Exhibit No. 215

OPC – Exhibit 215
DR 0130.0
File No. WR-2023-0344

Ex. 215

Data Response Display - WR-2023-0344 - 0130.0

Request Summary

Submission No.	WR-2023-0344
Request No.	0130.0
Requested Date	10/16/2023
Due Date	10/21/2023
Issue	Rate of Return Other Rate of Return Issues
Requested From	MO PSC Staff (Other) Casi Aslin casi.aslin@psc.mo.gov
Requested By	Office of the Public Counsel (OPC) (Other) David Murray david.murray@opc.mo.gov
Brief Description	Staff's ROR Methodology
Description	On page 5, lines 5 – 6 of his direct testimony, Mr. Jennings testifies that he employed Staff's "Small Utility ROR Methodology." Please provide a copy of Staff's "Small Utility ROR Methodology."
Request Security	Public (DR)

Response Date	10/17/2023
Response	Please see attached for response. Data Request Response provided by Randall Jennings (randall.jennings@psc.mo.gov).
Objections	
Response Security	Public (DR)
Rationale	

Attachments

Name	Size	Security
DR 0130.0 Staff Response.pdf	1,654.45 KB	Public (DR)

Total: 1 file(s), 1,654.45 KB

Small Utility

Return on Equity (ROE)/Rate of Return (ROR)

Methodology

Prepared by

Financial Analysis Department
(Shana Griffin, Zephania Marevangepo and David Murray)
Utility Services Division
Missouri Public Service Commission
September 2010
(updated January 2016)

Financial Analysis Small Water and Sewer Return on Equity (ROE) Determination

Financial Analysis' (FA) small water and sewer (W&S) procedure is based on the basic risk and return principle that investors should require a return on equity (ROE) that is higher than a current market-implied yield on a debt investment in the same company (the current required return on debt is not the same as an embedded cost of a debt to a company in which the required return on those debt instruments was based on the risk and return environment at that time). Because FA's methodology uses current cost of debt information to estimate a current required ROE, this allows estimates for small water and sewer companies to be responsive, current and specific. FA's procedure is based on a generic risk premium estimate observed in US capital markets.[1] Staff applies this "standard" risk premium to a reasonable estimate of the current cost of debt for the subject company to arrive at an estimated cost of equity. Because small water and sewer companies typically don't issue debt that is actively traded, FA must rely on its estimate of the subject company's credit rating and then determine a recent average cost of utility debt for this rating based on public utility bond yield data published in the Mergent Bond Record.[2] The Department then adds the "standard" risk premium to this current cost of debt to estimate the cost of common equity. These capital costs are then applied to the appropriate weights in the recommended capital structure to estimate a fair and reasonable rate of return.

Recommended Formula:

Recommended Return on Common Equity = Moody's Public Utility Bond Yield[3] average of the past three months from Mergent + 3-4% risk premium.

This formula is based on the bond yield risk premium method for estimating the cost of equity. According to the textbook *Analysis of Equity Investments: Valuation* (2002) by John D. Stowe, Thomas R. Robinson, Jerald E. Pinto and Dennis W. McLeavey (used as part of the curriculum in the Chartered Financial Analyst Program), a typical risk premium added to the yield-to-maturity (YTM) of a company's long-term debt is in the 3 to 4 percent range. For purposes of estimating the cost of common equity for Missouri's larger electric, gas and water utilities, FA believes at least the low end of this risk premium range is appropriate considering publicly-traded utility stocks exhibit investment characteristics very similar to bonds. Consequently, the low end of the risk premium estimate will be considered for companies that are not privately held or are

[1] John D. Stowe, Thomas R. Robinson, Jerald E. Pinto and Dennis W. McLeavey, *Analysis of Equity Investments: Valuation,* 2002, p. 54.

[2] Staff had been using Bondsonline, but as of August 2015, BondsOnline reduced the amount and specificity of utility bond yield data it reports. Staff had used Moody's public utility bond yields before subscribing to BondOnline. Because Moody's public utility bond yields are widely published and relied upon by others in the utility industry, Staff is now using these yields for purposes of evaluating changes in utility capital costs. This change is the primary reason Staff was required to update the explanation of its methodology in January 2016. Staff will discuss the changes in greater detail later in this study.

[3] If Staff estimates a company's credit rating as 'BB' or 'B' then Staff uses Bank of America Merrill Lynch corporate bond yield spread information to impute the corresponding implied utility bond yield by adding/subtracting these spreads to Moody's utility bond yield data.

subsidiaries of publicly-traded parent companies. However, the high end of the risk premium estimate may be used for privately owned small water and sewer companies that are not considered to be marketable from an acquisition standpoint.

Estimated Bond Rating:

In order to estimate the cost of debt for the subject company (assuming there is no current reasonable yield on the subject company's cost of debt), FA must estimate the credit rating of the subject company. FA's estimate of the subject company's credit rating will be restricted to credit ratings within the range of 'AAA' to 'B'. Because most regulated small water and sewer companies in Missouri do not issue debt either directly or indirectly (through a parent company), they do not have a published credit rating. Therefore, in such cases FA will use Standard & Poor's (S&P) corporate rating methodology as a guide to estimate the small water and sewer utility's credit rating. This guide allows FA to estimate a credit rating based on an assessment of the business and financial risks of the small water and sewer utility.

On November 19, 2013, S&P published its revised Corporate Ratings Methodology, which superseded its previous utility ratings' methodology, published on May 27, 2009. Because the May 27, 2009 report provided guidance on typical capital structures for the various rating categories and since capital structure is a key input in developing a rate of return recommendation, Staff will continue to use S&P's corporate rating methodology that was published on May 27, 2009 as a supplemental guide.[4] In the 2009 methodology, the "debt/ capital' ratio was a core financial ratio used to determine a subject company's Financial Risk Profile (FRP). S&P's updated (November 19, 2013) FRP assignment approach relies primarily on cash flow leverage ratios rather than the "debt/ capital" ratio as a core FRP determinant.

In light of the inherent subjectivity in estimating a credit rating, coupled, with insufficient financial data and/or unaudited/unreliable financial statements typically received from small water and sewer companies during discovery, FA believes relying on the simple and straight-forward "debt/ capital" ratio for purposes of assessing an appropriate "FRP" is the most objective, and consequently, fair and reasonable approach. However, if there is compelling conflicting financial information that would imply a different FRP than the benchmark using only the debt/capital ratio, FA will consider this information.

Based on S&P data available for the water companies it rates, these companies have a FRP no lower than "Aggressive" and business risk profiles ("BRP") of "Excellent."[5] Although S&P assigns an "Excellent" BRP to all of the water and sewer companies it rates, Staff believes that due to the fact that some small water and sewer companies have trouble receiving debt financing, this should be considered in assigning BRPs for purposes of estimating the cost of equity for small water and sewer companies. Staff will determine the BRP of a company by assessing the company's access or potential access to debt capital. If a company proves to Staff that they cannot obtain a loan or the company can obtain a loan but has to pledge personal assets in order to do so,

[4] Staff's first edition of this "Small Utility ROE/ROR Methodology" was based on S&P's corporate rating methodology that was published on May 27, 2009.

[5] "Excellent" is considered to be the least risky of all of S&P's business risk profiles.

then Staff would classify the company's BRP as "Satisfactory." If the company can obtain a commercial loan without having to pledge personal assets, then Staff would classify the company as having a "Strong" BRP. If a company or its parent can issue debt directly to capital providers, then Staff would classify the company as having an "Excellent" BRP. The FRP of a company will be estimated by determining the company's "debt/capital" ratio and comparing it to the following S&P's benchmark ratios:

Financial Risk Indicative Ratios (Corporates)

	Debt/Capital (%)
Minimal	less than 25
Modest	25-35
Intermediate	35-45
Significant	45-50
Aggressive	50-60
Highly Leveraged	greater than 60

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Based on S&P's credit rating methodology, a subject company's BRP and FRP are combined to determine a credit rating which can range from "AAA" to "B-". Unfortunately, starting August 2015 BondsOnline (the source FA had used for utility bond yield information) ceased the comprehensive publication of debt yields for securities with a rating of greater than "A" and less than "BBB". As a result, Staff is now using Moody's public utility bond yields for purposes of evaluating changes in utility capital costs.

Moody's coverage also has a data limitation problem as it does not publish bond yields for securities with a rating of greater than "AA" and less than "BBB." Therefore, in cases in which Staff estimates a credit rating lower than a "BBB" rating, Staff will use the appropriate Bank of America Merrill Lynch corporate bond spread data which is readily available on the Federal Reserve Bank of St. Louis' website[7] to extrapolate the utility bond yield for those respective categories. For example, if Staff estimated a subject company to have a 'B' rating, Staff would take the most recent 3 month average spread between 'BBB' corporate bond yields and 'B' corporate bond yields and add it to the 'BBB' Moody's public utility bond yield published in the Mergent Bond Record to impute the 'B' utility bond yield.

See the attached matrix that shows the indicated bond rating Staff will use based on the intersection of the BRP and the FRP.

Capital Structure Determination:

[6] S&P RatingsDirect, May 27, 2009, "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded" (Attachment A).

[7] https://research.stlouisfed.org/

In situations in which a small water and sewer utility has debt capital in excess of 75%, FA believes it is appropriate to use a hypothetical capital structure that limits debt to 75% of total capital. Although it could be argued that Staff should also use a hypothetical capital structure if a company's capital structure is not cost efficient due to a high equity ratio, FA decided not to limit the amount of equity in the capital structure. If a company shows that its capital structure consists of more than 75% debt, then a hypothetical capital structure of 75% debt and 25% equity will be assumed. For all situations wherein a small water and sewer company has debt capital less than 75%, the company's actual capital structure will be used in determining the company's ROR. In all situations, Staff will evaluate whether the actual cost of debt seems reasonable for the given rating used to estimate the cost of equity. If not reasonable, then Staff may use a hypothetical cost of debt.

FA will rely on the company's financial statements to estimate the ratemaking capital structure if these financial statements provide an accurate and reliable representation of the capital that supports the company's investment in the utility's assets. However, if a company's rate base is not consistent with the carrying value of the assets in the financial statements, Staff will impute the capital structure by subtracting the amount of debt from rate base to estimate the amount of equity in the capital structure.

Cost of Common Equity:

FA recognizes that the estimation of the cost of common equity for a utility is not an exact science. Therefore, FA will recommend a reasonable ROE range based on the specific circumstances of each case. For example, absent specific circumstances, FA usually recommends an ROE range of no more than 100 basis points in major rate cases. Staff may recommend the higher end of its range if the company is privately held and not marketable. Staff may recommend the low end of its range if the water and sewer operations are owned by a larger parent company that is publicly-traded or the company is considered to be marketable from an acquisition perspective.

Receivership Cases:

Due to the uncertainty of how utility systems in receivership are or will be capitalized after the systems are no longer under the control of the receiver, Staff will use a hypothetical capital structure and rate of return in such situations. However, the intent of allowing a rate of return for utility operations in receivership is not to allow monies to be distributed to any owners and/or receivers.

Disclaimer:

This procedure may be subject to change at any time based on Staff's research on other approaches to address small water and sewer ROE recommendations and the availability

of additional and/or better resources that may allow for improvement to the determination of appropriate rates of return for small water and sewer.

Case Examples for WACC Recommendation Using an Actual Capital Structure and a Hypothetical Capital Structure

Actual Capital Structure Example:

Test year of Dec. 31, 200X for this case indicates the following regarding capital structure:

XYZ Sewer Systems, Inc.
12/31/20XX

Common Stock	$102,000	51%
Debt	$98,000	49%
Total Capital	$200,000	100%

Most of the time the amount of common stock will be broken down by par value of common stock, other paid in capital and retained earnings. One should make sure to include all components of common equity in this balance.

The weighted cost of debt is as follows:

Debt Issuance	Amount	Cost	Percent	Weighted Cost of Debt
N/P United Bank of Union	$55,000	6.25%	56.12%	3.51%
N/P Jane Doe Corp.	$25,000	5.50%	25.51%	1.40%
N/P Doe Construction, Inc.	$18,000	5.50%	18.37%	1.01%
	$98,000		**100.00%**	**5.92%**

Based on the S&P ratings matrix the company has a "Significant" FRP; and based on the company's ability to obtain a commercial loan from United Bank of Union, the BRP is considered "Strong". Based on Staff's determination of a "Significant" FRP and a "Strong" BRP, XYZ Sewer Systems credit profile is indicative of a 'BBB' rating as shown in the attached matrix.

Now that we have an estimated credit rating we need to determine a current yield on debt of the same rating. Staff currently uses Moody's public utility bond yields for at least the base starting yield. Because yields can fluctuate from month-to-month, Staff believes it is appropriate to use a 3-month average yield.

Although the following example is only based on the debt yield for one month, September 2015, simply use the same methodology for the other two months and average the 3 yields to determine the appropriate reference yield.

Based on the methodology discussed above, the risk premium would be added to the reference yield consistent with a 'BBB' rating. The Moody's BBB utility bond yield for September 2015 was 5.42%. Because the company is a privately-owned enterprise that doesn't issue its own debt or its parent company doesn't issue debt, you add a 4% risk premium to arrive at a cost of equity recommendation of 9.42%(see table below). The rate of return is as follows:

XYZ Sewer Systems, Inc.
Cost of Capital as of 12/31/201X

Capital Component	Amount	%Capital	Cost	Weighted Cost
Common equity	$102,000	51.00%	9.42%	4.80%
Long-term debt	$ 98,000	49.00%	5.92%	2.90%
	$200,000	100.00%		7.70%

Hypothetical Capital Structure Example:

ABC Water & Sewer Company is a company that is in receivership.

A hypothetical capital structure based on the proxy group capital structure from the most recent Missouri American Water Company (MAWC) case will be used. The hypothetical capital structure is as follows:

ABC Water & Sewer Company

Common Stock	49.75%
Debt	50.25%
Total Capital	100%

The most recent MAWC case was Case No. WR-2011-0337. The proxy group capital structure in that case was 49.75% common equity and 50.25% debt.

Based on the S&P ratings matrix, the hypothetical capital structure presents an "Aggressive" FRP. The company is also viewed as having a "Satisfactory" BRP due to its inability to access commercial loan(s). Based on Staff's determination of an "Aggressive" FRP and a "Satisfactory" BRP, ABC Water & Sewer Company's credit profile is indicative of a 'BB' rating as shown in the attached matrix.

Because Moody's does not publish utility bond yield data for 'BB' rated bonds, Staff will use the spread between a 'BBB' corporate bond and a 'BB' corporate bond[8] and apply the spread to the 'BBB' rated Moody's utility bond yield data to impute the 'BB' rated bond yield average. Because yields can fluctuate from month-to-month, Staff believes it is appropriate to use a 3-month average yield.

Although the following example is only based on the debt yield for one month, September 2015, simply use the same methodology for the other two months and average the 3 yields to determine the appropriate reference yield.

The September 2015 Bank of America Merrill Lynch BBB and BB Corporate Bond yields were 4.07% and 5.65%, respectively. This equals a spread of 1.58%.

Based on the methodology discussed above, the risk premium and the spread between BBB and BB corporate bond yields would be added to the reference yield consistent with a 'BBB' rating to impute the 'BB' rated utility bond yield. The BBB Moody's public utility bond yield was 5.42% as of September 2015. We then add the 158 basis point spread between BBB and BB BAML corporate bond yields to estimate a BB utility bond yield of 7.00% (see table below). Because the company is a privately-owned enterprise that doesn't issue its own debt or its parent company doesn't issue debt, you add a 4% risk premium to arrive at a cost of equity recommendation of 11.00%. The rate of return recommendation based on the hypothetical capital structure of 75% debt and 25% equity is as follows:

ABC Water & Sewer Company
Hypothetical Cost of Capital

Capital Component	%Capital	Cost	Weighted Cost
Common equity	49.75%	11.00%	5.47%
Long-term debt	50.25%	7.00%	3.52%
	100.00%		8.99%

[8] Corporate bond spread data can be found at the Federal Reserve Bank of St. Louis' website: https://research.stlouisfed.org/

Table 1

Business And Financial Risk Profile Matrix

Business Risk Profile	--Financial Risk Profile--						
	Minimal	**Modest**	**Intermediate**	**Significant**	**Aggressive**	**Highly Leveraged**	
	<25%	*25-35%*	*35-45%*	*45-50%*	*50-60%*	*> 60%*	*Debt/Capital*
Excellent	AAA	AA	A	A	BBB	--	
Strong	AA	A	A	BBB	BB	BB	
Satisfactory	A	BBB	BBB	BB	BB	B	
Fair	--	BBB	BB	BB	BB	B	
Weak	--	--	BB	BB	B	B	
Vulnerable	--	--	--	B	B	CCC	

Note: These rating outcomes are general ratings as compared to S&P's actual matrix rating outcomes that have outcomes with specific notches. Staff is using more general outcomes based on S&P's Business and Financial Risk Profile Matrix because Staff's source for utility bond yield data, Mergent Bond Record (Moody's), does not report bond yield data for the specific notches within the rating categories.

STANDARD & POOR'S

RATINGSDIRECT®

May 27, 2009

Criteria | Corporates | General:

Criteria Methodology: Business Risk/Financial Risk Matrix Expanded

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Criteria | Corporates | General:

Criteria Methodology: Business Risk/Financial Risk Matrix Expanded

(Editor's Note: In the previous version of this article published on May 26, certain of the rating outcomes in the table 1 matrix were missated. A corrected version follows.)

Standard & Poor's Ratings Services is refining its methodology for corporate ratings related to its business risk/financial risk matrix, which we published as part of 2008 Corporate Ratings Criteria on April 15, 2008, on RatingsDirect at www.ratingsdirect.com and Standard & Poor's Web site at www.standardandpoors.com.

This article amends and supersedes the criteria as published in Corporate Ratings Criteria, page 21, and the articles listed in the "Related Articles" section at the end of this report.

This article is part of a broad series of measures announced last year to enhance our governance, analytics, dissemination of information, and investor education initiatives. These initiatives are aimed at augmenting our independence, strengthening the rating process, and increasing our transparency to better serve the global markets.

We introduced the business risk/financial risk matrix four years ago. The relationships depicted in the matrix represent an essential element of our corporate analytical methodology.

We are now expanding the matrix, by adding one category to both business and financial risks (see table 1). As a result, the matrix allows for greater differentiation regarding companies rated lower than investment grade (i.e., 'BB' and below).

Table 1

Business And Financial Risk Profile Matrix

Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	Significant	Aggressive	Highly Leveraged
Excellent	AAA	AA	A	A-	BBB	--
Strong	AA	A	A-	BBB	BB	BB-
Satisfactory	A-	BBB+	BBB	BB+	BB-	B+
Fair	--	BBB-	BB+	BB	BB-	B
Weak	--	--	BB	BB-	B+	B-
Vulnerable	--	--	--	B+	B	CCC+

These rating outcomes are shown for guidance purposes only. Actual rating should be within one notch of indicated rating outcomes.

The rating outcomes refer to issuer credit ratings. The ratings indicated in each cell of the matrix are the midpoints of a range of likely rating possibilities. This range would ordinarily span one notch above and below the indicated rating.

Business Risk/Financial Risk Framework

Our corporate analytical methodology organizes the analytical process according to a common framework, and it divides the task into several categories so that all salient issues are considered. The first categories involve fundamental business analysis; the financial analysis categories follow.

Our ratings analysis starts with the assessment of the business and competitive profile of the company. Two companies with identical financial metrics can be rated very differently, to the extent that their business challenges and prospects differ. The categories underlying our business and financial risk assessments are:

Business risk

- Country risk
- Industry risk
- Competitive position
- Profitability/Peer group comparisons

Financial risk

- Accounting
- Financial governance and policies/risk tolerance
- Cash flow adequacy
- Capital structure/asset protection
- Liquidity/short-term factors

We do not have any predetermined weights for these categories. The significance of specific factors varies from situation to situation.

Updated Matrix

We developed the matrix to make explicit the rating outcomes that are typical for various business risk/financial risk combinations. It illustrates the relationship of business and financial risk profiles to the issuer credit rating.

We tend to weight business risk slightly more than financial risk when differentiating among investment-grade ratings. Conversely, we place slightly more weight on financial risk for speculative-grade issuers (see table 1, again). There also is a subtle compounding effect when both business risk and financial risk are aligned at extremes (i.e., excellent/minimal and vulnerable/highly leveraged.)

The new, more granular version of the matrix represents a refinement--not any change in rating criteria or standards--and, consequently, holds no implications for any changes to existing ratings. However, the expanded matrix should enhance the transparency of the analytical process.

Financial Benchmarks

Table 2

Financial Risk Indicative Ratios (Corporates)

	FFO/Debt (%)	Debt/EBITDA (x)	Debt/Capital (%)
Minimal	greater than 60	less than 1.5	less than 25
Modest	45-60	1.5-2	25-35
Intermediate	30-45	2-3	35-45
Significant	20-30	3-4	45-50
Aggressive	12-20	4-5	50-60
Highly Leveraged	less than 12	greater than 5	greater than 60

How To Use The Matrix--And Its Limitations

The rating matrix indicative outcomes are what we typically observe--but are not meant to be precise indications or guarantees of future rating opinions. Positive and negative nuances in our analysis may lead to a notch higher or lower than the outcomes indicated in the various cells of the matrix.

In certain situations there may be specific, overarching risks that are outside the standard framework, e.g., a liquidity crisis, major litigation, or large acquisition. This often is the case regarding credits at the lowest end of the credit spectrum--i.e., the 'CCC' category and lower. These ratings, by definition, reflect some impending crisis or acute vulnerability, and the balanced approach that underlies the matrix framework just does not lend itself to such situations.

Similarly, some matrix cells are blank because the underlying combinations are highly unusual--and presumably would involve complicated factors and analysis.

The following hypothetical example illustrates how the tables can be used to better understand our rating process (see tables 1 and 2).

We believe that Company ABC has a satisfactory business risk profile, typical of a low investment-grade industrial issuer. If we believed its financial risk were intermediate, the expected rating outcome should be within one notch of 'BBB'. ABC's ratios of cash flow to debt (35%) and debt leverage (total debt to EBITDA of 2.5x) are indeed characteristic of intermediate financial risk.

It might be possible for Company ABC to be upgraded to the 'A' category by, for example, reducing its debt burden to the point that financial risk is viewed as minimal. Funds from operations (FFO) to debt of more than 60% and debt to EBITDA of only 1.5x would, in most cases, indicate minimal.

Conversely, ABC may choose to become more financially aggressive--perhaps it decides to reward shareholders by borrowing to repurchase its stock. It is possible that the company may fall into the 'BB' category if we view its financial risk as significant. FFO to debt of 20% and debt to EBITDA 4x would, in our view, typify the significant financial risk category.

Still, it is essential to realize that the financial benchmarks are guidelines, neither gospel nor guarantees. They can vary in nonstandard cases: For example, if a company's financial measures exhibit very little volatility, benchmarks may be somewhat more relaxed.