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MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF DIVISION

OPERATIONAL ANALYSIS

FINANCIAL ANALYSIS

SURREBUTTAL TESTIMONY

OF

DAVID MURRAY

MISSOURI-AMERICAN WATER COMPANY

CASE NO. WR-2015-0301

Jefferson City, Missouri
March 2016

** Denotes Highly Confidential Information **

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OF
DAVID MURRAY
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1 **SURREBUTTAL TESTIMONY**

2 **OF**

3 **DAVID MURRAY**

4 **MISSOURI-AMERICAN WATER COMPANY**

5 **CASE NO. WR-2015-0301**

6 Q. Please state your name.

7 A. My name is David Murray.

8 Q. Are you the same David Murray who prepared the Rate of Return Section of
9 the Staff's Cost of Service Report ("Staff Report"), Rebuttal Testimony and Rebuttal to
10 Supplemental Direct Testimony in this case?

11 A. Yes, I am.

12 Q. What is the purpose of your surrebuttal testimony?

13 A. The purpose of my surrebuttal testimony is to respond to Roger A. Morin's
14 and Scott W. Rungren's rebuttal testimonies and to true-up my capital structure
15 recommendation and corresponding embedded costs. Both witnesses sponsored
16 rate-of-return (ROR) testimony on behalf of Missouri-American Water Company (MAWC).
17 Dr. Morin's testimony primarily focused on a fair and reasonable allowed return on common
18 equity ("ROE"). Mr. Rungren's testimony primarily focused on his disagreement with
19 Staff's recommended use of American Water Works Company's ("American Water")
20 consolidated capital structure for purposes of setting MAWC's allowed rate of return.

21 **EXECUTIVE SUMMARY**

22 Q. What are Dr. Morin's primary criticisms of your ROR testimony?

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1 A. Dr. Morin claims my testimony has “major infirmities” and is “replete with
2 inconsistencies and contradictions.” I am not sure what Dr. Morin means by “infirmities”.
3 As to the inconsistencies and contradictions, I apologize if my testimony indicating utility
4 companies’ cost of common equity (“COE”) is less than their allowed ROEs is confusing.
5 Some ROR witnesses may be confused; however, it is not confusing to the investment
6 community.

7 As far as Dr. Morin’s confusion about a fair and reasonable perpetual growth rate
8 to use in a multi-stage discounted cash flow (DCF) analysis, I believe my testimony
9 may have been misread. I clearly indicate I am using projected long-term gross domestic
10 product (GDP) growth rates for my multi-stage DCF analysis of the water utility proxy
11 group, and I use an industry growth rate for the electric utility proxy group Staff used in the
12 recent Ameren Missouri and Kansas City Power and Light Company (“KCP&L”) rate cases,
13 Case Nos. ER-2014-0258 and ER-2014-0370, respectively. I explained that investors
14 recognize the water utility industry is growing its rate base at a somewhat faster rate than the
15 electric utility industry, which explains its higher earnings retention rates and lower dividend
16 yields.

17 Dr. Morin also indicates my testimony explaining the increase in average long-term
18 utility bond yields contradicts my claim that the cost of capital has not changed much since
19 the Missouri Public Service Commission (“Commission”) made its allowed ROE
20 determinations in the Ameren Missouri and KCP&L rate cases.

21 Staff recognized the capital market’s mixed signals: utility stock prices are
22 increasing, yet utility bond prices are either staying the same or decreasing for lower grade
23 investment grade rated utilities. Although utility stock prices have been increasing during the

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1 broader market selloff in recent weeks, utility bond yields have been steady for ‘A’-rated
2 bonds, but increasing for ‘BBB’-rated bonds. If Staff were strictly focusing on utility equity
3 prices, Staff would conclude that the COE has declined in recent weeks, but Staff notes that
4 at least ‘A’-rated utility bond yields have been steady, causing Staff to conclude that utility
5 capital market conditions have not changed significantly since the Commission made its
6 determinations in the Ameren Missouri and KCP&L rate cases. Consequently, Staff’s lower
7 recommended allowed ROE is simply due to lower implied costs of equity for the water
8 utility industry as compared to the electric utility industry.

9 Dr. Morin also expresses concern about Staff’s use of a “double leverage” approach
10 for purposes of its capital structure recommendation. Staff did not use a “double leverage”
11 approach. Staff simply recommended that American Water’s consolidated capital structure
12 and capital costs be used to set MAWC’s allowed ROR.

13 Q. What are Mr. Rungren’s primary criticisms of your ROR testimony?

14 A. Mr. Rungren addresses my recommended capital structure. He advocates for
15 use of MAWC’s per books capital structure because he claims it is managed as an
16 independent entity. Staff has had difficulties understanding how debt assignments are being
17 made to MAWC. Staff has been unable to identify the third-party debt transaction(s)
18 underlying 13 of MAWC’s debt assignments. Being that all transactions with
19 American Water Capital Corporation (AWCC) and American Water are affiliate transactions,
20 MAWC has the burden of proof to show how these affiliate transactions are prudent. Just the
21 mere fact that MAWC has affiliate debt shows it is not a “stand-alone” entity.

22 Q. Does Staff recommend a true-up of the capital structure and embedded costs
23 of capital?

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1 A. Yes. MAWC has provided American Water financial information through
2 December 31, 2015, to allow Staff to update its capital structure and embedded costs of
3 capital inputs. Although the agreed-to true-up date is through January 31, 2016, because
4 MAWC was only able to provide American Water information through year-end, Staff used
5 this data for its true-up recommendation.

6 **RESPONSE TO DR. MORIN'S REBUTTAL TESTIMONY**

7 Q. Does Dr. Morin's rebuttal testimony help the Commission compare, contrast,
8 interpret and understand the current economic and capital market environment and how it
9 affects the cost of capital for the various segments of the utility industry?

10 A. No. Dr. Morin does not provide insightful testimony about the current capital
11 market environment and whether the Commission should allow an ROE much different than
12 its recent authorizations for Missouri's electric utilities.

13 Q. Did you provide and discuss a considerable amount of market and financial
14 data on the water and electric utility industries in the Staff Report?

15 A. Yes. Staff understands that the models used by ROR witnesses are very much
16 a matter of judgment and interpretation and that each utility rate case that the Commission
17 hears usually involves the same methodologies and the same arguments. This case is no
18 different. Less than a year has passed since the Commission heard utility cost of capital
19 evidence in the most recent electric utility rate cases. The main difference in this case is the
20 Commission would be setting an allowed ROE for water and sewer utility operations rather
21 than electric utility operations. Consequently, Staff believes a much more efficient and
22 effective use of its and the Commission's time is to compare and contrast water and electric
23 utilities' capital market and financial data as well as evaluating any changes in utility equity

1 valuation levels since the Commission determined an approximate 9.5% ROE was fair and
2 reasonable.

3 Q. Do recent capital market events support the Commission maintaining its view
4 that an allowed ROE of no higher than 9.5% is fair and reasonable for Ameren Missouri and
5 KCP&L?

6 A. Yes. Although broader capital markets have been very turbulent since the
7 beginning of this year, utility stocks have been doing very well during this period of
8 turbulence. Through February 29, 2016, the year-to-date (YTD) total return for water
9 utilities, electric utilities and gas utilities was 4.8%, 4.0% and 6.7%, respectively. This
10 compares to a YTD total return for the same period for the S&P 500, Dow Jones Industrial
11 Average and the NASDAQ of -4.3%, -4.0% and -8.1%, respectively.¹ The fact that utilities
12 are doing so well during a period of global economic uncertainty confirms that the utility
13 industry is able to attract capital with little difficulty and it appears they are able to do so at
14 even lower costs than as recently as the end of 2015. If anything, Staff believes this supports
15 the Commission authorizing MAWC an ROE lower than the 9.5% it recently authorized its
16 electric utilities.

17 Q. What has happened to water and electric utility P/E ratios and dividend yields
18 since you prepared the ROR Section of the Staff Report in this case?

19 A. Water and electric utility P/E ratios have increased, while dividend yields
20 have decreased. To the extent these changes can't be explained by fundamental changes in
21 growth patterns for either industry over the last three months, the changes are due to a
22 decline in the COE. Because long-term US Treasury bond yields have been declining, it
23 appears to be due to the latter. According to data from the February 29, 2016, edition of

¹ Daniel M. Fidell, "USCA Weekly Downstream Utility Update," U.S. Capital Advisors, February 29, 2016.

1 U.S. Capital Advisors' "USCA Weekly Downstream Utility Update," the average dividend
2 yield on Staff's water utility proxy group was 2.44% as of February 26, 2016. This compares
3 to the average for Staff's water utility proxy group of 2.63% as of December 4, 2015.
4 According to the same publication, the average P/E ratio for Staff's proxy group was 22.88x
5 as of February 26, 2016, whereas the average P/E ratio for Staff's proxy group was 20.86x as
6 of the December 4, 2015. The decrease in the dividend yields and the increased in the P/E
7 ratios all occurred despite no change in the fundamentals of the industry, which indicates the
8 cause of the price increase was due to macroeconomic factors, i.e., lower interest rates.

9 As of February 26, 2016, the average dividend yield for Staff's 2014 electric utility
10 proxy group was 3.42%. This compares to the average for Staff's 2014 electric utility proxy
11 group of 3.60% as of December 4, 2015. According to the same publication, the average P/E
12 ratio for Staff's 2014 electric utility proxy group was 17.72x as of February 26, 2016,
13 whereas the average P/E ratio for Staff's proxy group was 16.14x as of the December 4, 2015
14 publication.

15 The fact that the P/E ratios for both the electric and water utility industries have gone
16 up and dividend yields have come down implies that the COE for utility companies has
17 declined since Staff performed its analysis for purposes of the Staff Report. Consequently,
18 Staff's recommended allowed ROE of 9.25% for MAWC continues to be fair and reasonable.

19 Q. Does Dr. Morin appear to be confused about how you approached your
20 testimony in this case?

21 A. Yes. Staff has taken a different approach since Dr. Morin last sponsored
22 ROR testimony in Missouri for the Union Electric rate case, Case No. ER-2010-0036. This
23 is due to Staff's logical and supported position that the utility industries' COE is lower than

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1 allowed ROE. To the extent Dr. Morin honestly believes MAWC's COE is 10.7%, Staff
2 understands his confusion. Dr. Morin is also apparently confused about the purpose of
3 Staff's inclusion of the electric proxy COE analysis. Staff included an updated analysis of
4 the electric utility proxy group it used in the recent electric rate cases in order to give the
5 Commission a frame of reference to judge whether capital markets had changed significantly
6 since it recently allowed ROEs of approximately 9.5%.

7 Dr. Morin claims that my multi-stage DCF produces an "improbably low range" of
8 7.0% - 7.5% yet I recommend an ROE of 9.25%. Dr. Morin indicates he does not understand
9 how I could recommend a 9.25% ROE if my COE estimates are in the 7% range. I believe I
10 explained in the Staff Report that I was making my recommendation based on my estimate of
11 what I believe a fair allowed ROE would be for MAWC as compared to the Commission's
12 recent decisions in the Ameren Missouri and KCP&L rate cases. Also, obviously I do not
13 agree with Dr. Morin that a 7% to 7.5% COE estimate is "improbably low." In fact, Staff has
14 repeatedly provided examples from the investment community that a COE for water utilities
15 is not higher than the 7% range and is more likely in the 6% range in the current low-interest
16 rate, low-return environment. Consequently, Dr. Morin and I have a fundamental
17 disagreement about the probable level of a COE for utilities in the current markets.

18 Q. Dr. Morin also takes issue with the many different estimates you give for
19 the COE differences between the water and electric utility industries. How do you respond
20 to this?

21 A. First, I think it's important to point out that Dr. Morin does not even attempt
22 to quantify the difference in the COE for electric and water utilities as Staff did. Second,
23 obviously estimating the COE is not an exact science so it really should not be surprising that

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1 Staff's analysis shows a range of differences in COE estimates. Although Staff estimated the
2 difference in COE between electric and water utilities could be as much as 100 basis points,
3 because debt yields were not widely divergent between American Water and Ameren
4 Missouri, Staff chose to recommend only a 25 basis point reduction to the Commission's
5 recent allowed ROEs of approximately 9.5%.

6 Q. On page 6, line 20 through page 7, line 2, of his rebuttal testimony, Dr. Morin
7 indicates that you argue that utilities' costs of capital are higher since the Commission
8 authorized an approximate 9.5% allowed ROE for Ameren Missouri and KCP&L.
9 Did Dr. Morin accurately paraphrase your testimony?

10 A. No. While Dr. Morin is correct that Staff's analysis of average utility bond
11 yields (inclusive of all 'Aa,' 'A' and 'Baa' rated utilities) published in the Mergent Bond
12 Record ("Mergent") showed an increase in average utility bond yields since the Commission
13 determined a 9.5% allowed ROE was fair and reasonable, he did not mention Staff's more
14 detailed analysis on specific utility bond rating categories, which Staff discussed in its
15 testimony immediately after the discussion on aggregate bond yield changes.

16 As Staff went on to explain, the spread between 'A'-rated utility bonds and
17 'BBB'- rated utility bonds has recently doubled from its long-term historical average spread
18 of about 50 basis points. Staff discussed how the increase in the spread was consistent with
19 investors' increased risk aversion that is causing the yields on junk bonds and lower-grade
20 investment grade bonds to increase. However, this was not evident for bonds with stronger
21 credit ratings, such as the 'A' rating assigned to American Water's bonds. At the time Staff
22 wrote its rebuttal testimony, the yield-to-maturity (YTM) on American Water's debt seemed
23 to be fairly consistent with the YTM on American Water's debt during the fall of 2014.

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1 Q. How have American Water's bonds been trading in the last few weeks?

2 A. Over-the-counter (OTC) trades on American Water's utility bonds have bid up
3 the price of these bonds, which resulted in a lower YTM on the bonds. Consequently, this
4 implies that due to the flight to safety in US Government bonds and other safe haven
5 securities, the cost of capital for safer investments has declined in recent weeks. In fact,
6 10-year US Treasury bond yields are once again below 2%, which was not expected as
7 recently as the end of last year. This is having a positive impact (lower cost of capital) on
8 utility securities.

9 Q. What has happened to American Water's bond yields since Staff filed its
10 rebuttal testimony?

11 A. They have declined slightly; however, this is only based on a few trades.
12 Although this is informative, Staff is not comfortable recommending a lower allowed ROE
13 based on just a few bond trades. However, this does give Staff confidence that an allowed
14 ROE of 9.25% is fair and reasonable for MAWC.

15 Q. Has Staff discovered any important information since it performed its analysis
16 and sponsored both direct (via the Staff Report) and rebuttal testimony for this case?

17 A. Yes. Although the increase in the spread between 'BBB'-rated utility bond
18 and 'A'-rated utility bonds published in the Mergent seemed consistent with Staff's
19 understanding of issues causing lower grade bonds to have a much higher YTM, the spread
20 was much higher than what seemed to be reasonable for fairly stable utility bonds, especially
21 considering the mixed message of increases in utility stock prices but declines in utility bond
22 prices at least as implied by the Moody's public utility bond yield averages. Staff also
23 understood that the energy sector, which includes energy pipeline operators and merchant

1 generation operators, have been experiencing significant volatility in capital market prices.
2 Often, many of these energy companies are broadly classified as “utilities” for purposes of
3 various stock and bond indices.

4 Consequently, Staff pursued additional information from Mergent as to the
5 underlying bonds that make up the current Moody’s public utility bond averages. The
6 information provided by Mergent showed that energy pipeline companies, with significant
7 exposure to commodity price volatility, were classified as “utilities” and were still rated
8 ‘Baa’ (Moody’s equivalent of S&P’s ‘BBB’ rating). A few examples of the energy
9 companies’ bonds that are included the Moody’s ‘Baa’ public utility bond yield index are:
10 El Paso Pipeline Partners, Energy Transfer Partners LP, Enlink Midstream Partners LP,
11 Kinder Morgan Energy Partners, and Williams Partners LP. It has been fairly widely
12 recognized in the financial community that these companies’ security prices have been very
13 volatile and declined significantly. For example, El Paso Pipeline Partners’ bond² has traded
14 at YTM’s of around 7% during February 2016; Energy Transfer Partners LP’s bond³ has
15 traded at YTM’s of around 8% during February 2016; Williams Partners LP’s bond⁴ has
16 traded at YTM’s of around 8.5% during February 2016; and Enlink Midstream Partners LP’s
17 bond⁵ has traded at YTM’s close to 11% around February 24, 2016 (this is the highest YTM
18 of the bonds in the index).

19 The energy company bonds in the Moody’s “utility” index make up seven (7) of the
20 18 bonds in the index. Staff requested Mergent provide information on the methodology it
21 uses to calculate its utility bond yield averages; however, Mergent considered this

² CUSIP: 28370TAF6

³ CUSIP: 29273RAZ2

⁴ CUSIP: 96950FAN4

⁵ CUSIP: 29336UAC1

1 information to be proprietary. However, removing these energy related “utility” bonds from
2 the index would cause the average utility bond yield average to decrease since the rest of the
3 bonds in the index trade in the 4.5% to 5.0% range, which is much more typical of
4 investment grade regulated utility bonds.

5 Q. Dr. Morin claims that you contradict yourself by claiming that the recent
6 Federal Reserve (“Fed”) Funds rate increase will not necessarily cause an increase in
7 long-term rates. How do you respond?

8 A. While Staff certainly did not predict long-term rates would decrease after the
9 Fed increased the Fed Funds rate. This has happened. While the Fed’s action in
10 December 2015 had a direct impact on short-term rates, long-term rates are a function of
11 market forces. Long-term rates have declined significantly since the Fed increased the
12 Fed Funds rate at its December 15-16, 2015 meeting. Ten-year US Treasury Bond yields
13 have declined by approximately 50 basis points since the Feds lowered the Fed Funds rate.
14 Thirty-Year US Treasury Bond yields have declined by approximately 40 basis points for the
15 same period.

16 Q. Have long-term corporate bond yields also declined?

17 A. No. ‘A’-rated corporate bond yields have held fairly steady, while ‘BBB’-
18 rated corporate bond yields have increased slightly.

19 Q. Why haven’t corporate bonds yields declined along with US Treasuries?

20 A. This is mainly due to increased risk aversion. This is explained by the fact
21 that low-risk investments, such as utility stocks, have been bid up in price, while higher-risk
22 investments have experienced price declines.

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1 Q. Does Dr. Morin attempt to explain any of these relationships in his rebuttal
2 testimony?

3 A. No. Dr. Morin's testimony does nothing to assist the Commission with
4 understanding the events occurring in the capital and economic environment. Although the
5 purpose of his rebuttal testimony is to attempt to discredit my testimony, his lack of analysis
6 of various capital market ratios, such as comparing and contrasting dividend yields and P/E
7 ratios either over time or across utility sectors, does nothing to provide the Commission with
8 any basis to authorize an ROE any higher than it recently allowed for KCP&L and
9 Ameren Missouri.

10 Q. What do you mean?

11 A. For instance, Staff compared and contrasted valuation metrics for the water
12 utility industry, as compared to the electric utility industry, to attempt to determine if there
13 was a rational explanation for the differences other than a lower required return for water
14 utility stocks as compared to electric utility stocks. If one were to simply compare the P/E
15 ratios of the water and electric utility industry, because the water utility industry's P/E ratios
16 are significantly higher than that of the electric utility industry, this would seem to imply that
17 equity investors are willing to accept lower returns for investments in water utility stocks.
18 However, in order for this to be a reliable conclusion, one would also have to assume that
19 water utility stock prices will grow at the same rate as stocks in the electric utility industry.
20 As Staff discussed in the Staff Report, this has not historically been the case. Consequently,
21 the water utility industry's higher P/E ratios can be explained in part by higher expected
22 growth.

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1 Q. Did Dr. Morin provide any meaningful insight about the valuation differences
2 for the water utility industry as compared to other utilities?

3 A. No. Dr. Morin seems to believe that his use of theoretical models that rely on
4 abstract assumptions provide the Commission with sufficient evidence that the water utility
5 industry's COE is in the 10% range, even when there is a wealth of evidence from actual
6 capital market practitioners that indicates otherwise. If capital market participants use a COE
7 that is over 300 basis points lower than an estimate, this would certainly cause most
8 practitioners/academics to reevaluate whether they are using rational inputs in their models.

9 Q. Dr. Morin claims that you used GDP growth rates in the range of 3% to 4.5%
10 in your analysis and testimony. Did he understand your testimony correctly?

11 A. No. I clearly indicate in the Staff Report that the premise for the perpetual
12 growth rate for the multi-stage DCF analysis of the water utility proxy group is an expected
13 GDP growth rate of 4% to 4.5%.⁶ However, for purposes of estimating the difference in the
14 COE between the electric and water utility industries, I use the same GDP growth rate, 4.4%,
15 I used in the recent Ameren Missouri rate case.⁷

16 When Dr. Morin claims that I used a GDP growth rate of 3% to 4% for purposes of
17 my analysis of the electric utility industry, he clearly either did not read my testimony or
18 perhaps did not understand it. Staff specifically stated the following on page 39 of the Staff's
19 Cost of Service Report:

20 Staff's multi-stage DCF analysis of the electric utility
21 industry assumed a perpetual growth rate of 3% to 4%
22 based on Staff's compilation and calculation of rolling
23 10-year compound growth rates for the electric utility
24 industry for the period 1968 through 1999. Staff also
25 used a perpetual growth rate of 4.4% based on the

⁶ Staff Report-Revenue Requirement Cost of Service, p. 33, ll. 16-19.

⁷ *Id.* p. 33, ll. 20-24.

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1 assumption that the electric utility industry could grow
2 in perpetuity at the same rate as the expected long-term
3 growth rate in the U.S. economy as measured by GDP.

4 Q. Dr. Morin claims that you offer no foundation or support for your testimony
5 which indicates that investors in utility companies tend to assume perpetual growth rates for
6 utilities closer to the expected rate of inflation rather than an expected growth rate in the
7 economy. Did you provide a response to a data request in when Dr. Morin inquired about
8 these statements?

9 A. Yes. Dr. Morin issued Data Request No. 390 to request Staff's support for
10 this statement in its testimony. Staff responded as follows:

11 Staff's statement is based on Staff's analysis of many
12 utility stock research reports and companies' internal
13 investment analyses over the last several years. While
14 Staff has not kept a central archive of such analyses
15 (and in some cases these analyses were marked Highly
16 Confidential by the company providing the analyses
17 involving internal valuation), Staff has cited this
18 information in various testimonies in the past.
19 Specifically, Staff cited this information in testimony
20 in the following cases: Case Nos. ER-2014-0258,
21 ER-2012-0174, ER-2012-0175, ER-2012-0166,
22 ER-2011-0128, ER-2010-0036, ER-2010-0355,
23 ER-2010-0356, WR-2010-0131, GR-2009-0355,
24 ER-2009-0089, ER-2009-0090. Staff has frequently
25 come across this information so Staff cannot be
26 sure that it has cited all testimonies in which it has cited
27 these examples. To the extent the Company wants
28 copies of any of the specific examples cited in
29 these testimonies, please list the specific examples and
30 Staff will provide copies to the extent they were not
31 marked HC.

32 Q. Did Dr. Morin follow-up to request specific examples from these testimonies?

33 A. No.

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David Murray

1 Q. ** _____

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4 A. ** _____

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11 Q. Do you have any other examples from research reports provided by the
12 investment community?

13 A. Yes. In fact, Staff discussed these examples in an electric rate case in which
14 Dr. Morin sponsored ROR testimony on behalf of the utility company. In Union Electric's
15 rate case in 2010, Case No. ER-2010-0036, Staff cited to Goldman Sachs' equity research
16 reports that assumed a perpetual growth rate of 2.5%, which was consistent with inflation
17 expectations at the time.

18 Q. Is there anything else Dr. Morin should have learned from the testimony and
19 hearings in Case No. ER-2010-0036 that should have affected his testimony in this case?

20 A. Yes. Dr. Morin increased his ROE recommendation in Case No.
21 ER-2010-0036 for purposes of flotation costs. During that case, Dr. Morin was informed that
22 Missouri allows for stock issuance costs through an amortization expense of actual stock

⁸ MAWC's response to Staff Data Request No. 191.

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1 issuance costs. After Dr. Morin learned that this is how the Commission accounts for stock
2 issuance costs, he no longer advocated for an adjustment to the allowed ROE.⁹

3 Q. Dr. Morin claims that your use of a multi-stage DCF analysis causes you to
4 recommend an ROE that is “well below investors’ required returns.” Has Dr. Morin
5 provided any corroborating information from investors that support his belief that investors
6 require a return higher than your recommended allowed ROE of 9.25%?

7 A. No. Dr. Morin seems fairly confident that he knows that investors require
8 returns above 10% for water utility stocks. However, he cannot provide even one practical
9 investment example of investors and/or market participants using a COE anywhere near his
10 estimate. Staff has repeatedly provided investor information that clearly contradicts
11 Dr. Morin’s lofty estimates. Although Dr. Morin hasn’t filed ROR testimony in Missouri
12 since 2010, he still is fairly steadfast that his estimates represent investor expectations even
13 when Staff has provided investor information that shows that investors use costs of equity
14 that are at least 300 basis points lower than Dr. Morin’s estimates.

15 Q. Were any investment reports entered as exhibits at the local public hearings
16 that provide yet another example of a more realistic COE used by investors?

17 A. Yes. At the local public hearing held on February 4, 2016, Exhibit No. 4 was
18 accepted by the Commission. This Exhibit is a Morningstar Equity Analyst Report on
19 American Water Works, Inc. As can be seen on page 2 of this report, the third paragraph
20 indicates American Water’s stock value was determined based on a COE of 7.5%, which is
21 actually the high end of Staff’s multi-stage COE estimate. Consequently, although Staff
22 recommends an allowed ROE higher than its COE estimate, which is corroborated by market

⁹ Case No. ER-2010-0036, Roger A. Morin Rebuttal, p. 54.

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1 participants that actually provide investment advice, Dr. Morin thinks that even Staff's higher
2 allowed ROE recommendation of 9.25% is still not high enough.

3 Q. Is any of this discussion new?

4 A. No. Staff has consistently sponsored testimony discussing the disconnect
5 between ROR witnesses' estimates of the COE and the markets' COE estimates.
6 Staff discussed this disconnect in detail in the Union Electric rate case in 2010 in which
7 Dr. Morin filed testimony. Although Staff understands the Commission needs to also
8 consider allowed ROEs in other states when determining a fair and reasonable allowed ROE,
9 cost of capital witnesses should still provide an accurate and reliable COE estimate. If an
10 adder is deemed appropriate and necessary, then this can be added to the COE. Staff believes
11 its recommended allowed ROE is at least 200 basis points over the COE, which is fairly
12 consistent with what investors have come to expect from commissions with some
13 commissions allowing ROEs over 300 basis points over the COE.

14 Q. Dr. Morin indicates that your recommended allowed ROE of 9.25% is not
15 consistent with the awarded ROEs for the water utility companies in your proxy group. How
16 do you respond to this criticism?

17 A. First, Staff notes that Dr. Morin did not provide the dates of the allowed ROEs
18 he cited on page 13 of his rebuttal testimony. It has been Staff's experience that the source,
19 on which Dr. Morin relied, provided the date on which these allowed ROEs were determined.
20 Also, it is important to know if these allowed ROEs were the result of a settlement or full
21 litigation because, ideally, allowed returns from litigation will be decided based on the merits
22 of the arguments associated with that specific issue, whereas settlements involve concessions

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1 and considerations of other issues, which may impact a headline number, such as a
2 negotiated ROE.

3 Q. Dr. Morin claims that equity analysts' projected 5-year compound annual
4 growth rate (CAGR) in earnings per share (EPS) should be used as the growth rate in a DCF
5 analysis. How do you respond?

6 A. Again, the fact that the very equity analysts that provide projected five-year
7 CAGR in EPS do not use them as a constant growth rate in their own dividend discount
8 models (referred to as "the DCF" in utility ratemaking arena) is proof in and of itself that
9 investors do not make the simplistic assumption that dividends will grow indefinitely at the
10 same rate as projected five-year CAGR in EPS. Staff has repeatedly cited examples of
11 practical investment analysis that disproves this over simplified assumption.

12 Q. But didn't Dr. Morin claim the financial literature supports this assumption?

13 A. Yes; however, Staff has reviewed much of the same literature, and Staff
14 disagrees with Dr. Morin's conclusion that because equity analysts' projected five-year
15 CAGR in EPS may cause changes in stock prices, this proves that investors use this growth
16 rate as a constant/perpetual growth rate in a DCF analysis. The literature simply indicates
17 that stock valuations may be influenced by equity analysts' projections and probably more
18 importantly their ultimate expected target prices in their stock recommendations.

19 ROR witnesses advocating for the use of equity analysts' projected five-year CAGR
20 in EPS often cite various academic studies to support the position that investors naïvely
21 assume that dividends can grow in perpetuity at the same rate as equity analysts' estimates of
22 the five-year annually compounded EPS growth rate. Although Staff believes the fact that
23 the very equity analysts that provide these forecasts do not make this same assumption when

1 valuing utility stocks disproves this conclusion, it is important to understand the true
2 conclusion of some of these studies. One of the studies often cited to support the use of
3 equity analysts' five-year EPS growth rate forecasts in the DCF is that of Burton G. Malkiel
4 and John G. Cragg, "Expectations and the Structure of Share Prices." The conclusion of this
5 academic study was that equity analysts' expectations had a greater influence on stock prices
6 compared to simple extrapolations of historical financial data. Staff believes this conclusion
7 is logical considering the vast amounts of resources dedicated to the discipline of securities
8 analysis. However, Staff is not sure how subsequent studies concluded that the results of this
9 study somehow translated into a proof that investors use five-year EPS forecasts as a constant
10 growth rate in the single-stage DCF methodology. In fact, Cragg and Malkiel did not even
11 use the DCF valuation model when testing their hypothesis regarding the influence of
12 analysts' projections on stock prices. It is more plausible to conclude that, because investors
13 rely on equity analysts' expectations, they rely on their investment recommendations
14 (e.g., buy, sell, or hold). Equity analysts' investment recommendations are based on their
15 assessment of the intrinsic value of a given stock. Analysts' methodologies for estimating a
16 fair price varies, but most at least assess the current price-to-forward earnings ratios both on a
17 consensus basis and on the analysts' own estimates. If the analyst believes the company can
18 grow its earnings faster than the consensus and/or the company deserves a higher P/E ratio
19 than the consensus, then the analyst will expect a higher return than the consensus. In Staff's
20 experience, this is the primary purpose for providing both absolute EPS forecasts and EPS
21 growth rate forecasts. It allows investors to estimate a potential justified P/E multiple.

22 Cragg and Malkiel specifically indicated the following in their study:

23 We would not argue that these estimates necessarily
24 give an accurate picture of general market expectations.

1 It would, however, seem reasonable to suggest that they
2 are representative of opinions of some of the largest
3 professional investment institutions and that they may
4 not be wholly unrepresentative of more general
5 expectations. **Since investors consult professional**
6 **investment institutions in forming their own**
7 **expectations, individuals' expectations may be**
8 **strongly influenced—and so reflect—those of their**
9 **advisers.** That several of our participating firms find it
10 worthwhile to publish these projections and provide
11 them to their customers provides prima facie evidence
12 that a certain segment of the market places some
13 reliance on such information in forming its own
14 expectations. Also, insofar as other security analysts
15 and investors follow the same sorts of procedures as
16 those used by our sample analysts in forming
17 expectations, general investors' expectations would
18 resemble those of the analysts. Consequently, these
19 predictions may well serve as acceptable proxies for
20 general expectations and surely seem worthy of detailed
21 analysis. (emphasis added)

22 Equity analysts often use the dividend discount model (DDM) to estimate a fair price to pay
23 for the stock. The DDM is synonymous with the DCF in utility ratemaking settings.
24 The DCF in utility ratemaking is simply solving for the required return/COE variable.
25 In valuation, the goal is to solve for the fair price of the stock. Consequently, if equity
26 analysts' are of value to their clients, then the stock prices will reflect their estimates of
27 future dividends and the required return on these dividends. Consequently, if one accepts the
28 studies that security analysts' expectations influence investors, which is the conclusion made
29 by Malkiel and Cragg, then this means that stock prices reflect the COE used by these very
30 same analysts. Staff's experience has been that these equity discount rates are usually much
31 lower than COE estimates provided by ROR witnesses in utility rate cases. Staff has
32 consistently cited examples in past rate cases that indicate equity analysts use equity discount
33 rates in the 7% to 8% range. Considering the continued current low long-term interest rate

1 environment and high utility P/E ratios, Staff thinks it is probable that utility equity analysts
2 are using costs of equity as low as in the 6% range to value utility stocks. However, this does
3 not mean that these equity analysts expect commissions to allow an ROE equivalent to the
4 COE. If allowed ROEs were set equal to the COE, this would cause downward pressure on
5 the stock price of a company whose earnings rely primarily on the regulated utility
6 operations. This is the case because utility stock prices currently reflect investors'
7 expectations of regulators continuing to allow returns in the 9% to 10% range.

8 Considering the fact that the Cragg and Malkiel study is the foundation for other
9 studies that are cited to support the use of five-year EPS forecasts in the constant growth
10 DCF, it is important to understand how at least one of the authors has estimated required
11 returns on stocks in his past studies and how he estimates required returns currently. In his
12 May 1979 study, "The Capital Formation Problem in the United States," Malkiel estimated
13 the required returns on the Dow Jones Industrial Average by using Value Line growth rates
14 for the first five years. This growth rate was then reduced over time to that of the expected
15 real growth rate of the economy, which was 3.6% at the time.¹⁰

16 In a January 5, 2012, editorial in the *Wall Street Journal*, "Where to Put Your Money
17 in 2012," Burton G. Malkiel provided his opinion on the long-run return expectations for
18 U.S. equities. Malkiel simplified his approach by simply indicating that earnings and
19 dividends in the market have grown at an approximate 5% rate over the long run. He simply
20 added this long-run growth rate to the 2% dividend yield at the time on the U.S. stock market
21 to arrive at a long-run return estimate of 7% for the U.S. Stock Market. If one were to add
22 the same growth rate to the current dividend yield on the S&P 500 of 2.32% as of

¹⁰ The use of a real GDP growth rate for perpetual growth is consistent with Goldman Sachs' valuation approach discussed in the last rate case, Case No. ER-2011-0028.

1 February 18, 2016,¹¹ this results in an expected return of 7.32%. This compares to the 5.37%
2 projected return on the S&P 500 estimated by professional forecasters in the
3 First Quarter 2016 *Survey of Professional Forecasters*. If Malkiel believed investors'
4 projected returns based on five-year EPS forecasts on the U.S. Stock Market, then a
5 projected return for the S&P 500 as of today would be 12.75% (2.32% dividend yield
6 plus 10.43% 5-year EPS growth forecasts for the S&P 500). While Malkiel and Cragg's
7 studies certainly concluded that security analysts' estimates have an impact on share prices,
8 they *did not* conclude that investors would assume security analysts' five-year EPS growth
9 rate forecasts are a proxy for perpetual growth.

10 The focus on earnings growth rates is understandable considering that most security
11 analysts' stock predictions are based on a multiple of P/E ratios, but security analysts provide
12 this information to evaluate potential P/E ratios as they compare to consensus P/E ratios. The
13 ability of the analyst to accurately project future earnings and justified P/E ratios will
14 determine whether that analyst is successful. Consequently, the focus on analysts' EPS
15 projections is understandable in this context.

16 Q. Does Dr. Morin take issue with the use of a current risk-free rate to estimate
17 required returns?

18 A. Yes. Dr. Morin claims that the 2.96% 30-year Treasury bond rate is "far too
19 low for purposes of applying the Capital Asset Pricing Model (CAPM)." He claims that
20 "because investors price securities on the basis of long-term expectations, including interest
21 rates," Staff should have relied on forecasted yields.

22 Q. Does Dr. Morin's proposition make sense from a market efficiency stand
23 point?

¹¹ <http://www.spindices.com/indices/equity/sp-500>.

Surrebuttal Testimony of
David Murray

1 A. No. Dr. Morin's proposition means that investors buying 30-year Treasury
2 bonds at current rates are doing so with the expectation that their investment will lose value
3 because bonds in the future will offer higher interest rates. As interest rates increase, bond
4 values decrease.

5 Q. Can you provide an example based on recent interest rate activity that helps
6 illustrate the fallacy of Dr. Morin's position?

7 A. Yes. However, Staff's example will show the opposite of increasing 30-year
8 US Treasury bond rates since interest rates have been declining in recent weeks. As of
9 March 1, 2016, the 30-year US Treasury bond yield was approximately 2.7%. This would
10 have caused the value of a \$1,000 investment in a 30-year US Treasury bond at the end of
11 November 2015, to have increased in value by approximately \$61 three months later. This is
12 due to the simple fact that because the current required return on a 30-year US Treasury bond
13 is now 2.7% rather than 3%, the initial price of the bond had to be bid up to cause the bond to
14 be in equilibrium with current required returns. While investors required a higher yield on
15 the 30-year US Treasury bond on November 30, 2015, these investors understand that the
16 value of their investment is likely to fluctuate over the period in which they hold the bond,
17 but they don't expect the values to change so much that they still won't eventually receive
18 the 3% return they required at the time. Actually, if they hold the bond until maturity, they
19 will achieve exactly this 3% required return.

20 Staff's point is that the current yield already reflects investors' expectations of what
21 they require for a return over the long-term in the current market environment. This is the
22 basic premise for using current stock prices in a DCF analysis to estimate the COE.

Surrebuttal Testimony of
David Murray

1 The current stock prices already reflect investors' views about the risk of changes in interest
2 rates in the future, whether they increase, decrease or both.

3 Q. Does Dr. Morin's own testimony claim that the current yield is the best
4 estimate of an investors' required return?

5 A. Yes. When Dr. Morin argues that only the income portion of a US Treasury
6 bond return should be used to estimate the risk premium, he recognizes that capital gains
7 and/or losses on US Treasury bonds are unanticipated by the investor and therefore should
8 not be considered the true risk-less required return. Specifically, Dr. Morin stated the
9 following in his rebuttal testimony:

10 ...the income component (i.e. the coupon rate) is a far
11 better estimate of expected return than the total return
12 (i.e., the coupon rate plus capital gains), because
13 realized capital gains/losses are largely unanticipated by
14 investors.¹²

15 The rationale that unexpected capital gains and losses should not be considered in measuring
16 the risk premium is consistent with the argument that the current risk-free rate represents
17 investors' current required return on a risk-free rate investment. Hence, this is the most
18 appropriate input for a CAPM COE estimate.

19 Q. If Dr. Morin understands that capital gains and/or losses on an investment in
20 Treasury bonds are largely unanticipated, what else should he have recognized when he
21 estimated an equity risk premium for purposes of his CAPM analysis?

22 A. That the same holds true for investments in stocks and, specifically, utility
23 stocks. Utility stock prices increase when interest rates decline for the same reason bond
24 prices increase, which causes investors to realize capital gains they did not expect to achieve.

¹² Roger A. Morin's Rebuttal Testimony, p. 24, ll. 15-18.

Surrebuttal Testimony of
David Murray

1 While many utility investors had been factoring in an increase in interest rates into the price
2 they were willing to pay for utility stocks through the summer and early fall of 2014,
3 long-term rates actually declined which caused utility stocks to achieve returns well above
4 the broader markets at the end of 2014 and into early 2015. While utility stock prices
5 moderated through the rest of 2015, they have once again begun to increase in early 2016
6 while the broader markets have declined. Again, this appears to have been unanticipated due
7 to a decline in long-term interest rates. Because the fundamentals of the utility industry have
8 not changed in early 2016, the only explanation for the increase in utility stock prices is a
9 decline in the utility industry's COE.

10 Q. If Dr. Morin understands that investors incur unanticipated capital gains and
11 losses, what other step should he have taken to complete his risk premium analysis?

12 A. He should have removed unanticipated capital gains in stock returns as well.
13 Although quantifying investors' actual required returns as compared to earned returns is a
14 daunting task, nonetheless, if Dr. Morin is removing this information from the risk-free
15 return, he must also do so for stock investments.

16 Q. Are you aware of any studies that have estimated the difference
17 between achieved returns and expected returns for at least part of the historical period
18 Dr. Morin analyzed?

19 A. Yes. Staff cited this study in its rebuttal testimony when explaining the fact
20 that realized returns are not the same as required returns. Eugene Fama and Kenneth French
21 studied the period from 1950 to 2000 and concluded that *earned* ROEs over the period of
22 1950 through 2000 were not consistent with *required* ROEs over the same period.¹³
23 Fama and French arrived at this conclusion by using the DCF method to compare the COE to

¹³ Eugene F. Fama and Kenneth R. French, "The Equity Premium," *The Journal of Finance*, (April 2002).

1 the market ROE over the same period. They attributed the higher earned returns as compared
2 to required returns due to the unanticipated increase in P/E ratios in the market, which they
3 attribute to a decline in the COE for the broader markets.

4 Q. At the end of the day, what's the most important thing to understand in order
5 to select a fair and reasonable equity risk premium to use to estimate the cost of common
6 equity?

7 A. Does it pass a reasonableness test. Dr. Morin's risk premium estimates
8 assume the broader markets are going to achieve 11.4% returns. Staff knows of no reputable
9 institutional investor that expects this high of a return for the US markets.

10 **CAPITAL STRUCTURE**

11 Q. Which MAWC witnesses sponsor testimony on the appropriate capital
12 structure to use for setting MAWC's allowed ROR?

13 A. Dr. Morin and Mr. Rungren. I will first respond to Dr. Morin's testimony
14 on capital structure and then I will reply to Mr. Rungren's testimony.

15 Q. Dr. Morin claims that because your recommended common equity ratio is not
16 the same as the average of your proxy group, this makes your capital structure
17 recommendation inappropriate. Do you agree?

18 A. No. Although a company's capital structure, i.e., financial risk, influences the
19 credit rating it may be assigned, rating agencies also consider an entity's business risk when
20 assigning a credit rating. In fact, Staff discussed this in its rebuttal testimony when
21 evaluating Dr. Morin's argument that because Staff's recommended ratemaking capital
22 structure contains more leverage than that assigned to MAWC, Staff's ROE recommendation
23 needed to be adjusted upward. Staff explained that because Standard & Poor's evaluated

Surrebuttal Testimony of
David Murray

1 American Water's capital structure and business risk when it assigned American Water an
2 'A' rating, it is this capital structure that is associated with the capital costs incurred by
3 MAWC. If American Water had a common equity ratio in the low to mid 50% range, then it
4 is likely that American Water would be rated higher than its current 'A' rating. The average
5 credit rating of Staff's proxy group is an 'A' so no adjustment is needed due to similar total
6 risks. If the Commission determines MAWC's allowed ROR should be based on MAWC's
7 allocated capital structure, then the Commission's authorized ROE should be below Staff's
8 9.25% recommendation.

9 Q. Dr. Morin claims that Staff recommended a "double leverage" approach.
10 Is this an accurate representation of Staff's recommendation?

11 A. No. The "double leverage" approach determines the amount of equity infused
12 into the subsidiary from debt proceeds and equity proceeds from the parent company. For
13 example, if 10% of the equity ratio is determined to be from capital infused by the parent
14 company, then the parent company's cost of capital is assigned to this part of the subsidiary's
15 equity costs. This is not how Staff approached its capital structure and cost of capital
16 recommendation. Staff simply used American Water's consolidated capital structure and
17 consolidated capital costs because MAWC is not financed as a stand-alone entity. While it is
18 entirely correct that Staff's capital structure and capital costs cannot be reconciled to actual
19 rate base investments in MAWC's system, it is much more important to ensure that
20 MAWC's allowed ROR is set based on American Water's market-tested capital structure
21 because this is the capital structure investors evaluate to determine their required returns.

22 Q. Before going into the details of Mr. Rungren's rebuttal testimony about your
23 recommended use of American Water's consolidated capital structure and capital costs to set

Surrebuttal Testimony of
David Murray

1 MAWC's ROR, has MAWC provided you sufficient data to true-up your recommended
2 capital structure and capital costs?

3 A. Yes, but only through December 31, 2015. MAWC was unable to provide
4 American Water data through January 31, 2016. Consequently, Staff's true-up recommended
5 ROR is based on American Water's financial data through the end of 2015.

6 Q. What is your true-up recommendation for MAWC's allowed ROR?

7 A. Schedules DMs-1 through DMs-4 show Staff's recommended capital structure
8 and corresponding capital costs. Staff is not recommending a true-up to its allowed ROE
9 recommendation. However, based on recent declines in long-term interest rates and
10 increases in water utility stock prices, Staff is even more confident that its recommended
11 allowed ROE of 9.25% is fair.

12 Staff's recommended common equity ratio is now 45.48% as compared to the 46.99%
13 ratio Staff recommended based on test year data. Staff is still recommending an amount of
14 short-term debt be included in MAWC's ratemaking capital structure because
15 American Water is still carrying a balance of short-term debt above its construction work in
16 progress (CWIP) balance, which implies that a portion of long-term assets are financed by
17 short-term capital. Staff also updated all of American Water's embedded capital costs to
18 match the date of the updated capital structure.

19 Staff's recommended allowed ROR now ranges from 6.77% to 7.23%, with a point
20 recommendation of 7.12%. This compares to Staff's initial recommended allowed ROR
21 range of 6.94% to 7.41% with a point estimate of 7.29%.

22 Q. Why is your recommended allowed ROR for true-up lower than the test year
23 case?

Surrebuttal Testimony of
David Murray

1 A. Mainly due to the fact that the common equity ratio has declined by
2 approximately 1.5%, but also because American Water's embedded cost of debt has declined
3 from 5.69% to 5.51%.

4 Q. Is American Water's common equity ratio still consistent with its historical
5 level?

6 A. Yes. Page 71, of American Water's 2014 SEC Form 10-K filing, shows that
7 American Water's common equity ratio has typically been around 45% over the last three
8 years.

9 Q. Mr. Rungren maintains that MAWC is an autonomous entity with respect to
10 the issuance of equity and debt and the management of its capital structure. Do you agree
11 that MAWC is autonomous?

12 A. No. It is not clear to Staff why MAWC targets a common equity ratio in the
13 low 50% range, while American Water targets a common equity ratio of around 45%.
14 Because MAWC is not issuing its own debt to third parties, AWCC is doing this on behalf of
15 American Waters' subsidiaries; there appears to be no ongoing consequential effects of
16 MAWC's capital structure other than for ratemaking purposes.

17 Q. Did Staff request information about American Water's and MAWC's capital
18 structure strategies?

19 A. Yes. Staff issued Data Request No. 452 to determine if there was any
20 formalized documentation regarding their strategies. MAWC responded as follows:

21 There are no corporate documents that delineate either
22 MAWC's or American Water's strategy for managing
23 each company's capital structure.

Surrebuttal Testimony of
David Murray

1 Q. Mr. Rungren claims that you made an unfounded claim that American Water
2 manipulates MAWC and other subsidiaries' capital structures to achieve a higher revenue
3 requirement. Is your assertion unsupported?

4 A. No. It is supported by the fact that there is no rational reason for MAWC to
5 have a more equity-rich capital structure than its consolidated parent company. As Staff
6 explained in its rebuttal testimony, MAWC's capital structure is of no consequence for
7 purposes of raising third-party debt because it has not done so since 2006. MAWC has not
8 provided any evidence to prove why it is necessary to maintain a capital structure that is less
9 cost efficient (more costly to ratepayers) than its parent company's capital structure.
10 The parent company's capital structure is of consequence to American Water's ability to
11 raise debt through AWCC and that capital structure only contains approximately 45% equity.

12 Q. Can you demonstrate how American Water makes MAWC's capital structure
13 more costly to Missouri ratepayers than it needs to be?

14 A. Yes. Based on true-up data for the period from December 31, 2014, through
15 January 31, 2016, American Water provided an additional \$30,178,387 million of additional
16 capital to MAWC as an equity contribution. During the same period, American Water also
17 received debt capital in the amount of \$241.3 million from AWCC at a weighted average
18 interest rate of 3.46% for capital infusions. There is no reason why MAWC should not have
19 received the \$30,178,387 in additional capital in the form of a loan from AWCC. If
20 American Water had transferred the debt capital to MAWC as an affiliate loan, then
21 MAWC's common equity ratio would be 47.19%.

22 Q. If MAWC would have been loaned this capital directly from AWCC, how
23 much would Missouri ratepayers have to pay for this capital?

Surrebuttal Testimony of
David Murray

1 A. \$1,044,172 ($\$30,178,387 \times 3.46\%$).

2 Q. If the Commission accepts that this capital should be treated as equity, how
3 much will Missouri ratepayers have to pay for this capital?

4 A. If Dr. Morin's recommended ROE is allowed; $\$5,241,067 (\$30,178,387 \times$
5 $10.7\% \times 1.62308)$, and if Staff's recommended ROE is allowed; $\$4,530,829 (\$30,178,387 \times$
6 $9.25\% \times 1.62308)$.

7 Q. Has Staff had difficulty verifying the original third-party debt certain MAWC
8 affiliate debt transactions are tied to?

9 A. Yes. In response to Staff Data Request No. 187, Staff discovered 13 internal
10 debt assignments to MAWC in which Staff could not match the costs of these internal debt
11 assignments to the cost of the third-party debt issued by AWCC. Historically, Staff was
12 always able to match the internal debt assignments to third-party debt issued by AWCC.
13 Scott Rungren explained to Staff that it was his understanding that this assigned debt was
14 transferred from American Water (not to be confused with AWCC) to MAWC, but AWCC
15 determined the cost that it believed it could have received if it went to market.

16 Q. What does the above issue demonstrate to Staff?

17 A. That MAWC is not managed as a stand-alone entity. Clearly, American Water
18 is assigning debt based on the needs/convenience of the consolidated entity. Staff
19 understands the need to do so, but this lack of independence of American Water's
20 subsidiaries should be recognized for purposes of assessing whether the subsidiary capital
21 structures are market-tested and managed for purposes of attracting capital at a fair and
22 reasonable cost.

Surrebuttal Testimony of
David Murray

1 Q. On page 11 of his rebuttal testimony, Mr. Rungren claims that MAWC is an
2 independent legal entity responsible for making its own decisions regarding its financing
3 sources and the composition of its capital structure. Assuming MAWC's Board of Director's
4 were acting in the best interest of MAWC as a stand-alone entity, do you think it would
5 target a capital structure with over 50% common equity?

6 A. No. It is in the best interest of MAWC to manage its capital structure to
7 achieve a lower cost of capital. It is clear that American Water has determined that it can
8 achieve the best value for its shareholders if it manages the consolidated capital structure to a
9 common equity ratio of approximately 45%. American Water could still maintain this
10 consolidated common equity ratio if it transferred all of the debt issued by AWCC straight
11 down to its subsidiaries rather than transferring the debt to American Water to make equity
12 infusions into the subsidiaries. Staff is not aware of any benefit MAWC's ratepayers are
13 receiving by American Water taking this debt capital from AWCC and infusing it as equity
14 rather than the debt capital being directly transferred to MAWC as debt capital. In fact, as is
15 evident from this dispute, MAWC ratepayers are actually being charged more due to this
16 arrangement.

17 Q. On page 13 of his rebuttal testimony, Mr. Rungren implies that because you
18 use American Water's capital structure and capital costs as a proxy for MAWC, this implies
19 that it would be acceptable to use any of the comparable companies' capital structures and
20 capital costs as a proxy for MAWC's allowed ROR. How do you respond?

21 A. Mr. Rungren's suggestion is interesting. Basically, Mr. Rungren's point is
22 that a hypothetical approach based on any water utility or proxy of water utilities could be
23 used to estimate MAWC's overall cost of capital rather than just the COE component. This

Surrebuttal Testimony of
David Murray

1 is actually fairly consistent with how analysts typically approach valuing business
2 enterprises. The analyst determines a COE without any debt (an unleveraged COE) and then
3 determines the targeted capital structure for the subject unit and determines a cost of debt and
4 COE based on the targeted capital structure.

5 Q. If American Water had a capital structure with a similar amount of equity as
6 MAWC, how would this impact its COE?

7 A. It would cause it to be lower.

8 Q. Mr. Rungren claims that American Water does not guarantee the debt
9 assigned to MAWC. How do you respond?

10 A. American Water indicates the following about its support for AWCC debt:

11 AWCC, which is a wholly-owned subsidiary of the
12 Company, has a strong support agreement with its
13 parent that, under certain circumstances, is the
14 functional equivalent of a guarantee.¹⁴

15 Q. But this isn't a guarantee of MAWC's internal loan agreement, right?

16 A. No, but there is no logical reason for American Water to guarantee an internal
17 loan commitment that is owed to an affiliate, AWCC.

18 **SUMMARY AND CONCLUSIONS**

19 Q. Please summarize the conclusions of your surrebuttal testimony.

20 A. Dr. Morin and I have a fundamental disagreement about the probable level of
21 the COE. He believes the water utility industry has a COE above 10%, whereas I think it is
22 7% or lower. However, I believe an allowed ROE of 9.25% is reasonable when considering
23 the Commission's recent allowed ROEs for Ameren Missouri and KCP&L.

¹⁴ American Water's 2014 SEC Form 10-K Filing, p. 92.

Surrebuttal Testimony of
David Murray

1 Dr. Morin and Mr. Rungren argue that MAWC is managed financially as a
2 stand-alone entity and therefore, its capital structure should be used for purposes of setting
3 MAWC's allowed ROR. Because MAWC has several affiliate loans from AWCC and Staff
4 cannot even determine what third-party loans these internal loan agreements are related to,
5 Staff does not consider MAWC's capital structure to be independent. MAWC does not issue
6 its own debt, and therefore, it doesn't have a separate credit rating. There is no logical reason
7 for American Water to carry debt at the holding company level because that debt can simply
8 be loaned directly to the subsidiaries so all subsidiaries maintain a capital structure consistent
9 with American Water's targeted consolidated capital structure. This is the only true
10 market-tested capital structure that is managed to achieve lower capital costs.

11 Q. Does this conclude your surrebuttal testimony?

12 A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water)
Company's Request for Authority to Implement)
a General Rate Increase for Water and Sewer)
Service Provided in Missouri Service Areas) Case No. WR-2015-0301

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

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

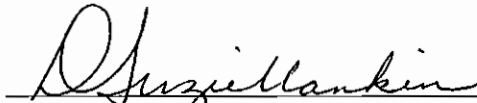
Further the Affiant sayeth not.


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 4th day of March, 2016.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2016
Commission Number: 12412070


Notary Public

**Missouri-American Water Company
Case No. WR-2015-0301**

**Rate Making Capital Structure as of December 31, 2015
for Missouri American Water Company
(based on American Water Consolidated Capital Structure)**

Capital Component	Amount (in thousands)	Percentage of Capital
Common Stock Equity	\$5,049,000 ¹	45.48%
Preferred Stock	13,291 ²	0.12%
Long-Term Debt	5,815,024 ³	52.38%
Short-Term Debt	224,000 ⁴	2.02%
Total Capitalization	<u><u>\$11,101,315</u></u>	<u><u>100.00%</u></u>

Notes:

1. Based on common equity shown on American Water's December 31, 2015 balance sheet.
2. Net balance based on MAWC's updated response to Staff DR No. 187
3. Net balance based on MAWC's updated response to Staff DR No. 187.
4. Based on short-term debt shown in excess of construction work in progress balance as of December 31, 2015.

Source: MAWC's updated responses to Staff Data Request Nos. 186, 187 and 195.

**Missouri-American Water Company
Case No. WR-2015-0301**

**Rate Making Cost of Long-Term Debt as of December 31, 2015
for Missouri American Water Company
(based on American Water's Consolidated Cost of Long-Term Debt)**

Total Annual Cost:	\$320,623,312	
Total Carrying Value:	\$5,815,023,974	
Embedded Cost = Total Annual Cost/Total Carrying Value		5.51%

Source: Missouri-American Water Company's updated response to Staff's Data Request No. 187.

**Missouri-American Water Company
Case No. WR-2015-0301**

**Rate Making Cost of Preferred Stock as of December 31, 2015
for Missouri American Water Company
(based on American Water's Consolidated Cost of Long-Term Debt)**

Total Annual Cost:	\$1,150,841	
Total Carrying Value:	\$13,291,140	
Embedded Cost = Total Annual Cost/Total Carrying Value		8.66%

Source: Missouri-American Water Company's updated response to Staff's Data Request No. 0187.

Missouri-American Water Company
Case No. WR-2015-0301

Recommended Allowed Rate of Return as of December 31, 2015
for Missouri-American Water Company

Capital Component	Percentage of Capital	Embedded Cost	Allowed Rate of Return Common Equity Return of:		
			8.50%	9.25%	9.50%
Common Stock Equity	45.48%	-----	3.87%	4.21%	4.32%
Preferred Stock	0.12%	8.66%	0.01%	0.01%	0.01%
Long-Term Debt	52.38%	5.51%	2.89%	2.89%	2.89%
Short-Term Debt	<u>2.02%</u>	0.48%	<u>0.01%</u>	<u>0.01%</u>	<u>0.01%</u>
Total	<u>100.00%</u>		<u>6.77%</u>	<u>7.12%</u>	<u>7.23%</u>

Sources:

Updated responses to Staff Data Request Nos. 186, 187, 188 and 195