire Missouri's capital structure has contained a significant amount of short-term debt with increasing balances over the last several years. There is no reason to conclude that Spire Missouri will not follow the same pattern over the next cycle before its divisions file subsequent rate cases. An average balance of short-term debt in excess of current assets capitalized with short-term debt rates over the full cycle between rate cases is appropriate to include in the capital structure regardless of the recent refinancing of short-term debt. I will provide the details of the specific amount of short-term debt I recommend including in the capital structure when I receive all necessary true-up financial data through September 30, 2017.

STAFF RESPONSE TO PAULINE M. AHERN'S RECOMMENDED ALLOWED ROE FOR SPRIRE MISSOURI

Q. Would you please provide a summary of how Ms. Ahern developed her recommended allowed ROE of 10.35%?

A. Yes. Ms. Ahern provides a good summary of her cost of equity estimates on page 5 of her direct testimony. Ms. Ahern applies the DCF method, the CAPM, and the

RPM to a natural gas proxy group and a "non-price regulated" proxy group. Ms. Ahern selected her non-price regulated proxy group by evaluating risk factors other than being in the same industry as Spire Missouri. The results of Ms. Ahern's individual methods range from as low as 8.68% based on her application of the constant-growth DCF analysis to the natural gas proxy group to a high of 11.62% based on her application of her jointly-developed Predictive Risk Premium Model ("PRPM") to the natural gas utility proxy group. Ms. Ahern's application of the traditional CAPM to her natural gas utility proxy group implies a cost of common equity of approximately 8.81%. Her application of the Empirical CAPM ("ECAPM") to the natural gas utility proxy group resulted in an implied cost of common equity of 9.40%.[4] Ms. Ahern then applied most of these same methods to a "non-price regulated" proxy group to arrive at an aggregate cost of equity estimate for this group of 10.45%. On page 47 of her direct testimony, Ms. Ahern states:

> Based upon these common equity cost rate results, I conclude that a common equity cost rate of 10.00% is indicated for the Natural Gas Group before applying a flotation cost adjustment and the necessary business risk adjustment to determine the Companies' common equity cost rate of 10.35%, which will be discussed in detail below."[5] (emphasis in original).

Ms. Ahern then adds a 16-basis point (0.16%) flotation cost adjustment and a 20-basis point (0.20%) business risk adjustment to arrive at her final cost of common equity estimate of approximately 10.35%, which is the basis for her recommended allowed ROE.

Q. Is it clear what implied costs of equity Ms. Ahern gives more weight to in arriving at her final estimate?

[4] Ahern Direct Testimony, Schedule PMA-D5, p. 1 of 2.

[5] *Id.*, p. 47, ll. 8-11.

A. Not entirely, but because her final estimate is 10% even though her CAPM and DCF estimates are in the high 8% to low 9% range, it certainly appears she puts more weight on her risk premium estimates.

Q. Does Ms. Ahern explain why she did not give the DCF as much consideration as her risk premium estimates?

A. Yes. Ms. Ahern provides five pages of testimony addressing her concerns about the constant-growth DCF. Ms. Ahern explains that her DCF results are not reliable because utility stock prices are trading at high multiples to their book values. Utility stock market values are high in the current macroeconomic environment due to the fact that the cost of capital is low.

Q. Is it reasonable and logical to expect lower cost of equity estimates for utilities in today's low interest rate environment?

A. Absolutely. Therefore, the DCF should be embraced rather than dismissed because its lower results are supported by the opportunity cost concept, which means that as the returns on alternative investments to utility stocks, such as bonds, decrease, investors will pay more for utility stocks, reflecting the lower required return environment.

Q. Has the DCF method been widely-accepted as being reliable for estimating investors' required returns on equity?

A. Yes. The constant-growth DCF is widely used by rate of return witnesses throughout the country. This is for good reason. The DCF is used in investment practice by equity analysts to estimate the value of utility stocks. Therefore, the application of the DCF using reasonable inputs will provide accurate and reliable estimates of investors' required returns on utility common equity (i.e. the cost of equity) investments.

Q. What is part of Ms. Ahern's rationale for dismissing lower DCF cost of equity estimates in setting a utility's allowed ROE?

A. On page 22 of her direct testimony, Ms. Ahern states:

> Under DCF theory, the rate of return investors require is related to the market price paid for a security. Thus, market prices form the basis of investment decisions and investors' expected rates of return. In contrast, a regulated utility is generally limited to earning on a net book value (depreciated original cost) rate base. Although market prices are significantly influenced by analysts' EPS growth forecasts, market values can diverge from book values **for a myriad of macroeconomic reasons including**, but not limited to, EPS and DPS expectations, **merger or acquisition expectations, interest rates, investor sentiment, unemployment levels, monetary policy, fiscal policy**, etc.[6] (emphasis added)

Again, this is exactly the reason why the Commission should embrace the information conveyed from a rational and logical application of the DCF. The DCF directly captures the change in utility investors' required returns in today's macroeconomic environment due to all of the factors listed by Ms. Ahern. To imply the Commission's decision on an allowed ROE should not be informed by this information is akin to not recognizing realized lower costs of debt in the authorized debt return. As discussed in a *Wall Street Journal* article in 2016 (last year), the backward looking nature of utility regulation tends to support higher equity valuation metrics:

> The biggest driver of the good times at utilities is low interest rates. The most obvious impact has been yield-chasing investors driving up share prices and pushing valuations for the world's stodgiest industry to the highest level in at least 20 years, according to FactSet. Utilities don't look so expensive when compared with Treasury yields. The spread between dividend yields on utilities and 10-year Treasurys is nearly 2 percentage points, among the widest ever.

[6] Ahern Direct Testimony, p. 22, ll. 16-23.

> Low rates also have boosted utilities' profits. That is because regulators allow utilities to make a specific return on their investments. Utilities borrow a lot, so rates matter. But regulators have lagged behind the reality. So rates are being set as if utilities were borrowing at higher rates than they really are. The difference is profit.
>
> The second benefit for the industry has been lower energy prices. Energy accounts for roughly two-thirds of consumers' electric bills, and utilities just pass along those costs. But when utility bills are low overall, regulators are more likely to be generous when they negotiate rate increases, according to Morningstar utilities analyst Travis Miller.
>
> Finally, there is the benefit of having more-valuable shares, which makes it cheaper to raise capital. "Your cost of equity has gone down and your cost of debt has gone down," Mr. Miller said.[7]

As Staff has discussed extensively in past rate cases, investment analysts expect the allowed-ROE-to-cost-of-equity spread to eventually compress, but whether this occurs due to regulators reducing allowed ROEs or costs of equity going back up (or both), remains to be seen.

Therefore, Staff recommends the Commission consider the evidence conveyed by rational results implied from a common-sense DCF analysis. Even if the Commission decides to authorize an ROE of 9.25%, this still allows the utility a significant margin over its current cost of equity.

Q. What reason does Ms. Ahern give for using equity analysts' long-term EPS growth rates for purposes of estimating the cost of equity using the DCF method?

A. On page 21 of her direct testimony, Ms. Ahern states:

> Over the long run, there can be no growth in DPS without growth in EPS. Thus, the use of earnings growth rate forecasts in a DCF analysis provides a better matching between investors' market price appreciation expectations and the growth rate component of the DCF.

[7] Ken Brown, "Be Careful: Utilities Are Riskier Than They Look," July 7, 2016, Wall Street Journal, pp. C1 and C4.

Therefore, I have relied upon security analysts' five-year forecasts of EPS growth in my application of the DCF model.[8]

Q. ** _____ _____ **

A. ** _____ _____ ** [9]

Q. ** _____ _____ **

A. ** _____ _____

[8] Ahern Direct, p. 21, ll. 12-16.

[9] Spire, Inc.'s November 19, 2014, Strategy Committee Meeting, p. 43.

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Q. What does the above information demonstrate?

A. Ms. Ahern's views are at odds with Spire, Inc.'s own management and investors' views.

Q. Which of Ms. Ahern's methods is the most novel to this Commission, as well as other jurisdictions?

A. Ms. Ahern's PRPM, which she uses to estimate the risk premium. Ms. Ahern applies this method to each of the companies in her gas utility proxy group, as well as to the S&P 500 and utility companies in the S&P 500.

Q. What general concerns do you have with Ms. Ahern's jointly-developed PRPM?

A. According to Spire Missouri's response to Staff Data Request No. 479, the PRPM, as used by Ms. Ahern, has been used by four other witnesses, Dylan W. D'Ascendis, Robert B. Hevert, John Perkins and Frank J. Hanley. To Staff's knowledge, Robert B. Hevert, Frank J. Hanley and Dylan W D'Ascendis have all sponsored testimony before the Commission on behalf of Missouri utility companies. Staff is not familiar with John Perkins' testimony. To Staff's knowledge, these witnesses did not sponsor this methodology in utility rate case testimony until at least 2012, which was shortly after Ms. Ahern, Mr. D'Ascendis and Mr. Hanley coauthored an article in 2011 discussing this method.

Staff is not aware of any utility commissions that have specifically recognized the PRPM analyses as being credible for purposes of setting the allowed ROE.

Additionally, as Staff will explain later in its testimony, Staff is not aware of any utility stock analysts that use the PRPM, at least in the way Ms. Ahern recommends it be used. Staff is confident in making this statement because the cost of equity estimates Ms. Ahern derives from her PRPM analysis are at least 4% higher than Staff has observed in practical investment analyses and financial analyses performed by financial consultants hired by Spire, Inc..

Q. Do you have a specific example?

A. Yes. Spire Inc. hires PricewaterhouseCoopers LLP ("PwC") to annually assess whether Spire, Inc.'s balance sheet accurately reports the carrying value of Spire Missouri's assets. In order to do so PwC has to estimate the gas distribution industry's cost of equity. ** _____
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Q. Does Ms. Ahern explain why she did not give the CAPM estimates as much consideration as her risk premium estimates?

A. No. She does not explain her concerns with the CAPM results, which are much lower than her risk premium estimates.

Q. Beginning on page 47, line 12, of her direct testimony, Ms. Ahern argues for an adjustment of 16 basis points for flotation costs. Should there be an adjustment to ROR for flotation costs incurred for purpose of issuing common equity?

A. No. In past Missouri rate cases, Staff has allowed recovery of explicit costs associated with issuing common equity by allowing an amortization of these issuance costs over a 5-year period. Staff allows the recovery of actual incurred issuance costs if a company can show that it issued additional shares of equity to the public and the proceeds were used for the benefit of the Missouri utility. Consequently, if Staff finds these costs should be recovered, the recovery would be through an expense allowance rather than through an adjustment to the ROR.

Q. Is there anything particularly troubling about Ms. Ahern's proposal to recover flotation costs in this case?

A. Yes. The only reason Spire, Inc. has had to issue equity in recent years is for the purpose of raising funds to acquire MGE, Alagasco and EnergySouth. It is wholly inappropriate to ask for recovery of issuance costs associated with these acquisitions as these are considered transaction costs. At least in the stipulation and agreement executed in the MGE acquisition,[10] the Company specifically agreed not to seek recovery of these costs in subsequent rate cases. If Spire, Inc. had filed applications requesting authority to acquire Alagasco and EnergySouth, Staff would have required the same commitments.

Q. On page 50, line 11 through page 52, line 17, of her Direct Testimony, Ms. Ahern explains why she believes a small size risk adjustment should be made to her initial proxy group cost of common equity. What has Staff's position been regarding the

[10] Section 3.b. in Case No. GM-2013-0354, p. 9.

need for an adjustment to the cost of common equity to consider a utility company's smaller size relative to the proxy group?

A. Staff has consistently recommended that the Commission reject any adjustments to the cost of common equity because of a utility company's smaller size. Studies cited by company ROR witnesses are not based on an analysis of the regulated utility industry, but on all of the stocks in the New York Stock Exchange, the American Stock Exchange and the Nasdaq National Market.

Q. Do expert valuators consistently dismiss the need for a small size adjustment when determining a fair value to assign to regulated utility assets?

A. Yes. The small size risk premium is not applied in practice for purposes of determining a fair value of regulated utility assets. ** _____

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Q. On page 8, line 4, through page 9, line 35, Ms. Ahern explains why she believes it is better to rely on several cost of common equity methods. What does she state as the key reason for using several methods to estimate the cost of common equity?

A. Ms. Ahern states:

> The key consideration in estimating the common equity cost rate is to ensure that the overall analysis reasonably reflects investors' expectations in light of the capital markets in general, and the

relative investment risk of the subject company (in the context of the proxy companies), in particular.[11]

Q. Does Ms. Ahern's use of several cost of common equity methods cause her analysis to be more reflective of "investors' expectations in light of the capital markets in general, and the relative investment risk of the subject company (in the context of proxy companies), in particular" than your analysis?

A. No.

Q. What's the basis for your position?

A. My understanding of how equity investors and financial advisors actually value utility stocks in practice. Both in the Staff Report and my rebuttal testimony, I provide several empirical examples from the investment and financial community that support my position that utility investors' costs of equity are closer to 7% than Ms. Ahern's estimate of 10%. Clearly, Ms. Ahern's use of several methods does not make her cost of equity estimates more consistent with those actually used by market participants.

Q. Although you provided several examples from the investment and financial community that cast doubt on the reliability of Ms. Ahern's cost of equity estimates, can you identify other concerns you have as it relates to the models that cause her to recommend a 10% ROE rather than the 9% supported by her DCF and CAPM analyses?

A. Yes.

Q. Which of Ms. Ahern's methods causes her to conclude that an allowed ROE of 10% is reasonable?

A. The RPM.

Q. Can you summarize her risk premium analyses?

[11] Ahern Direct, p. 8, ll. 7-11.

A. Yes. Ms. Ahern performs two different risk premium analyses to arrive at her risk premium estimate of 10.57% for her natural gas proxy group. The first method is the PRPM, which I discussed earlier. The second method is based on evaluating total market return expectations as compared to interest rates.

Q. What cost of equity estimates are implied by Ms. Ahern's application of her PRPM to the natural gas utility proxy group?

A. Page 2 of Ms. Ahern's Schedule PMA-D4 shows the average and median cost of equity estimates of 11.43% and 11.81%, respectively. Ms. Ahern uses the average of these two figures to arrive at an implied COE of 11.62%.

Q. What COE estimates are implied by Ms. Ahern's use of the adjusted total market return approach?

A. Page 3 of Ms. Ahern's Schedule PMA-D4 shows Ms. Ahern's implied COE of 9.51% using the total market return ("TMR") approach.

Q. Considering that Ms. Ahern's risk premium approach using adjusted TMRs implies a cost of equity closer to her DCF and CAPM results, what does this mean?

A. It means that Ms. Ahern's ROE recommendation was primarily influenced by only one method, her PRPM. All of her natural gas utility proxy group COE estimates using the various other methods were in the range of 8.68% to 9.51%. Although Staff has provided corroborating evidence that shows that even these lower COE estimates are higher than those used by investment analysts and other financial consultants, if not for the PRPM, then the mid-point of her cost of equity methods would be 9.1%, which is below Staff's recommended allowed ROE of 9.25%.

Q. Because the PRPM is the only method that causes Ms. Ahern's cost of common equity estimates to be above 9.5%, can you explain some general concerns you have about this particular method?

A. Yes. First, it should be noted that the Commission has never considered the merits of the PRPM in deciding on a fair and reasonable allowed ROE. While Ms. Ahern's ROR recommendation in the 2014 MGE rate case, Case No. GR-2014-0007, included the PRPM, that case settled so the method was never addressed by the Commission.

Second, in response to Staff Data Request No. 431, Ms. Ahern indicated she was not aware of any peer review of the articles she coauthored introducing the PRPM as a new method to estimate the cost of equity for utility companies. If she is not aware of any peer review, this means she did not request peer review. Researchers often request peers to review their proposed research articles before they are published in order to consider comments and/or concerns about how the study was performed and the results of the studies. In addition, in response to Staff Data Request No. 432, Ms. Ahern indicated she is not aware of any articles published in response to the articles she coauthored. Consequently, other than responsive testimony from other rate of return witnesses, there are no authoritative sources that have critiqued the PRPM as introduced by Ms. Ahern.

Third, Staff has never seen an example of the PRPM being used in practice by investors, equity analysts or financial advisors when estimating the equity value of a utility company's stock or its assets.

Finally, unless Staff purchases Eviews© statistical software and has access to all of the stock return and bond return data used by Ms. Ahern, it is impossible for Staff to test the sensitivity of her model using different inputs and time periods.

Q. Are Ms. Ahern's PRPM results consistent with basic risk and return principles?

A. No. Ms. Ahern's PRPM workpapers show that the current risk premium estimates for the S&P 500 are approximately 4%, while the current risk premium estimates for her gas utility proxy group are approximately 7%. This implies that equity investors in the gas utility proxy group currently require a 3% higher return than investors in the S&P 500. However, as Staff explained in the Staff Report, utilities have been trading at significant premiums compared to their own historical averages. In fact, utilities have been trading at premiums to that of the S&P 500, which is rare because, on average, S&P 500 companies are expected to have higher earnings growth potential than utilities, causing higher p/e ratios. The Commission should dismiss the current implied COE estimates from Ms. Ahern's PRPM method because they contradict basic risk and return principles and are not consistent with a rational and logical understanding of current market conditions. The main factor that is driving higher p/e ratios for utilities is the current low interest rate environment, not growth. This is a fundamental concept understood by utility capital market analysts, such as utility equity analysts.

Q. Does the current output from Ms. Ahern's PRPM contradict other well-accepted relationships that can also be tested using current market data?

A. Yes. Ms. Ahern's PRPM results are at direct odds with the long-standing and widely-used beta coefficients used by investors and financial practitioners when estimating the cost of equity using the CAPM. Current beta coefficients used by investors when estimating the cost of equity for utility companies are approximately 0.70. Typically beta coefficients for regulated utility companies range from 0.60 to 0.80. This coefficient is

applied to the market risk premium. Applying a beta coefficient of 0.70 to the current market risk premium of approximately 4% produced by Ms. Ahern's PRPM implies an adjusted risk premium of 2.8% for an average regulated utility company. Adding this current adjusted risk premium to Ms. Ahern's projected risk-free rate of 3.65% would suggest a COE estimate of 6.45% for utility companies.

Q. Do you agree with the use of a projected risk-free rate?

A. No. Current bond prices already reflect investors' interest rate expectations over the long-term. If they didn't, then the market would be considered inefficient and investors could make a riskless profit by shorting bonds to capture the certain decline in long-term bond prices when long-term interest rates increased.

Q. What are some of the other methodological issues you have with Ms. Ahern's PRPM analysis?

A. First, the method as applied by Ms. Ahern compares the volatility of historical monthly total stock returns to the volatility of historical monthly income returns on long-term government bonds. Ms. Ahern's comparison of only income return volatility on bonds (i.e. not including price changes on bonds) to the total return on stocks results in an upward bias in the estimated required risk premium. This is especially true as it relates to utility stocks since the changes in the prices of both utility stocks and bonds are heavily influenced by the same factor, changes in long-term interest rates, causing unexpected capital gains and losses for both types of securities.

Second, Ms. Ahern's PRPM assumes investors' required returns are based on the volatility of annualized monthly spreads between total stock returns and bond income returns. Ms. Ahern's use of monthly data intervals to determine the equity risk premium

causes an additional upward bias to an already upwardly biased annual arithmetic return on stocks of 12.0 percent for the period 1926 to 2016.[12] In terms of measuring historical returns, the annual arithmetic average of total stock returns of 12.0% is 2% higher than the geometric mean of 10.0%. Using annualized monthly returns causes the arithmetic average to imply a total return on stocks that is 20 basis points higher than the information provided by Ibbotson. Staff has consistently debated the impropriety of using the spread between annual arithmetic averages of total stock returns as compared to the annual arithmetic averages of total bond returns for purposes of estimating the risk premium. Because the DCF method is widely used to value utility stocks and this method determines the intrinsic value of utility stock based on a long-term horizon, Staff has consistently considered geometric averages as the most appropriate for projecting future risk premiums. Staff provided its most extensive discussion about this topic in its surrebuttal testimony in a 2010 Ameren Missouri rate case, Case No. ER-2010-0036.

Although Ms. Ahern's use of the arithmetic average of annualized monthly total returns on long-term stocks causes an upward bias, the fact that she used the same approach to determine the average income return on bonds helps offset the bias. According to Ibbotson data, the arithmetic average of annual income returns on long-term government bonds was 5.0% for the period 1926-2016. Ms. Ahern's PRPM workpapers shows that the average annualized monthly income return on long-term government bonds over the same period was 5.23%.

[12] The Ibbotson data for 1926-2015 and 1926-2016 indicates the annual arithmetic mean returns on large company stocks was 12.0%. Staff averaged all of Ms. Ahern's annualized large company stock returns provided in her workpaper "PRPM WP2" and determined they were 12.20% for the 1926-2016 period and 12.29% for the 1926-2015 period.

Q. Although you advise the Commission to ignore the results from Ms. Ahern's PRPM in determining a fair and reasonable allowed ROE for this case, is there any information from Ms. Ahern's PRPM that can assist the Commission in deciding on a fair and reasonable allowed ROE in this case?

A. Yes. Because Spire, Inc. is one of the oldest companies traded on the New York Stock Exchange and Ms. Ahern had access to stock market data since 1926, her workpapers provided Spire, Inc.'s stock price and dividend data since 1926. The market data for most of her other natural gas proxy companies are limited to the period from the early 1970s to the current period. Therefore, the market returns for these companies were largely influenced by decline in long-term interest rates for the last 35 years, as I discussed above.

For the period 1926 to 2016, Spire, Inc.'s average annual total stock returns were 8.58% using Ibbotson's averaging technique and 9.38% using Ms. Ahern's averaging technique.

Q. What was the annual arithmetic average total return on long-term government bonds for the period 1926 to 2016?

A. 6.0%.

Q. What risk premium is implied by subtracting this return from Spire, Inc.'s long-term total stock return for the same period?

A. 2.58 (8.58% - 6.00%).

Q. What is the implied required return on Spire, Inc.'s stock if you add this risk premium to a recent 30-year Treasury yield?

A. Approximately 5.4% when this spread is added to the recent monthly average 30-Year yield of approximately 2.80% in August and September of 2017.

SUMMARY AND CONCLUSIONS

Q. What are the main points the Commission should consider in determining an appropriate capital structure and fair rate of return for Spire Missouri?

A. The Commission should use its recent allowed ROE decisions for its electric utilities as a starting point for determining a fair and reasonable allowed ROE for Spire Missouri's gas systems. If the Commission ignores Ms. Ahern's methodologically unsound PRPM, it will find sufficient evidence to support an allowed ROE in the low 9% range for Spire Missouri. This is reasonable as compared to Missouri's large electric utilities considering Ameren Missouri and KCPL have 'BBB+' ratings and Spire Missouri has an 'A-' rating. Additionally, the equity market valuation levels of the natural gas utility industry as compared to the integrated electric utility industry support Staff's position that gas utilities have a lower cost of equity than electric utilities.

In determining a fair and reasonable capital structure, the Commission should consider the inconsistencies in the Company's past positions as compared to its position in this case. Although it is obvious that Spire Missouri does not want to use Spire, Inc.'s capital structure for ratemaking because it would result in a lower authorized ROR, the Company did not explain why it changed its position from using a consolidated holding company capital structure to a subsidiary capital structure. Considering the significance of this issue, Staff expected the Company to devote more attention to explaining why it changed this position. Staff discussed compelling reasons for using the consolidated holding company capital structure that were supported by the Company's own witness in MGE's last rate case.

Q. Does this conclude your Rebuttal Testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Laclede Gas Company's Request to Increase Its Revenues for Gas Service	)))	Case No. GR-2017-0215
In the Matter of Laclede Gas Company d/b/a Missouri Gas Energy's Request to Increase Its Revenues for Gas Service	)))	Case No. GR-2017-0216

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW DAVID MURRAY and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing Rebuttal Testimony; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

DAVID MURRAY

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 13th day of October, 2017.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

Notary Public