

State of Florida



Public Service Commission

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COMMISSION CLERK

DATE: May 2, 2013

TO: Office of Commission Clerk (Cole)

FROM: Division of Accounting and Finance (Buys, Cicchetti, Makki, Prestwood)
Office of the General Counsel (Klancke) *DB MC KM CPJ CREW*

RE: Docket No. 130006-WS – 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.

AGENDA: 05/14/13 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Balbis

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\AFD\WP\130006.RCM.DOC

Case Background

Section 367.081(4)(f), Florida Statutes (F.S.), authorizes the Commission 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 leverage formula methodology currently in use was established in Order No. PSC-01-2514-FOF-WS.¹ On October 23, 2008, the Commission held a formal hearing in Docket No. 080006-WS to allow interested parties to

¹ See Order No. PSC-01-2514-FOF-WS, issued December 24, 2001, in Docket No. 010006-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.

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provide testimony regarding the validity of the leverage formula.² Based on the record in that proceeding, the Commission approved the 2008 leverage formula in Order No. PSC-08-0846-FOF-WS.³ In that order, the Commission reaffirmed the methodology that was previously approved in Order No. PSC-01-2514-FOF-WS. In 2011, the Commission approved the leverage formula currently in effect by Order No. PSC-11-0287-PAA-WS.⁴

Staff continues to use the leverage formula methodology established in Order No. PSC-01-2514-FOF-WS and reaffirmed in Order No. PSC-08-0846-FOF-WS. This methodology uses ROEs derived from financial models applied to an index of natural gas utilities. Based on the results of staff's annual review, there is an insufficient number of WAW utilities that meet the requisite criteria to assemble an appropriate proxy group. Therefore, since 2001, the Commission has used natural gas utilities as the proxy companies for the leverage formula. There are many natural gas utilities that have actively traded stocks and forecasted financial data. Staff uses natural gas utilities that derive at least 50 percent of their revenue from regulated rates. These utilities have market power and are influenced significantly by economic regulation. As explained below, the model results based on natural gas utilities are adjusted to reflect the risks faced by Florida WAW utilities.

Although Section 367.081(4)(f), F.S., authorizes the Commission to establish a range of returns for setting the authorized ROE for WAW utilities, the Commission may set an ROE for WAW utilities based on record evidence in any proceeding. If one or more parties file testimony in opposition to the use of the leverage formula, the Commission will determine the appropriate ROE based on the evidentiary record in that proceeding.

The Commission has jurisdiction pursuant to Section 367.081, F.S.

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

³ See Order No. PSC-08-0846-FOF-WS, issued December 31, 2008, in Docket No. 080006-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.

⁴ See Order No. PSC-11-0287-PAA-WS, issued July 5, 2011, in Docket No. 110006-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.

Discussion of Issues

Issue 1: What is the appropriate range of returns on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), Florida Statutes?

Recommendation: Staff recommends that the current 2011 leverage formula authorized by the Commission in Order No. PSC-12-0339-PAA-WS continue to be used until the leverage formula is readdressed in 2014. Accordingly, staff recommends the following leverage formula:

$$\text{Return on Common Equity} = 7.13\% + (1.610 \div \text{Equity Ratio})$$

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

$$\text{Range: } 8.74\% @ 100\% \text{ equity to } 11.16\% @ 40\% \text{ equity}$$

Additionally, staff recommends that the Commission cap returns on common equity at 11.16 percent for all WAW utilities with equity ratios less than 40 percent. Staff believes that this will discourage imprudent financial risk. This cap is consistent with the methodology in Order No. PSC-08-0846-FOF-WS.

(Buys, Makki)

Staff Analysis: Section 367.081(4)(f), F.S., authorizes the Commission to establish a leverage formula to calculate a reasonable range of returns on common equity for WAW utilities. The Commission must establish this leverage formula not less than once a year.

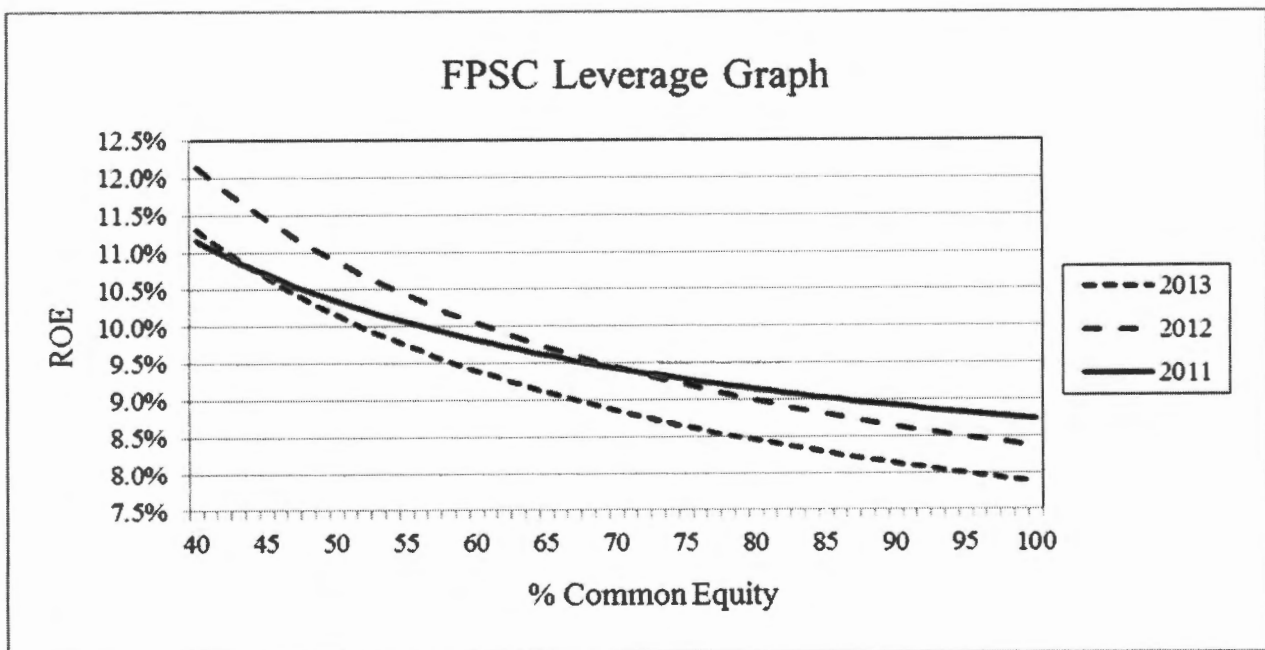
In last year's leverage formula docket the Commission approved staff's recommendation to continue to use the 2011 leverage formula until the leverage formula is readdressed in 2013. The Commission kept the 2011 leverage formula in place because federal policies had lowered interest rates to historically low rates, thereby increasing the slope of the leverage formula graph relative to previous years. The economic conditions recognized by the Commission in 2012 continue to persist in 2013.

In the instant docket, staff updated the leverage formula using current 2013 financial information and the Commission approved methodology. The range of returns for the 2013 leverage formula is comparable to the 2011 leverage formula currently in effect. However, the updated 2013 leverage formula decreases the lower end of the allowed return on equity range by 86 basis points while increasing the upper end of the range by 13 basis points. This results in a spread of 342 basis points (7.88 percent to 11.29 percent) for the allowed return on common equity for WAW utilities. Last year's leverage formula resulted in a spread of 378 basis points (8.36 percent to 12.14 percent). This was the largest spread for the allowed return on common equity for WAW utilities in the approximately 30 years the leverage formula has been in use in Florida. In comparison, the spread of the range of returns for the 2011 leverage formula is 242 basis points.

While the spread of the range of returns has narrowed from last year's leverage formula result, the slope of the 2013 leverage formula graph is very similar to 2012's result. This is caused by the very low bond rates resulting from the Federal Reserve Board's various quantitative easing programs, which are still in effect. The Federal Reserve Board's quantitative easing programs have lowered interest rates and bond yields to historically low levels. The Baa3 bond rate of 5.60 percent, which includes a 50 basis point adjustment for small company risk and a 50 basis point adjustment for a private placement premium, is even lower than the Baa3 bond rate of 5.84 percent in 2012, which was the lowest since the inception of the Commission's leverage formula in 1982.

In addition, the overall weighted cost of capital for the proxy group used in the leverage formula model declined 86 basis points from 2011 to 2013 (8.74 percent versus 7.88 percent), yet the upper end of the required ROE in the leverage formula increased 13 basis points (11.29 percent versus 11.16 percent). Staff believes a decrease in the overall weighted cost of capital coupled with a decline in the cost of debt to historically low levels while the cost of equity increases is anomalous. Because federal policies have lowered interest rates thereby increasing the slope of the leverage formula relative to previous years, staff believes the range of returns produced from the updated 2013 leverage formula is not optimal for determining the appropriate authorized ROE for WAW utilities at this time. An increase in the slope of the leverage formula means a given change in the equity ratio will result in a greater change to the cost of equity. Chart 1 illustrates the change in the slope of the leverage formula for the three years 2011 through 2013.

Chart 1



In staff's opinion, the 2011 leverage formula range of 8.74 percent to 11.16 percent is still reasonable for WAW utilities. Therefore, staff recommends that the current leverage formula continue to be used for determining the return on equity for WAW utilities. Staff believes retaining the use of the current in-place leverage formula until the leverage formula is addressed again in 2014 is a reasonable alternative to updating the formula using current 2013 financial information.

In 2012, the Commission voted to continue to use the 2011 leverage formula. In Order No. PSC-12-0339-PAA-WS, the Commission found that the updated 2012 leverage formula is not optimal for determining the appropriate authorized ROE for WAW utilities. The Commission found that the range of returns of 8.74 percent to 11.16 percent from the 2011 leverage formula appears to be more reasonable for determining the ROE for WAW utilities than the 2012 leverage formula and was the best alternative until the leverage formula is readdressed in 2013. Additionally, in 1996, the staff recommended, and the Commission voted, to continue to base the authorized ROE for WAW utilities on leverage formula instituted in 1995.⁵ In Order No. PSC-96-0729-FOF-WS, the Commission found that the leverage formula range of returns from the prior year were still reasonable and found it appropriate to continue to base the authorized range of returns on common equity for WAW utilities on the leverage formula from the prior year.

Staff continues to believe the leverage formula is a sound, workable methodology that reduces the costs and administrative burdens in WAW rate cases by eliminating the need for cost of equity testimony. Many of the WAW utilities under the Commission's jurisdiction are small operations that find it beneficial to avoid the costs associated with presenting cost of equity testimony.

Although staff recommends the current 2011 leverage formula should remain in place, staff has provided the updated 2013 leverage formula using the most recent financial information should the Commission decide to not continue to use the 2011 leverage formula and approve the updated 2013 leverage formula. The updated model produced the following leverage formula:

$$\text{Return on Common Equity} = 5.60\% + (2.279 \div \text{Equity Ratio})$$

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

$$\text{Range: } 7.88\% \text{ @ } 100\% \text{ equity to } 11.29\% \text{ @ } 40\% \text{ equity}$$

In conjunction with the 2013 leverage formula, the returns on common equity should be capped at 11.29 percent for all WAW utilities with equity ratios less than 40 percent to discourage imprudent financial risk. This cap is consistent with the methodology in Order No. PSC-08-0846-FOF-WS.

⁵ See Order No. PSC-96-0729-FOF-WS, issued May 31, 1996, in Docket No. 960006-WS, In re: Annual reestablishment of authorized range of returns on common equity of water and wastewater utilities, pursuant to Section 367.081(4)(f), F.S.

In developing the updated leverage formula, staff used the same methodologies used in the 2011 docket. Staff notes 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 a Florida WAW utility over an equity ratio range of 40 percent to 100 percent.

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

The leverage formula relies on two ROE models. Staff adjusted the results of these models to reflect differences in risk and debt cost between the index of companies used in the models and the average Florida WAW utility. Both models include a four percent adjustment for flotation costs. The models are as follows:

- A Discounted Cash Flow (DCF) model applied to an index of natural gas (NG) utilities that have publicly traded stock and are followed by the Value Line Investment Survey (Value Line). This DCF model is an annual model and uses prospective growth rates.
- The index consists of eight NG companies that derive at least 50 percent of their total revenue from gas distribution service. These companies have a median Standard and Poor's bond rating of A.
- A Capital Asset Pricing Model (CAPM) using a market return for companies followed by Value Line, the average yield on the Treasury's long-term bonds projected by the Blue Chip Financial Forecasts, and the average beta for the index of NG utilities. The market return for the 2013 leverage formula was calculated using a quarterly DCF model with stock prices on April 4, 2013.

Staff averaged the indicated returns of the above models and adjusted the result as follows:

- A bond yield differential of 57 basis points is added to reflect the difference in yields between an A/A2 rated bond, which is the median bond rating for the NG 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 credit quality of the minimum investment grade rating.

- 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.

After the above adjustments, the resulting cost of equity estimate is included in the average capital structure for the NG utilities. The derivation of the leverage formula using the current methodology with updated financial information is presented in Attachment 1.

For administrative efficiency, the leverage formula is used to determine the appropriate return for an average Florida WAW utility. Traditionally, the Commission has applied the same leverage formula to all WAW utilities. As is the case with other regulated companies under the Commission’s jurisdiction, the Commission has discretion in the determination of the appropriate ROE based on the evidentiary record in any proceeding. If one or more parties file testimony in opposition to the use of the leverage formula, the Commission will determine the appropriate ROE based on the evidentiary record in that proceeding.

Based on the aforementioned, staff believes that the current range of returns on common equity of 8.74 percent to 11.16 percent is still reasonable for WAW utilities. As such, staff recommends the current leverage formula authorized by the Commission in Order No. PSC-12-12-0339-PAA-WS remain unchanged until the leverage formula is readdressed in 2014.

Docket No. 130006-WS

Date: May 2, 2013

Issue 2: Should this docket be closed?

Recommendation: No. Upon expiration of the protest period, if a timely protest is not received from a substantially affected person, the decision should become final and effective upon the issuance of a Consummating Order. However, this docket should remain open to allow staff to monitor changes in capital market conditions and to readdress the reasonableness of the leverage formula as conditions warrant. (Klanke)

Staff Analysis: Upon expiration of the protest period, if a timely protest is not received from a substantially affected person, the decision should become final and effective upon the issuance of a Consummating Order. However, this docket should remain open to allow staff to monitor changes in capital market conditions and to readdress the reasonableness of the leverage formula as conditions warrant.

SUMMARY OF LEVERAGE FORMULA RESULTS

	<u>Updated Results (2013)</u>	<u>Currently in Effect (2011)</u>
(A) DCF ROE for Natural Gas Index	8.19%	8.25%
(B) CAPM ROE for Natural Gas Index	<u>9.42%</u>	<u>9.40%</u>
AVERAGE	<u>8.80%</u>	<u>8.83%</u>
Bond Yield Differential	0.57%	0.57%
Private Placement Premium	0.50%	0.50%
Small-Utility Risk Premium	0.50%	0.50%
Adjustment to Reflect ROE at 40% Equity Ratio	<u>0.92%</u>	<u>0.76%</u>
Cost of Equity for Average Florida WAW Utility with a capital structure containing a 40% Equity Ratio	<u>11.29%</u>	<u>11.16%</u>
 <u>2011 Leverage Formula (Currently in Effect)</u>		
Return on Common Equity =	7.13% + (1.610 ÷ Equity Ratio)	
Range of Returns on Equity (100% to 40%) =	8.74% to 11.16%	
 <u>2013 Leverage Formula (Using Current Data)</u>		
Return on Common Equity =	5.60% + (2.279 ÷ Equity Ratio)	
Range of Returns on Equity (100% to 40%) =	7.88% to 11.29%	

MARGINAL COST OF INVESTOR CAPITAL
 (2013 Leverage Formula Result)

Average Marginal Cost Rate of the Natural Gas Utility Proxy Group

<u>Capital Component</u>	<u>Ratio</u>	<u>Marginal Cost Rate</u>	<u>Weighted Marginal Cost Rate</u>
Common Equity	47.71%	10.37%	4.95%
Total Debt	<u>52.29%</u>	5.60% *	<u>2.93%</u>
	100.0%		7.88%

Average Marginal Cost Rate at a 40% Equity Ratio

A 40% equity ratio is the floor for calculating the required return on common equity. The return on equity at a 40% equity ratio is $5.60\% + (2.279 \div 0.40) = 11.29\%$

<u>Capital Component</u>	<u>Ratio</u>	<u>Marginal Cost Rate</u>	<u>Weighted Marginal Cost Rate</u>
Common Equity	40.00%	11.29%	4.52%
Total Debt	<u>60.00%</u>	5.60%*	<u>3.36%</u>
	100.00%		7.88%

Common Equity Ratio = $\text{Common Equity} \div (\text{Common Equity} + \text{Preferred Equity} + \text{Long-Term Debt} + \text{Short-Term Debt})$

* Assumed Baa3 rate for March 2013 plus a 50 basis point private placement premium and a 50 basis point small utility risk premium.

Sources: Moody's Credit Perspectives and Value Line Selection and Opinion

ANNUAL DISCOUNTED CASH FLOW MODEL

NATURAL GAS UTILITY INDEX

COMPANY	DIV0	DIV1	DIV2	DIV3	DIV4	EPS4	ROE4	GR1-4	GR4+	STOCK PRICE				
										MARCH 11 - APRIL 10				
										HI-PR	LO-PR	AVG-PR		
AGL RESOURCES INC.	1.88	1.92	1.96	2.00	2.04	4.10	6.00	1.0204	1.0301	43.21	40.44	41.825		
ATMOS ENERGY CORPORATION	1.40	1.42	1.45	1.47	1.50	3.00	8.50	1.0184	1.0425	43.53	40.68	42.105		
LACLEDE GROUP, INC.	1.74	1.76	1.78	1.80	1.82	3.75	10.50	1.0112	1.0540	44.09	40.58	42.335		
NORTHWEST NATURAL GAS CO.	1.83	1.87	1.91	1.96	2.00	3.25	11.50	1.0227	1.0442	45.48	43.30	44.390		
PIEDMONT NATURAL GAS CO., INC.	1.23	1.27	1.31	1.35	1.39	1.90	11.00	1.0306	1.0295	34.70	32.45	33.575		
SOUTH JERSEY INDUSTRIES, INC.	1.82	1.98	2.13	2.28	2.45	4.50	15.50	1.0736	1.0706	57.94	54.11	56.025		
SOUTHWEST GAS CORPORATION	1.32	1.42	1.48	1.54	1.60	3.75	10.50	1.0406	1.0602	49.24	46.63	47.935		
WGL HOLDINGS, INC.	1.66	1.71	1.75	1.79	1.83	2.65	9.50	1.0229	1.0294	44.78	42.88	43.830		
AVERAGE	1.6100	1.6688	1.7198	1.7731	1.8288	3.3625	10.3750	1.0300	1.0451			44.003		
					1.9112					Stock price including a four percent flotation cost:		42.2424		
	<table border="1"> <tr> <td>Annual DCF Result:</td> <td>8.19%</td> </tr> </table>												Annual DCF Result:	8.19%
Annual DCF Result:	8.19%													
Cash Flows:	1.5017	1.4365	1.3685	1.3042	1.2475	35.3841								
Present Value of Cash Flows:	42.2424													

NOTE: The cash flows for this multi-stage DCF Model are derived using the average forecasted dividends and the near term and long term growth rates.

The discount rate equates the cash flows with the average stock price less flotation cost.

\$42.24 = Average stock price from March 11, 2013, through April 10, 2013, with a 4 percent flotation cost.

8.19% = Cost of equity required to match the current stock price with the expected cash flows.

Sources:

1. Stock Prices - Yahoo Finance.
2. DPS, EPS, ROE - Value Line Ratings and Reports issued March 8, 2013.

CAPITAL ASSET PRICING MODEL

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,
April 1, 2013)

Beta = Measure of industry-specific risk (Average for water utilities followed by
Value Line)

MR = Market return (Value Line Investment Survey For Windows, April 2013)
 $9.42\% = 3.48\% + 0.66(12.14\% - 3.48\%) + 0.20\%$

Note: Staff calculated the market return using a quarterly DCF model for a large number of dividend paying stocks followed by Value Line. For April 2013, the result was 12.14%. Staff also added 20 basis points to the CAPM result to allow for a four-percent flotation cost.

BOND YIELD DIFFERENTIALS

Public Utility Long Term Bond Yield Averages									
120 Month Average Spread		0.1422		0.1422		0.1422		0.1422	
MONTH/YEAR	A2	SPREAD	A3	SPREAD	Baa1	SPREAD	Baa2	SPREAD	Baa3
March 2013	4.110	0.115	4.225	0.115	4.340	0.115	0.455	0.115	4.570
Sources: Moody's Credit Perspectives and Value Line Selection and Opinion									

PROXY GROUP STATISTICS AND FACTS

Natural Gas Distribution Utility Companies	S&P Bond Rating	% of Gas Revenue	Value Line Market Capital (millions)	Equity Ratio	Value Line Beta
AGL Resources Inc.	BBB+	68%	\$ 4,944.02	40.91%	0.75
Atmos Energy Corporation	BBB+	62%	\$ 3,864.13	46.51%	0.70
Laclede Group, Inc.	A	56%	\$ 963.44	58.11%	0.55
Northwest Natural Gas Co.	A+	56%	\$ 1,177.27	45.39%	0.60
Piedmont Natural Gas Co., Inc.	A	100%	\$ 2,384.19	43.39%	0.65
South Jersey Industries, Inc.	BBB+	58%	\$ 1,710.84	43.27%	0.65
Southwest Gas Corporation	A-	74%	\$ 2,189.80	47.02%	0.75
WGL Holdings, Inc.	A+	51%	\$ 2,277.81	57.07%	0.65
Average:	A			47.71%	0.66

Sources:

Value Line Investment Survey for Windows April 2013
 S.E.C. Forms 10Q and 10K for proxy group companies
 AUS Utilities Report issued April 1, 2013
 Standard & Poor's RatingsDirect