EXHIBIT 223

Exhibit No.:	
Issue:	Cost of Capital
Witness:	Michael P. Gorman
Type of Exhibit:	Surrebuttal Testimony
Sponsoring Parties:	Missouri Office of Public Counsel and Missouri Industrial Energy Consumers
Case No.:	WR-2017-0285
Date Testimony Prepared:	February 9, 2018

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Missouri-American Water Company's Request for Authority to Implement General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas	**Case No. WR-2017-0285**

Surrebuttal Testimony of

Michael P. Gorman

On behalf of

Missouri Office of Public Counsel
and
Missouri Industrial Energy Consumers

February 9, 2018

BRUBAKER & ASSOCIATES, INC.

Exhibit No. 223
Date 3/8/18 Reporter MW
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Project 10440.3

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STATE OF MISSOURI)
) **SS**
COUNTY OF ST. LOUIS)

Affidavit of Michael P. Gorman

Michael P. Gorman, being first duly sworn, on his oath states:

1. My name is Michael P. Gorman. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by the Missouri Office of Public Counsel and Missouri Industrial Energy Consumers in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony which was prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. WR-2017-0285.

3. I hereby swear and affirm that the testimony is true and correct and that it shows the matters and things that it purports to show.

Michael P. Gorman

Subscribed and sworn to before me this 9th day of February, 2018.

Maria E. Decker
Notary Public

MARIA E. DECKER
Notary Public - Notary Seal
STATE OF MISSOURI
St. Louis City
My Commission Expires: May 5, 2021
Commission # 13706793

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BEFORE THE PUBLIC SERVICE COMMISSION
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Surrebuttal Testimony of Michael P. Gorman

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q ARE YOU THE SAME MICHAEL P. GORMAN WHO PREVIOUSLY FILED TESTIMONY IN THIS CASE?

A Yes. On November 30, 2017 and January 17, 2018, I filed direct and rebuttal testimony on behalf of the Office of the Public Counsel ("OPC") and the Missouri Industrial Energy Consumers ("MIEC").

Q ON WHOSE BEHALF ARE YOU SPONSORING THIS TESTIMONY?

A I am filing this surrebuttal testimony on behalf of OPC and MIEC.

Q WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A I will respond to the rebuttal testimony of Missouri-American Water Company ("MAWC" or "Company") witness Ann Bulkley.

Q PLEASE SUMMARIZE YOUR CONCLUSIONS.

A MAWC witness Bulkley's arguments in support of her recommended return on equity are without merit and should be rejected. A balanced and objective assessment of observable market evidence shows that market-derived models, including the DCF, are accurate and reliable in estimating a fair return on equity for MAWC. Further, my recommended return on equity of 9.0% is comparable to more recent authorized returns for water utilities, which support a return at or near my recommendation.

In stark contrast, Ms. Bulkley's own testimony clearly shows that her recommended return of 10.80% is excessive and significantly out of line with equity returns authorized in other jurisdictions, and with accepted practices in estimating the current market cost of equity for a low risk regulated utility equity investment. Therefore, the Commission should reject her excessive return estimate and give primary weight to the fair returns estimated by Staff (9.25%) and myself (9.00%), which reasonably balance the interests of all stakeholders by awarding an equity return that provides fair compensation and maintains MAWC's financial integrity, but at rates that are just and reasonable to Missouri customers.

Anomalous Market Conditions

Q DID MS. BULKLEY COMMENT ON THE APPROPRIATENESS OF DISCOUNTED CASH FLOW ("DCF") RETURNS BASED ON ANOMALOUS MARKET CONDITIONS?

A At page 7 of her rebuttal testimony, Ms. Bulkley states that the return on equity estimation should be based on multiple models with forward-looking assumptions to accurately estimate investors' expected cost of equity. She opines that DCF return

estimates, which range from 6.62% up to 15.73%, vary widely and thus support her concern about anomalous market conditions. (*Id.*).

Q DID MS. BULKLEY PROVIDE VALID EVIDENCE OF WHAT SHOULD BE CONSIDERED IN ESTIMATING A RETURN ON EQUITY THAT REASONABLY REFLECTS MAWC'S CURRENT MARKET COST OF EQUITY?

A No. While I support her opinion that a fair return on equity should be based on multiple models, reflecting a broad assessment of current market conditions, I do not agree with her that market conditions are anomalous and therefore do not result in DCF return estimates that are reliable and useful in estimating a fair return on equity.

Further, Ms. Bulkley's impression that current market conditions are anomalous was already addressed in my rebuttal testimony at pages 13-16. In my rebuttal testimony, I outlined how DCF returns reflect dividend yields and growth outlook, which are competitive with other observable income returns of comparable risk, and have growth components that are robust and strong relative to historical growth. A DCF return which comprises a competitive income return with robust growth outlooks provides a reasonable estimate of fair compensation to investors, and is not an indication, as Ms. Bulkley erroneously implies, that a DCF return is too low and unreasonable. Further, CAPM return estimates also reflect beta estimates consistent with historical measures of beta for utilities, and when combined with observable high market risk premiums consistent with observable market evidence, produce a robust CAPM return estimate in this marketplace. Ms. Bulkley simply has not provided any reason to refute these findings. Nor has Ms. Bulkley provided any observable evidence to support her belief that market-based models do not produce reasonable estimates of a fair return on equity for MAWC.

Interest Rates

Q DID MS. BULKLEY ALSO COMMENT ON CURRENT OBSERVABLE AND PROJECTED INTEREST RATES IN ASSESSING THE CURRENT MARKET COST OF EQUITY?

A Yes. At page 16 and other places in her testimony, she states that the Federal Reserve increased "short-term" interest rates by 0.25% in December 2017, and reiterated an intention to continue to increase short-term interest rates in 2018 possibly by as much as 75 basis points. She goes on to quote that *Blue Chip Financial Forecasts'* outlooks for short-term interest rates increase throughout 2018.

Q DOES MS. BULKLEY'S ASSESSMENT OF SHORT-TERM INTEREST RATE CHANGES SUPPORT HER CONCLUSION THAT MAWC'S FAIR RETURN ON EQUITY IS ABOVE CURRENT MARKET COST OF EQUITY?

A No. As I outlined in my direct testimony at pages 6-11, short-term interest rates are projected to increase throughout 2018. However, that increase in short-term interest rates is not resulting in corresponding increases to long-term interest rates. Long-term interest rates have a similar investment horizon as common equity securities. As such, short-term interest rates are expected to increase, but long-term cost of capital such as long-term bonds and common stock equity are not expected to increase as significantly throughout 2018 as short-term interest rates. Rather, the phenomenon expected in 2018 will be a flattening of the yield curve, that is, short-term interest rates will rise closer to long-term interest rates. As a result, common equity costs and long-term bond costs are not expected to increase in line with short-term interest rates based on the Fed's monetary actions.

Authorized Returns

Q DID MS. BULKLEY ALSO COMMENT ON AUTHORIZED RETURNS ON EQUITY FOR UTILITY COMPANIES?

A Yes. In her Table 1, Ms. Bulkley shows that authorized returns on equity have been in the 9.43% to 9.90% area. (Bulkley Rebuttal at 10). She observed this authorized return on equity to dispute Staff's and my recommended returns on equity of 9.25% and 9.0%, respectively. However, she failed to provide any recognition that her recommended return on equity of 10.8% is significantly higher than the industry authorized return on equity for regulated companies. This is clear evidence that a 10.8% return on equity is unreasonable. (*Id.*).

More importantly, Ms. Bulkley does not seem to understand that regulatory commissions can authorize returns on equity which reflect gradual movements toward the market cost of equity. To the extent the market cost of equity has decreased over the last several years, as it has, regulatory commissions may lower authorized returns on equity in a more gradual manner in order to protect the financial integrity of the utility. This would suggest that as a sound regulatory policy, the Commission would award MAWC a return on equity near the low end of the industry authorized return on equity awards, or 9.40%, because it would be moving toward what Staff and I have both estimated the current market cost of equity for MAWC to be in the range of 9.25% and 9.00%. This evidence of authorized returns on equity supports the recommendations of Staff and me and provides sound evidence to reject Ms. Bulkley's 10.8% return on equity recommendation.

Further, the most recently authorized returns for MAWC water utility affiliates in 2017 are 9.10% (New York) and 9.25% (Virginia). These authorized water utility

equity returns on equity were made in conjunction with capital structures with common equity ratios of approximately 46%.[1]

DCF Studies

Q DID MS. BULKLEY COMMENT ON THE RESULTS OF YOUR DCF STUDIES?

A Yes. At pages 55-59 of her rebuttal testimony, Ms. Bulkley offers several criticisms of my DCF results, including the following:

1. My final recommendation of 8.6% is essentially the median of the results of the constant growth analysis for the water group, and she finds that this return on equity is well below commission-determined returns on equity for water utilities. (*Id.* at 55).

2. She finds that my constant growth water utility group range of 4.87% to 15.73% is a wide range, again referencing commission-authorized returns to suggest that these numbers are unreliable. (*Id.* at 56).

3. She also comments on the water group's dividend yield of 2.11%, stating that this yield is low in relationship to 30-year Treasury bond yields, which have declined since 2009. (*Id.* at 56).

4. She also is critical of my sustainable growth DCF numbers, stating that the FERC no longer relies on this model, and that the average result for the water group is 9.55%. While she disagrees with the premises underlying the constant growth model, she likes the result, and therefore asserts I should have given it more weight. (*Id.* at 57).

5. Finally, with respect to the multi-stage growth DCF, she believes that a long-term sustainable growth rate of 4.2% is too low in relationship to the historical nominal GDP growth of around 5.5%. She states at a 9% DCF return, long-term sustainable growth would have to be around 6.95% in order to produce a multi-stage growth estimate of 9%. (*Id.* at 58-59).

Q DOES MS. BULKLEY PROVIDE REASONABLE CRITICISMS OF YOUR DCF ANALYSIS?

A No. Indeed, she has not found any critical flaw in the application, theory or data I used in my DCF studies. Indeed, many of her arguments have already been

[1]American Water Works, Investors Presentation, December 2017 at 34.

addressed in my direct testimony. Ms. Bulkley's main argument appears to be challenging the results of DCF studies because they are producing results that are lower than Commission authorized returns.

Q PLEASE RESPOND.

A My response to Ms. Bulkley's criticisms of my DCF studies and resulting recommendation based on the DCF models will largely be tied to what I already provided in my direct testimony. Worthy of note, Ms. Bulkley did not respond to these arguments. Specifically, my constant growth DCF models are based on forward-looking estimates by analysts, and Ms. Bulkley agrees that forward-looking expectations by market participants are the best measure of estimating a fair return on equity for a utility company. (Bulkley Direct Testimony at 33-34). My constant growth DCF analysis for my water proxy group was corroborated by the constant growth DCF analysis for my gas proxy group. Ms. Bulkley, without any evidence whatsoever, simply rejected my gas proxy group as unable to produce a reasonable estimate to measure a fair return for MAWC. Nevertheless, the two proxy groups corroborated the results of one another, and support a DCF return on equity based on a constant growth methodology for MAWC of around 8.6%.

Her argument about not giving more weight to my sustainable growth DCF analysis appears to relate only to the fact that she likes the high DCF return estimate of 9.55%. However, at page 24 of my direct testimony, I outlined the reasons why I did not give more weight to the results of the sustainable growth model. In fact, the water utility group estimate specifically for the sustainable growth model was impacted by two outliers: SJW Group which reflected a growth rate almost three times the expected future growth of the U.S. economy, and Atmos Energy which had

a very high growth rate that is considerably higher than a rational outlook for sustainable growth. As such, the water proxy group average result of 9.55%, embraced by Ms. Bulkley, was skewed by two high-end outliers. The water proxy group median estimate was 8.8%, which more accurately reflects the central tendency of the proxy group using the sustainable growth DCF analysis. Ms. Bulkley's assessment of my sustainable growth DCF analysis ignored the central tendency of the group, skewing the average proxy group result due to outliers, and effectively provided no credible assessment of the reliability of the results themselves at all.

Similarly, Ms. Bulkley's estimate of 9.57% in regard to my constant growth DCF model is erroneous. (Bulkley Rebuttal Testimony at 56). As Ms. Bulkley points out, the average DCF result is based on dispersed distribution in the range of 4.87% to 15.73%. To obtain an estimate of 9.57%, Ms. Bulkley excludes five low-end estimates but just one high-end estimate, and averages the remaining three results. This one-sided approach does not reflect the central tendencies of the proxy group, and produces a false point estimate of a fair and reasonable return based on this DCF study. Again, as I pointed out above, a better approach in determining a reasonable return on equity for MAWC is relying on the median result (8.61%), which more accurately measures the central tendency of the group results, taking into account the presence of outliers.

Concerning my multi-stage growth rate model, Ms. Bulkley's proposal to use historical GDP growth, in lieu of consensus analysts' projected GDP growth, contradicts her own testimony. Specifically, at page 7 of her testimony, Ms. Bulkley acknowledges that prospective factors used to reflect investment opportunities on a forward-looking basis are more likely to be reflective of current valuations and

expectations by investors. Her proposal to reject forward-looking projected future GDP growth in favor of historical GDP growth simply contradicts her own methodologies and proposals. This argument is inconsistent with her own testimony and not credible.

Q DO YOU BELIEVE THAT THE DCF RESULTS ARE PRODUCING REASONABLE RETURNS IN THE CURRENT MARKETPLACE?

A Yes. As stated above, DCF returns are at the low end of what I believe to be a reasonable range in the current marketplace, but nevertheless they are valid and reasonable estimates of the current market cost of equity.

Ms. Bulkley observed that commission-authorized returns do not undermine a DCF model's ability to accurately estimate the market cost of equity. Commission-authorized returns on equity must reflect both fair compensation to the utility and must also be adequate to maintain the utility's financial integrity and its access to capital. Simply stated, the Commission-authorized return includes more factors than simply a current estimate of the current market cost of equity. The DCF return, in contrast, produces only the current market cost of equity estimate. Commissions may consider DCF results and other factors to decide what return on equity meets the *Hope* and *Bluefield* standards of fair compensation. While a market cost of equity estimate may be lower than what the Commission finds is appropriate for meeting the *Hope* and *Bluefield* standards in the past, that is not evidence that the DCF model is not producing reasonable estimates of the current market cost of equity. As such, the Commission should consider DCF results currently, as they have in the past, in determining what an appropriate and fair return on equity would be for a utility company.

Other factors such as financial integrity and access to capital should be based on evidence other than DCF return estimates on the market cost of equity. Based on the evidence in this record, a return on equity in the low 9% area would be consistent with the *Hope* and *Bluefield* standards, which is slightly higher than the DCF return estimate. However, on a pure measure of the market cost of equity, the DCF return estimates are valid and accurate estimates of fair compensation.

Q DID MS. BULKLEY COMMENT ON THE RESULTS OF YOUR RISK PREMIUM STUDIES?

A Yes. Ms. Bulkley's criticism of my risk premium analysis is based on her belief that I should have relied on an inverse relationship between interest rates and equity risk premium. She states that when interest rates decrease, market risk premiums increase and vice versa. (*Id.* at 60). She also believes that I should have relied on a more recent time period (the last five years). I disagree with both of these points. I will discuss the first point here, and the second later in this testimony at pages 13-14 where I discuss her proposed adjustments to my results.

Q DO YOU BELIEVE THAT MS. BULKLEY'S PERSPECTIVE OF MEASURING A MARKET RISK PREMIUM IS ACCURATE AND PRODUCES A FAIR RESULT?

A No. I would agree that changes in interest rates are one factor that can help explain changes in equity risk premium based on prevailing market conditions. However, changes in interest rates alone will not allow for an accurate measurement of the current market equity risk premium, and therefore would not provide for a reasonable and accurate estimate of the current market cost of equity.

For example, interest rates can fall as prospective outlooks for inflation fall. That is, an interest rate is based on an expected real return and inflation outlook. Holding everything constant except inflation outlooks, if inflation outlooks decline by 1 percentage point, then the interest rate would decline by 1 percentage point. Similarly, equity returns reflect a real return component and inflation outlook. If all other factors are held constant, a 1 percentage point decline in inflation would result in a 1 percentage point decline in the required equity return. In this example, where interest rates decrease, an equity risk premium would not change, because the expected differential between investing in equity securities and debt securities would not be impacted by a decline in inflation expectations by itself. As such, contrary to Ms. Bulkley's claims, proper equity premiums must be measured based on changes in investment risk between equity and debt securities, and not simply changes in interest rates.

Q DID MS. BULKLEY COMMENT ON THE RESULTS OF YOUR CAPM STUDY?

A Yes. In response to my CAPM study, Ms. Bulkley primarily disputes the market risk premium based on historical data. However, what Ms. Bulkley does not recognize is that I provide primary weight to my high-end risk premium of 7.8% because of my assessment of observable risk premiums in the market. (Gorman Direct at 46 and Schedule MPG-16, page 2). Using the high end of my range reflects current observable yield spreads, which indicate that the market is demanding higher than average yield spreads to invest in securities of greater amounts of risk. (Gorman Direct at 42-45).

Also, Ms Buckley's support for developing a market risk premium based on historical data contradicts her own testimony. At page 7 of her rebuttal testimony,

she acknowledges that prospective factors should be used to reflect investor return expectation by relying on forward-looking estimates, not backward-looking estimates. I agree. I developed a forward-looking risk premium return on the market using an inflation-adjusted market return of 8.9% that is adjusted by a forward-looking inflation projection of 2.3%, which produced an expected market return of 11.40%. This market return reflects a forward-looking expectation that most accurately gauges investors' return requirements in the current market.

Revisions to My Return on Equity Estimates

Q DID MS. BULKLEY ALSO PROPOSE REVISIONS TO YOUR CAPM AND RISK PREMIUM ESTIMATES?

A Yes, however Ms. Bulkley's estimates are highly biased and simply unreliable. Her first estimate was to my CAPM study. She states that based on revisions to my CAPM methodology, the CAPM return would be 11.19%. She develops that estimate on her Schedule AEB-12, page 1. As shown on that page, in order to produce a CAPM return estimate of 11.19%, Ms. Bulkley developed a risk premium for the market of 10.21%.

Her revised market risk premium was based on an expected market return of 13.81%, less a risk-free rate of 3.6%. (Schedule AEB-12, pages 1 and 2). The expected return on the market in turn of 13.81% was based on a long-term growth rate of 11.75% and a weighted average dividend yield of 1.94%. (*Id.*).

This expected return on the market simply is economically illogical, and unreliable. While a constant growth DCF model can be used if the growth rate can be shown to be reasonably reflective of long-term sustainable growth, the DCF model

cannot be used with a short-term growth rate that is simply far too high to be a sustainable growth estimate.

Ms. Buckley's 11.75% growth rate for the Standard & Poor's ("S&P") 500 significantly exceeds the historical growth of the S&P 500 of 5.8% (Duff & Phelps 2017 SBBI Yearbook at 6-17, Exhibit 6-9) and almost three times the growth rate of the expected U.S. economy of 4.2% over the long term.

There is simply no rational or logical basis to expect that the stock market can grow at such an elevated level, relative to historical growth, and relative to the economy in which the public companies sell most of their goods and services. For this reason, Ms. Bulkley's revision of my market risk premium analysis is unreliable because it reflects an illogically high long-term sustainable growth rate on the market index, the S&P 500.

Q DID MS. BULKLEY ALSO REVISE YOUR RISK PREMIUM ESTIMATE?

A Yes. Ms. Bulkley revised my risk premium estimate to shorten the time period used to estimate the equity risk premium. In my analysis, I relied on the period 1986-2017. In Ms. Bulkley's analysis she revised it to shorten the study period to 2013-2017. (Schedule AEB-13 and Schedule AEB-14).

Q IS REDUCING THE STUDY PERIOD TO LESS THAN FIVE YEARS AS MS. BULKLEY HAS DONE MORE LIKELY TO PRODUCE A REASONABLE AND RATIONAL ESTIMATE OF THE CURRENT MARKET COST OF EQUITY?

A No. Ms. Bulkley's revision of my risk premium estimate is flawed for several reasons. First, Ms. Bulkley's risk premium analysis is not measured over several business cycles or market cycles. Hence, it is not a methodology that can be accurately used

to gauge an equity risk premium based on changes in capital market conditions. It is simply too short to provide meaningful information. Second, Ms. Bulkley's reliance on authorized returns on equity from 2013 to 2017 reflects a period of substantial reductions in capital market costs. As noted above, regulatory commissions have been decreasing authorized returns on equity over this time period, but they have not been authorizing returns on equity down as low as the current market cost of equity for utilities. Doing this is sound regulatory policy because it allows utilities to gradually reduce the authorized returns on equity, and provides utilities opportunities to maintain their financial integrity with reduced authorized returns on equity. This allows utilities time to refinance embedded debt costs, modify dividend payout schedules, and other means to maintain their financial integrity, and support their valuations of their equity and debt securities. However, Ms. Bulkley's use of this data as market cost of equity, rather than gradual movement toward market cost of equity, diminishes the value and accuracy of her estimates of the current market cost of equity for utilities. While the Commission may still choose to make a gradual movement down to the current market cost of equity, it is significant that Ms. Bulkley has not provided the Commission with meaningful evidence on what that market cost of equity actually is. Rather, she estimates the gradual limits on authorized returns on equity, relative to the market cost of equity that has been imposed by regulatory commissions. Had she extended her analysis over several market cycles, as I did, then such analysis would provide a more accurate estimate of the current market cost of equity for utility companies using a risk premium methodology. This analysis in turn could be used by regulatory commissions to gauge an appropriate authorized return on equity to guide them in setting rates.

1 **Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**

2 A Yes, it does.

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