

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.

DOCKET NO. 20190006-WS
ORDER NO. PSC-2019-0267-PAA-WS
ISSUED: July 1, 2019

The following Commissioners participated in the disposition of this matter:

ART GRAHAM, Chairman
JULIE I. BROWN
DONALD J. POLMANN
GARY F. CLARK
ANDREW GILES FAY

NOTICE OF PROPOSED AGENCY ACTION
ORDER ESTABLISHING AUTHORIZED RANGE OF RETURNS ON
COMMON EQUITY FOR WATER AND WASTEWATER UTILITIES

BY THE COMMISSION:

NOTICE is hereby given by the Florida Public Service Commission that the action discussed herein is preliminary in nature and will become final unless a person whose interests are substantially affected files a petition for a formal proceeding, pursuant to Rule 25-22.029, Florida Administrative Code (F.A.C.).

Background

Section 367.081(4)(f), Florida Statutes (F.S.), authorizes us to establish, not less than once each year, a leverage formula to calculate a reasonable range of returns on equity (ROE) for water and wastewater (WAW) utilities. The original version of the current leverage formula methodology was established in Order No. PSC-2001-2514-FOF-WS.¹ On October 23, 2008, we held a formal hearing in Docket No. 20080006-WS to allow interested parties to provide testimony regarding the validity of the leverage formula.² Based on the record in that proceeding, we approved the 2008 leverage formula in Order No. PSC-2008-0846-FOF-WS.³ In that order,

¹Order No. PSC-2001-2514-FOF-WS, issued December 24, 2001, in Docket No. 20010006-WS, In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity of water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.

²At the May 20, 2008, Commission Conference, upon request of the Office of Public Counsel, we voted to set the establishment of the appropriate leverage formula directly for hearing.

³Order No. PSC-2008-0846-FOF-WS, issued December 31, 2008, in Docket No. 20080006-WS, In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.

we reaffirmed the methodology that was previously approved in Order No. PSC-2001-2514-FOF-WS.⁴

From 2012 through 2017, we found that the range of returns on equity derived from the annual leverage formulas were not optimal for determining the appropriate authorized ROE for WAW utilities due to Federal Reserve monetary policies that resulted in historically low interest rates. Consequently, we decided it was reasonable to continue using the range of returns on equity of 8.74 percent to 11.16 percent from the 2011 leverage formula approved by Order No. PSC-2011-0287-PAA-WS until 2018.⁵

On November 8, 2017, Commission staff held a workshop to solicit input from interested persons regarding potential changes to the current leverage formula methodology. The only stakeholders that filed comments in the docket were the Office of Public Counsel (OPC) and Utilities, Inc. of Florida (UIF). OPC also filed post-workshop comments on January 31, 2018. On June 26, 2018, we approved the current leverage formula by Order No. PSC-2018-0327-PAA-WS.⁶ The June 2018 Order approving the current leverage formula provided necessary and timely updates to the leverage formula methodology.

Section 367.081(4)(f), F.S., authorizes us to establish a range of returns for setting the authorized ROE for WAW utilities. However, use of the leverage formula by the utilities is discretionary and a utility can file cost of equity testimony in lieu of using the leverage formula. We may set an ROE for WAW utilities based on record evidence in any proceeding. If a utility files cost of equity testimony, we will determine the appropriate ROE based on the evidentiary record in that proceeding.

We have jurisdiction pursuant to Section 367.081, F.S.

Decision

The leverage formula methodology we approved in Order No. PSC-2018-0327-PAA-WS using a proxy group comprised of natural gas and WAW utilities and updated financial data shall be used until the leverage formula is addressed again in 2020:

$$\text{ROE} = 6.05 + (1.80 \div \text{Equity Ratio})$$

Where the Equity Ratio = Common Equity ÷ (Common Equity + Preferred Equity + Long-Term and Short-Term Debt)

⁴Order No. PSC-2001-2514-FOF-WS, issued December 24, 2001, in Docket No. 20010006-WS, In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.

⁵Order No. PSC-11-0287-PAA-WS, issued July 5, 2011, in Docket No. 20110006-WS, In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.

⁶Order No. PSC-2018-0327-PAA-WS, issued June 26, 2018, in Docket No. 20180006-WS, In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.

Range: 7.85% at 100% equity to 10.55% at 40% equity

The returns on common equity shall be capped at 10.55 percent for all WAW utilities with equity ratios less than 40 percent. Imposing a cap serves to discourage imprudent financial risk. This cap is consistent with the methodology in Order No. PSC-2018-0327-PAA-WS.

We are authorized pursuant to section 367.081(4)(f), F.S., to establish a leverage formula to calculate a reasonable range of returns on common equity for WAW utilities. We must establish this leverage formula not less than once a year. For administrative efficiency, the leverage formula is used to determine the appropriate return for an average Florida WAW utility. However, use of the leverage formula by utilities is discretionary and a utility can file cost of equity testimony in lieu of using the leverage formula. As is the case with other regulated companies under our jurisdiction, we have discretion in the determination of the appropriate ROE based on the evidentiary record in a proceeding. If one or more parties in a rate case or limited proceeding file testimony in lieu of using of the leverage formula, we will determine the appropriate ROE based on the evidentiary record in that proceeding.

Methodology

In the instant docket, the current leverage formula was updated using the most recent financial data applied to the methodology approved in Order No. PSC-2001-2514-FOF-WS, reaffirmed in Order No. PSC-2008-0846-FOF-WS and modified in Order No. PSC-2018-0327-PAA-WS. The methodology uses ROEs derived from widely accepted financial models applied to an index of natural gas and water and wastewater companies that have actively traded stock and forecasted financial data. To establish the proxy group, we selected 4 natural gas companies and 7 WAW companies that derive at least 50 percent of their total revenue from regulated operations and have a Standard and Poor's credit rating. These selected companies have market power and are influenced significantly by economic regulation and have a median Standard and Poor's bond rating of "A".

Consistent with the approved methodology, a market capitalization weighted average was used for: (1) the Discounted Cash Flow (DCF) model results, (2) the Beta values in the Capital Asset Pricing Model (CAPM), and (3) the equity ratio of the proxy group.

Assumed Cost Of Debt

A projected yield on Baa2 rated public utility bonds was used to estimate the bond yield of an average Florida WAW utility in the calculation of the weighted average cost of capital of the proxy group. A projected yield is used because required returns are forward looking and based on projections.

Consistent with the methodology approved in Order No. PSC-2018-0327-PAA-WS, we relied upon the projected Baa2 rated utility bond yield for the upcoming four quarters as published in the most recent Blue Chip Financial Forecast (Blue Chip). The 120-month historical average spread between the Baa and A Corporate Utility Bond was then added to the projected Baa2 rated utility bond yield to estimate a projected Baa3 rated utility bond yield of 6.05 percent.

The projected assumed Baa3 bond rate of 6.05 percent used in the updated leverage formula calculation includes a 50 basis point adjustment for small-company risk and a 50 basis point adjustment for a private placement premium and remains low relative to historic levels. In comparison, the assumed Baa3 bond rate used in the 2018 leverage formula is 6.24 percent. The lower Baa3 bond rate of 6.05 percent is the primary driver of the overall decrease in the results of the 2019 leverage formula compared to the 2018 leverage formula.

Estimated Cost Of Equity

The current leverage formula relies on two ROE models described below. The results of these models were adjusted to reflect differences in risk and debt cost between the proxy group and the average Florida WAW utility. The ROE models include a four percent adjustment for flotation costs. The ROE models are as follows:

A multistage Discounted Cash Flow (DCF) model applied to an index of natural gas and WAW utilities that have publicly traded stock and are followed by Value Line. This DCF model is an annually compounded model and uses prospective dividend growth rates as published by Value Line.

A Capital Asset Pricing Model (CAPM) that relies on a market return for companies followed by Value Line, the average projected yield on the U.S. Treasury's 30-year bonds as of May 1, 2019, published by Blue Chip Financial Forecasts, and the weighted average beta for the index of natural gas and WAW utilities. The market return for the CAPM was calculated using a quarterly DCF model with stock prices as of April 15, 2019.

Consistent with Order No. PSC-2018-0327-PAA-WS, the results of the DCF and CAPM models were added, which adjusted the result of 8.18 percent as follows:

A bond yield differential of 60 basis points was added to reflect the difference in yields between an A/A2 rated bond, which is the median bond rating for the combined utility index, and a BBB-/Baa3 rated bond. Florida WAW utilities are assumed to be comparable to companies with the lowest investment grade bond rating which is Baa3. This adjustment compensates for the difference between the credit quality of 'A' rated debt and the assumed credit quality of a typical Florida WAW utility.

A private placement premium of 50 basis points is added to reflect the difference in yields on publicly traded debt and privately placed debt, which is illiquid. Investors require a premium for the lack of liquidity of privately placed debt.

A small-utility risk premium of 50 basis points is added because the average Florida WAW utility is too small to qualify for privately placed debt and smaller companies are considered by investors to be more risky than larger companies.

After the above adjustments, the resulting cost of equity estimate of 9.78 percent is included in the weighted average capital structure of the proxy group to derive the leverage formula. The derivation resulted in an adjustment of 77 basis points to reflect an estimated

required return of 10.55 percent at an equity ratio of 40 percent. Table 1 shows the components that comprise the upper range of the leverage formula.

Table 1
Adjusted ROE

DCF Model	7.39%
CAPM	8.97%
Average	8.18%
Bond Yield Differential	0.60%
Private Placement Premium	0.50%
Small Utility Risk Premium	0.50%
Adjusted ROE Average	9.78%
Adj. To Reflect Required Equity Return at a 40% Equity Ratio	0.77%
Upper Range of ROE	10.55%

Source: FPSC Analysis

Leverage Formula

The updated leverage formula is: $ROE = 6.05\% + (1.80 \div \text{Equity Ratio})$.

The resulting range of returns is 7.85 percent at 100 percent equity to 10.55 percent at 40 percent equity.

Using the most recent financial data in the leverage formula decreases the lower end of the current allowed ROE range by 26 basis points and decreases the upper end of the range by 37 basis points. Overall, the spread between the range of returns on equity based on the updated leverage formula is 270 basis points (7.85 percent to 10.55 percent). In comparison, the range of returns on equity for the existing leverage formula from 2018 is 281 basis points (8.11 percent to 10.92 percent).

In developing the updated leverage formula, we acknowledge that the leverage formula depends on four basic assumptions:

- 1) Business risk is similar for all WAW utilities;
- 2) The cost of equity is an exponential function of the equity ratio but a linear function of the debt to equity ratio over the relevant range;
- 3) The marginal weighted average cost of investor capital is constant over the equity ratio range of 40 percent to 100 percent; and
- 4) The debt cost rate at an assumed Moody's Baa3 bond rating, plus a 50 basis point private placement premium and a 50 basis point small-utility risk premium,

represents the average marginal cost of debt to an average Florida WAW utility over an equity ratio range of 40 percent to 100 percent.

For these reasons, we find the leverage formula to be appropriate for the average Florida WAW utility.

Conclusion

For these reasons, we find that the revised leverage formula methodology applied to a proxy group of natural gas and WAW utilities with updated financial data based on market-capitalization weighted averages produces a reasonable range of ROEs for WAW utilities and reflects current financial markets. As such, we approve the following leverage formula for use until a new leverage formula is determined in 2020 :

$$\text{ROE} = 6.05\% + (1.80 \div \text{Equity Ratio})$$

Where the Equity Ratio = Common Equity \div (Common Equity + Preferred Equity + Long-Term and Short-Term Debt).

The appropriate range of returns on equity is 7.85% at 100% equity to 10.55% at 40% equity.

Additionally, the returns on common equity are capped at 10.55 percent for all WAW utilities with equity ratios less than 40 percent. The cap discourages imprudent financial risk. This cap is consistent with our methodology in Order No. PSC-2018-0327-PAA-WS.

Based on the foregoing, it is

ORDERED by the Florida Public Service Commission that the leverage formula methodology approved in Order No. PSC-2018-0327-PAA-WS using a proxy group comprised of natural gas and WAW utilities and updated financial data shall be used. It is further

ORDERED that the approved leverage formula shall be used until the leverage formula is addressed again in 2020. It is further

ORDERED that the Return on Common Equity = 6.05 + (1.80 \div Equity Ratio). It is further

ORDERED that where the Equity Ratio = Common Equity \div (Common Equity + Preferred Equity + Long-Term and Short-Term Debt). It is further

ORDERED that the current range of returns on common equity of 7.85 percent to 10.55 percent is approved for water and wastewater utilities as set forth in this Order. It is further

ORDERED that the returns on common equity shall be capped at 10.55 percent for all water and wastewater utilities with equity ratios less than 40 percent. It is further

ORDERED that this docket shall remain open to allow Commission staff to monitor changes in capital market conditions and to readdress the reasonableness of the leverage formula as conditions warrant.

By ORDER of the Florida Public Service Commission this 1st day of July, 2019.



ADAM J. TEITZMAN
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Copies furnished: A copy of this document is provided to the parties of record at the time of issuance and, if applicable, interested persons.

WLT

NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing that is available under Section 120.57, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing will be granted or result in the relief sought.

Mediation may be available on a case-by-case basis. If mediation is conducted, it does not affect a substantially interested person's right to a hearing.

The action proposed herein is preliminary in nature. Any person whose substantial interests are affected by the action proposed by this order may file a petition for a formal proceeding, in the form provided by Rule 28-106.201, Florida Administrative Code. This petition must be received by the Office of Commission Clerk, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, by the close of business on July 22, 2019.

In the absence of such a petition, this order shall become final and effective upon the issuance of a Consummating Order.

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In the absence of such a petition, this order shall become final and effective upon the issuance of a Consummating Order.

Any objection or protest filed in this/these docket(s) before the issuance date of this order is considered abandoned unless it satisfies the foregoing conditions and is renewed within the specified protest period.

SUMMARY OF RESULTS
2019 Water and Wastewater Leverage Formula

	Updated <u>Results</u>	Currently <u>In Effect</u>
(A) DCF ROE for Combined Index	7.39%	7.69%
(B) CAPM ROE for Combined Index	<u>8.97%</u>	<u>9.49%</u>
AVERAGE	8.18%	8.59%
Bond Yield Differential	0.60%	0.64%
Private Placement Premium	0.50%	0.50%
Small-Utility Risk Premium	0.50%	0.50%
Adjustment to Reflect Required Equity		
Return at a 40% Equity Ratio	<u>0.77%</u>	<u>0.85%</u>
Cost of Equity for Average Florida	<u>10.55%</u>	<u>11.08%</u>
WAW Utility at 40% Equity Ratio		

2018 Leverage Formula (Currently in Effect)

Return on Common Equity = 6.24% + (1.61 ÷ Equity Ratio)

Range of Returns on Equity = 8.18% to 11.08%

2019 Leverage Formula

Return on Common Equity = 6.05% + (1.80 ÷ Equity Ratio)

Range of Returns on Equity = 7.85% to 10.55%

Marginal Cost of Investor Capital
Average Water and Wastewater Utility

<u>Capital Component</u>	<u>Ratio</u>	<u>Marginal Cost Rate</u>	<u>Weighted Marginal Cost Rate</u>
Common Equity	48.22%	9.78%	4.72%
Total Debt	<u>51.78%</u>	6.05%*	<u>3.13%</u>
	100.00%		7.85%

A 40% equity ratio is the floor for calculating the required return on common equity.
 The return on equity at a 40% equity ratio: $6.05\% + (1.80 \div 0.40) = 10.55\%$

Marginal Cost of Investor Capital
Average Water and Wastewater Utility at 40% Equity Ratio

<u>Capital Component</u>	<u>Ratio</u>	<u>Marginal Cost Rate</u>	<u>Weighted Marginal Cost Rate</u>
Common Equity	40.00%	10.55%	4.22%
Total Debt	<u>60.00%</u>	6.05%*	<u>3.63%</u>
	100.00%		7.85%

Where: ER = Equity Ratio = CE / (CE + Pref. Equity + LTD+ STD)

*Assumed Baa3 rate for April 2019 plus a 50 basis point private placement premium and a 50 basis point small utility risk premium.

Sources:

Value Line Selection and Opinion

Company 10-K Filings

Discounted Cash Flow Model Results
April 1, 2019 - April 30, 2019

COMPANY	HI-PR	LO-PR	AVG-PR ^[1]	DCF Results	WEIGHT ^[3]	Weighted DCF RESULTS ^[4]
Atmos Energy Corporation	102.97	98.66	96.78	7.49%	20.76%	1.56%
Northwest Natural Gas Company	67.56	63.48	62.90	7.44%	3.46%	0.26%
ONE Gas, Inc.	88.97	85.45	83.72	7.11%	8.01%	0.57%
Spire Inc.	84.54	80.53	79.23	7.74%	7.10%	0.55%
American States Water	71.50	67.52	66.73	7.43%	4.73%	0.35%
American Water Works	108.23	101.92	100.87	7.05%	34.05%	2.40%
Aqua America	39.08	34.79	35.46	7.79%	11.83%	0.92%
California Water Service Group	54.56	48.00	49.23	7.43%	4.55%	0.34%
Middlesex Water	58.14	52.51	53.11	8.72%	1.64%	0.14%
SJW Group	62.65	59.10	58.44	7.49%	3.10%	0.23%
York Water	34.55	32.29	32.08	8.54%	0.77%	0.07%
Average Weighted DCF Result:						<u>7.39%</u>

The ROE of 7.39 percent represents the expected cost of equity required to match the average stock price with the present value of expected cash flows.

Sources:

Stock prices obtained from Yahoo Finance for the 30-day period April 1, 2019 through April 30, 2019

Natural Gas (NG) company dividends, earnings, and ROE obtained from Value Line Ratings & Reports issued March 1, 2019

Water and Wastewater (WAW) company dividends, earnings and ROE obtained from Value Line Ratings & Reports issued April 12, 2019

Notes:

^[1] Average Stock Prices include four percent flotation cost

^[3] Company's weight based off of Market Cap

^[4] Company's DCF results are weighted against their Market Cap Weight

**Capital Asset Pricing Model Cost of Equity for
Water and Wastewater Industry**

CAPM analysis formula

K = RF + Beta (MR-RF)

K = Investor's required rate of return

RF = Risk-free rate (Blue Chip forecast for Long-term Treasury bond)

Beta = Measure of industry-specific risk market cap weighted (Average for natural gas and water utilities followed by Value Line)

MR = Market return (Value Line Investment Analyzer Web Browser)

$$8.97 \% = 3.10 \% + 0.64 (12.02 \% - 3.10 \%) + 0.20\%$$

Note:

The market return was calculated using a quarterly DCF model for a large number of dividend paying stocks followed by Value Line. As of April 15, 2019, the result was 12.02%. 20 basis points were added to the CAPM result to account for a flotation cost of four percent.

Bond Yield for Water and Wastewater Industry

Credit Rating	<u>Equity Bond Yield Differential</u>					
	(A)	Spread	(A-)	Spread (BBB+)	Spread (BBB)	Spread (BBB-)
		0.15		0.15	0.15	0.15
120 - Month Average Spread		0.150654				
Total Equity Bond Yield Differential		0.151 x 4 = 0.604%				

Blue Chip Financial Forecasts - Corporate Baa Bond Rate

	2Q 2019	3Q 2019	4Q 2019	1Q 2020
Forecast Corporate Baa Bond	4.80	4.90	4.90	5.00
Average Forecasted Corporate Baa Bond Rate:	4.90			

Assumed Bond Yield for Baa3 Utilities: 4.90 + 0.151 = 5.051

	Updated	Currently
	<u>Results</u>	<u>In Effect</u>
Private Placement Premium	0.50%	0.50%
Small-Utility Risk Premium	0.50%	0.50%
Assumed Bond Yield for Baa3 Utilities	<u>5.05%</u>	<u>5.24%</u>
Assumed Bond Yield for Florida WAW Utilities	<u>6.05%</u>	<u>6.24%</u>

Sources:

Value Line Selection and Opinion

Blue Chip Financial Forecast May 2019

2019 Leverage Formula Proxy Group

<u>Company</u>	<u>S & P Bond Rating</u>	<u>Regulated Revenue</u>	<u>V/L Market Capital (Millions)</u>	<u>Equity Ratio</u>	<u>Weighted Equity Ratio</u>	<u>Weighted Value Line Beta</u>
Atmos Energy Corporation	A	96.39%	\$ 11,400	56.69%	11.77%	0.12
Northwest Natural Gas Company	A-	96.39%	\$ 1,900	44.43%	1.54%	0.02
ONE Gas, Inc.	A	100.00%	\$ 4,400	50.58%	4.05%	0.05
Spire Inc.	BBB+	96.10%	\$ 3,900	47.59%	3.38%	0.05
American States Water	BBB-	75.46%	\$ 2,600	63.46%	3.00%	0.03
American Water Works	A	86.74%	\$ 8,700	40.51%	13.79%	0.20
Aqua America	A	99.59%	\$ 6,500	45.22%	5.35%	0.08
California Water Service Group	A+	94.09%	\$ 2,500	45.35%	2.06%	0.03
Middlesex Water	A	88.28%	\$ 900	54.38%	0.89%	0.01
SJW Group	A	96.72%	\$ 1,700	62.60%	1.94%	0.02
York Water	A-	100.00%	\$ 425	57.22%	0.44%	0.01
Average	A	93.61%	\$ 4,993.18	51.64%	48.22%	0.64

Sources:
Value Line Ratings and Reports
S.E.C. Form 10K for
Companies
Standard & Poor's