

**Mr. D'Ascendis Return on Equity Recommendations and Authorized Returns on Equity**

**(June 2019 through September 2022)**

<b>Company Name</b>	<b>Case No.</b>	<b>State</b>	<b>D'Ascendis Percent Recommended ROE</b>	<b>Date Authorized</b>	<b>Percent Authorized ROE</b>	<b>Basis Points Authorized ROE Below D'Ascendis</b>
Carolina Water Service, Inc.	W-354 Sub 364	NC	10.20%	6/2019	9.50%	70
Aqua North Carolina Inc.	W-218 Sub 526	NC	10.1.%	12/2019	9.40% (1)	70
Arizona Water Company	W01445A-19-0278	AR	9.73%	12/2019	9.00%	73
Blue Granite Water	2019-290WS	SC	10.00% midpoint	12/2019	7.46%	254
Utilities Inc. Florida	20200139-WS	FL	11.75%	6/2020	9.75%	200
Aqua Virginia	PUR 8020-00106	VA	11.20%	7/2020	9.30% (1)	190
Bluegrass Water Utility	2020-00290	KY	11.80%	10/2020	9.90%	190
EPCOR Water Arizona	WS-0103A-20-0177	AZ	10.24%	2/1/2022	9.83%	41
Aquarion Water Company of New Hampshire, Inc	DW 20-184	NH	10.25%	7/29/2022	9.10% (1)	115
Launiupoko Irrigation Co., Inc.	2020-0217	HI	13.00%	Ongoing		
Utility Services of Illinois, Inc.	21-0198	IL	10.80%	12/1/2021	9.52%	128
Community Utilities of Pennsylvania, Inc.	R-2021-302507	PA	10.35%	1/13/2022	N/A (1)	

Middlesex Water Company	WR21050813	NJ	10.65%	Ongoing		
Utilities, Inc. of Louisiana	U-36003	LA	11.00%	8/4/2022	9.50% (1)	150
Aqua Ohio, Inc.	21-0595-WW-AIR	OH	10.75%	9/21/2022	9.50% (1)	125
Carolina Water Service, Inc.	W-354 Sub 384	NC	10.50%	4/8/2022	9.40% (1)	110
The Maine Water Company	2021-00053	ME	10.25%	Ongoing		
Water Service Corporation of Kentucky	2022-00147	KY	10.60%	Ongoing		
Borough of Ambler - Bureau of Water	2022-3031704	PA	10.75%	11/10/2022	N/A (1)	

(1) Result is product of settlement/stipulation

## UTILITY STOCKS AND THE SIZE EFFECT: AN EMPIRICAL ANALYSIS

Annie Wong\*

### I. Introduction

The objective of this study is to examine whether the firm size effect exists in the public utility industry. Public utilities are regulated by federal, municipal, and state authorities. Every state has a public service commission with board and varying powers. Often their task is to estimate a fair rate of return to a utility's stockholders in order to determine the rates charged by the utility. The legal principles underlying rate regulation are that "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks," and that the return to a utility should be sufficient to "attract capital and maintain credit worthiness." However, difficulties arise from the ambiguous interpretation of the legal definition of *fair and reasonable rate of return* to an equity owner.

Some finance researchers have suggested that the Capital Asset Pricing Model (CAPM) should be used in rate regulation because the CAPM beta can serve as a risk measure, thus making risk comparisons possible. This approach is consistent with the spirit of a Supreme Court ruling that equity owners sharing similar level of risk should be compensated by similar rate of return.

The empirical studies of Banz (1981) and Reinganum (1981) showed that small firms tend to earn higher returns than large firms after adjusting for beta. This phenomenon leads to the proposition that firm size is a proxy for omitted risk factors in determining stock returns. Barry and Brown (1984) and Brauer (1986) suggested that the omitted risk factor could be the differential information environment between small and large firms. Their argument is based on the fact that investors often have less publicly available information to assess the future cash flows of small firms than that of large

firms. Therefore, an additional risk premium should be included to determine the appropriate rate of return to shareholders of small firms.

The samples used in prior studies are dominated by industrial firms, no one has examined the size effect in public utilities. The objective of this study is to extend the empirical findings of the existing studies by investigating whether the size effect is also present in the utility industry. The findings of this study have important implications for investors, public utility firms, and state regulatory agencies. If the size effect does exist in the utility industry, this would suggest that the size factor should be considered when the CAPM is being used to determine the fair rate of return for public utilities in regulatory proceedings.

### II. Information Environment of Public Utilities

In general, utilities differ from industrials in that utilities are heavily regulated and they follow similar accounting procedures. A public utility's financial reporting is mainly regulated by the Securities and Exchange Commission (SEC) and the Federal Energy Regulatory Commission (FERC). Under the Public Utility Holding Company Act of 1935, the SEC is empowered to regulate the holding company systems of electric and gas utilities. The Act requires registration of public utility holding companies with the SEC. Only under strict conditions would the purchase, sale or issuance of securities by these holding companies be permitted. The purpose of the Act is to keep the SEC and investors informed of the financial conditions of these firms. Moreover, the FERC is in charge of the interstate operations of electric and gas companies. It requires utilities to follow the accounting procedures set forth in its Uniform Systems of Accounts. In particular, electric and gas utilities must request their Certified Public Accountants to certify that certain schedules in the financial reports are in conformity with the Commission's accounting requirements. These detailed reports are submitted annually and are open to the public.

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The FERC requires public utilities to keep accurate records of revenues, operating costs, depreciation expenses, and investment in plant and equipment. Specific financial accounting standards for these purposes are also issued by the Financial Accounting Standards Board (FASB). Uniformity is required so that utilities are not subject to different accounting regulations in each of the states in which they operate. The ultimate objective is to achieve comparability in financial reporting so that factual matters are not hidden from the public view by accounting flexibility.

Other regulatory reports tend to provide additional financial information about utilities. For example, utilities are required to file the FERC Form No. 1 with the state commission. This form is designed for state commissions to collect financial and operational information about utilities, and serves as a source for statistical reports published by state commissions.

Unlike industrials, a utility's earnings are predetermined to a certain extent. Before allowed earnings requests are approved, a utility's performance is analyzed in depth by the state commission, interest groups, and other witnesses. This process leads to the disclosure of substantial amount of information.

### III. Hypothesis and Objective

Due to the Act of 1935, the Uniform Systems of Accounts, the uniform disclosure requirements, and the predetermined earnings, all utilities are reasonably homogeneous with respect to the information available to the public. Barry and Brown (1984) and Brauer (1986) suggested that the difference of risk-adjusted returns between small and large firms is due to their differential information environment. Assuming that the differential information hypothesis is true, then uniformity of information availability among utility firms would suggest that the size effect should not be observed in the public utility industry. The objective of this paper is to provide a test of the size effect in public utilities.

### IV. Methodology

#### 1. Sample and Data

To test for the size effect, a sample of public utilities and a sample of industrials matched by equity value are formed so that their results can be compared. Companies in both samples are listed on the Center for Research in Security Prices (CRSP)

Daily and Monthly Returns files. The utility sample includes 152 electric and gas companies. For each utility in the sample, two industrial firms with similar firm size (one is slightly larger and the other is slightly smaller than the utility) are selected. Thus, the industrial sample includes 304 non-regulated firms.

The size variable is defined as the natural logarithm of market value of equity at the beginning of each year. Both the equally-weighted and value-weighted CRSP indices are employed as proxies for the market returns. Daily, weekly and monthly returns are used. The Fama-MacBeth (1973) procedure is utilized to examine the relation between risk-adjusted returns and firm size.

### 2. Research Design

All utilities in the sample are ranked according to the equity size at the beginning of the year, and the distribution is broken down into deciles. Decile one contains the stocks with the lowest market values while decile ten contains those with the highest market values. These portfolios are denoted by  $MV_1$ ,  $MV_2$ , ..., and  $MV_{10}$ , respectively.

The combinations of the ten portfolios are updated annually. In the year after a portfolio is formed, equally-weighted portfolio returns are computed by combining the returns of the component stocks within the portfolio. The betas for each portfolio at year  $t$ ,  $\hat{\beta}_{pt}$ 's, are estimated by regressing the previous five years of portfolio returns on market returns:

$$\tilde{R}_{pt} = \alpha_p + \hat{\beta}_{pt}\tilde{R}_{mt} + \tilde{U}_{pt} \quad (1)$$

where

$R_{pt}$  = periodic return in year  $t$  on portfolio  $p$

$R_{mt}$  = periodic market return in year  $t$

$U_{pt}$  = disturbance term.

Banz (1981) applied both the ordinary and generalized least squares regressions to estimate  $\beta$ ; and concluded that the results are essentially identical (p.8). Since adjusting for heteroscedasticity does not necessarily lead to more efficient estimators, the ordinary least squares procedures are used in this study to estimate  $\beta$  in equation (1).

The following cross-sectional regression is then run for the portfolios to estimate  $\gamma_{it}$ ,  $i = 0, 1$ , and 2:

$$R_{pt} = \gamma_0 + \gamma_1 \hat{\beta}_{pt} + \gamma_2 \hat{S}_{pt} + U_{pt} \quad (2)$$

where

$\hat{\beta}_{pt}$  = estimated beta for portfolio p at year t, t=1968, ..., 1987

$\hat{S}_{pt}$  = mean of the logarithm of firm size in portfolio p at the beginning of year t

$U_{pt}$  = disturbance term.

Depending on whether daily, weekly or monthly returns are used, a portfolio's average return changes periodically while its beta and size only change once a year. The  $\gamma_1$  and  $\gamma_2$  coefficients are estimated over the following four subperiods: 1968-72, 1973-77, 1978-82 and 1983-1987. If portfolio betas can fully account for the differences in returns, one would expect the average coefficient for the beta variable to be positive and for the size variable to be zero. A t-statistic will be used to test the hypothesis. The coefficients of a matched sample are also examined so that the results between industrial and utility firms can be compared.

## V. Analysis of Results

### 1. Equity Value of the Utility Portfolios

The mean equity values of the ten size-based utility portfolios are reported in Table 1. Panels A and B present the average firm size of these portfolios at the beginning and end of the test period, 1968-1987. The first interesting observation from Table 1 is that the difference in magnitude between the smallest and the largest market value utility portfolios is tremendous. In Panel A, the average size of  $MV_1$  is about \$31 million while that of  $MV_{10}$  is over \$1.4 billion. In Panel B, that is twenty years later, they are \$62 million and \$5.2 billion, respectively. Another interesting finding is that there is a substantial increase in average firm size from  $MV_9$  to  $MV_{10}$ . Since these two findings are consistent over the entire test period, the average portfolio market values for interim years are not reported. These results are similar to the empirical evidence provided by Reinganum (1981).

The utility sample in this study contains 152 firms whereas Reinganum's sample contains 535 firms that are mainly industrial companies. Two conclusions may be drawn from the results of the Reinganum study and this one. First, utilities and industrials are similar in the sense that their market

values vary over a wide spectrum. Second, the fact that there is a huge jump in firm size from  $MV_9$  to  $MV_{10}$  indicates that the distribution of firm size is positively skewed. To correct for the skewness problem, the natural logarithm of the mean equity value of each portfolio is calculated. This variable is then used in later regressions instead of the actual mean equity value.

### 2. Betas of the Utility and Industrial Samples

The betas based on monthly, weekly and daily returns are reported for the utility and industrial samples. For simplicity, they will be referred to as monthly, weekly, and daily betas. In all cases, five years of returns are used to estimate the systematic risk. The betas estimated over the 1963-67 time period are used to proxy for the betas in 1968, which is the beginning of the test period. By the same token, the betas obtained from the time period 1982-86 are used as proxies for the betas in 1987, which is the end of the test period.

The betas from using the equally-weighted and value-weighted indices are calculated in order to check whether the results are affected by the choice of market index. Since the results are similar, only those obtained from the equally-weighted index are reported and analyzed.

Table 2 reports the monthly, weekly and daily betas of the two samples at the beginning and end of the test period. Panel A shows the various betas of the industrial portfolios. Two conclusions may be drawn. First, in the 1960's, smaller market value portfolios tend to have relatively larger betas. This is consistent with the empirical findings by Banz (1981) and Reinganum (1981). Second, this trend seems to vanish in the 1980's, especially when weekly and daily returns are used.

The betas of the utility portfolios are presented in Panel B. The table shows that none of the utility betas are greater than 0.71. A comparison between Panels A and B reveals that utility portfolios are relatively less risky than industrial portfolios after controlling for firm size. The comparison also reveals that, unlike industrial stocks, betas of the utility portfolios are not related to the market values of equity.

The negative correlation between firm size and beta in the industrial sample may introduce a multicollinearity problem in estimating equation (2). Banz (p.11) had addressed this issue and concluded that the test results are not sensitive to the

multicollinearity problem. For the utility sample, this problem does not exist.

### 3. Tests on the Coefficients of Beta and Size

The beta and firm size are used to estimate  $\gamma_1$  and  $\gamma_2$  in equation (2). A t-statistic is used to test if the mean values of the gammas are significantly different from zero. The tests were performed for four 5-year periods which are reported in Table 3. The mean of the gammas and their t-statistic are presented in Panel A for the utilities and in Panel B for the industrial firms.

The empirical results for the utility sample are reported in Panel A of Table 3. When monthly returns are used, 60 regressions were run to obtain 60 pairs of gammas for each of the 5-year periods. When daily returns are used, over 1200 regressions were run for each period to obtain the gammas. The results are similar: in all of the time periods tested, none of the average coefficients for beta and size are significantly different from zero. When weekly returns are used, 260 pairs of gammas were obtained. The average coefficients for beta are not significant in any test period, and the average coefficients for size are not significant in three of the test periods. For the test period of 1978-82, the average coefficient for size is significantly negative at a 5% level.

The test results for the industrial sample are reported in Panel B of Table 3. When monthly returns are used, the average coefficient estimates for size and beta are significant and have the expected sign only in the 1983-87 test period. When weekly returns are used, only the size variable is significantly negative in the 1978-82 period. When daily returns are used, the coefficient estimates for betas and size are not significant at any conventional level.

According to the CAPM, beta is the sole determinant of stock returns. It is expected that the coefficient for beta is significantly positive. However, the empirical findings reported in this study and in Fama and French (1992) only provide weak support for beta in explaining stock returns. The empirical findings in this study also suggest that the size effect varies over time. It is not unusual to document the firm size effect at certain time periods but not at others. Banz (1981) found that the size effect is not stable over time with substantial differences in the magnitude of the coefficient of the size factor (p.9, Table 1). Brown, Kleidon and Marsh (1983) not only have shown that size effect is not constant over time but also have reported a reversal of the size anomaly for certain years.

The research design of this study allows us to keep the sample, test period, and methodology the same with the holding-period being the only variable. The size effect is documented for the industrial sample in one of the four test periods when monthly returns are used and in another when weekly returns are used. When daily returns are used, no size effect is observed. For the utility sample, the size effect is significant in only one test period when weekly returns are used. When monthly and daily returns are used, no size effect is found. Therefore, this study concludes that the size effect is not only time-period specific but also holding-period specific.

### VI. Concluding Remarks

The fact that the two samples show different, though weak, results indicates that utility and industrial stocks do not share the same characteristics. First, given firm size, utility stocks are consistently less risky than industrial stocks. Second, industrial betas tend to decrease with firm size but utility betas do not. These findings may be attributed to the fact that all public utilities operate in an environment with regional monopolistic power and regulated financial structure. As a result, the business and financial risks are very similar among the utilities regardless of their sizes. Therefore, utility betas would not necessarily be expected to be related to firm size.

The objective of this study is to examine if the size effect exists in the utility industry. After controlling for equity values, there is some weak evidence that firm size is a missing factor from the CAPM for the industrial but not for the utility stocks. This implies that although the size phenomenon has been strongly documented for the industrials, the findings suggest that there is no need to adjust for the firm size in utility rate regulations.

### References

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Table 1

Average Equity Size of the Utility Portfolios at the Beginning and End of the Test Period  
(Dollar figures in millions)

	A: Beginning (1968)	B: End (1987)
MV <sub>1</sub>	\$31	\$62
MV <sub>2</sub>	\$77	\$177
MV <sub>3</sub>	\$113	\$334
MV <sub>4</sub>	\$161	\$475
MV <sub>5</sub>	\$220	\$715
MV <sub>6</sub>	\$334	\$957
MV <sub>7</sub>	\$437	\$1,279
MV <sub>8</sub>	\$505	\$1,805
MV <sub>9</sub>	\$791	\$2,665
MV <sub>10</sub>	\$1,447	\$5,399

Table 2

Betas of the Two Samples at the Beginning and End of the Test Period

	<u>Monthly Betas</u>		<u>Weekly Betas</u>		<u>Daily Betas</u>	
	1963-67	1982-86	1963-67	1982-86	1963-67	1982-86
<b>Panel A: Industrial Firms</b>						
MV <sub>1</sub>	0.89	1.00	1.15	0.95	1.11	0.92
MV <sub>2</sub>	0.94	0.87	1.07	1.01	1.14	1.01
MV <sub>3</sub>	0.88	0.82	1.12	0.86	1.14	1.04
MV <sub>4</sub>	0.69	0.74	1.00	0.83	1.03	0.86
MV <sub>5</sub>	0.73	0.80	1.05	0.96	1.13	1.01
MV <sub>6</sub>	0.66	0.82	1.03	1.01	1.05	1.04
MV <sub>7</sub>	0.64	0.81	0.97	1.04	0.98	1.09
MV <sub>8</sub>	0.62	0.75	0.97	1.11	1.00	1.20
MV <sub>9</sub>	0.52	0.78	0.84	1.06	0.94	1.16
MV <sub>10</sub>	0.43	0.65	0.78	1.01	0.86	1.22
<b>Panel B: Public Utilities</b>						
MV <sub>1</sub>	0.30	0.37	0.31	0.43	0.30	0.40
MV <sub>2</sub>	0.28	0.38	0.37	0.47	0.36	0.44
MV <sub>3</sub>	0.22	0.42	0.33	0.42	0.31	0.49
MV <sub>4</sub>	0.27	0.35	0.36	0.52	0.34	0.54
MV <sub>5</sub>	0.25	0.45	0.37	0.61	0.35	0.62
MV <sub>6</sub>	0.25	0.41	0.39	0.54	0.40	0.65
MV <sub>7</sub>	0.20	0.35	0.34	0.54	0.37	0.63
MV <sub>8</sub>	0.17	0.38	0.34	0.65	0.33	0.68
MV <sub>9</sub>	0.19	0.34	0.35	0.60	0.34	0.71
MV <sub>10</sub>	0.18	0.29	0.38	0.59	0.39	0.71



Table 3

Tests on the Mean Coefficients of Beta ( $\gamma_1$ ) and Size ( $\gamma_2$ )

$$R_{pt} = \gamma_{\alpha} + \gamma_{1t}\hat{\beta}_{pt} + \gamma_{2t}\hat{S}_{pt} + U_{pt}$$

Returns Used:		Monthly (t-value)	Weekly (t-value)	Daily (t-value)
<b>Panel A: Utility Sample</b>				
1968-72	$\gamma_1$	-0.46% (-0.26)	-0.32% (-0.42)	-0.02% (-0.18)
	$\gamma_2$	-0.07% (-0.78)	-0.01% (-0.51)	-0.00% (-0.46)
1973-77	$\gamma_1$	-0.28% (-0.13)	0.14% (0.14)	-0.03% (-0.21)
	$\gamma_2$	-0.11% (-0.70)	-0.03% (-0.67)	-0.00% (-0.53)
1978-82	$\gamma_1$	0.55% (0.36)	0.54% (1.00)	0.05% (0.43)
	$\gamma_2$	-0.10% (-0.75)	-0.05% (-1.71)*	-0.01% (-1.60)
1983-87	$\gamma_1$	1.74% (1.28)	-0.24% (-0.51)	-0.02% (-0.18)
	$\gamma_2$	-0.16% (-1.54)	-0.03% (-0.86)	-0.01% (-0.63)
<b>Panel B: Industrial Sample</b>				
1968-72	$\gamma_1$	-0.36% (-0.27)	-0.28% (-0.55)	-0.02% (-0.32)
	$\gamma_2$	0.07% (0.43)	-0.01% (-0.19)	0.00% (0.51)
1973-77	$\gamma_1$	1.34% (0.64)	-0.23% (-0.31)	0.14% (1.45)
	$\gamma_2$	-0.01% (-0.06)	-0.04% (-0.85)	-0.00% (-0.64)
1978-82	$\gamma_1$	-0.84% (-0.28)	-0.56% (-0.91)	-0.09% (-0.81)
	$\gamma_2$	-0.29% (-0.75)	-0.01% (-1.72)*	-0.00% (-1.33)
1983-87	$\gamma_1$	2.51% (1.83)*	0.34% (0.64)	0.11% (1.40)
	$\gamma_2$	-0.25% (-1.90)*	-0.01% (-0.43)	0.00% (0.14)

\* Significant at the 5% level based on a one-tailed test.

**Water utility rate case data, Jan. 1, 2021 - Nov. 3, 2022**

State	Company	Docket No.	(Water or WW)	Case type	Increase authorized		
					Order date	Decision type	Return on equity (%)
Pennsylvania	Pennsylvania American Water Co.	R-2020-3019369 R-2020-3019371	Water/WW	Base rate case	02/25/21	Settled	NA
Missouri	Missouri American Water Co.	WR-2020-0344 SR-2020-0345	Water/WW	Base rate case	04/07/21	Settled	NA
Idaho	Veolia Water Idaho	SUZ-W-20-02	Water	Base rate case	04/30/21	Settled	NA
New Jersey	Veolia Water New Jersey	D-WR20110729	Water/WW	Base rate case	05/19/21	Settled	9.60
Iowa	Iowa American Water	RPU-2020-0001	Water	Base rate case	06/28/21	Litigated	9.60
Virginia	Aqua Virginia Inc.	PUR-2020-00106	Water/WW	Base rate case	06/22/21	Settled	NA
Connecticut	Connecticut Water Co.	20-12-30	Water	Base rate case	07/28/21	Litigated	9.00
California	California American Water	A-19-07-004	Water	Base rate case	12/30/21	Settled	NA
Illinois	Utility Services of Illinois Inc.	21-0198	Water	Base rate case	12/31/21	Litigated	9.52
New Jersey	Middlesex Water Co.	D-WR 21050813	Water/WW	Base rate case	09/30/21	Settled	9.60
West Virginia	West Virginia American Water Co.	C-21-0369-W-42T C-21-0370-S-42T	Water/WW	Base rate case	02/24/22	Litigated	9.80
Maine	The Maine Water Co. (Biddeford & Saco)	D-2021-00289	Water	Base rate case	04/07/22	Settled	9.70
North Carolina	Carolina Water Service Inc. of North Carolina	W-354 Sub 384	Water/WW	Base rate case	04/08/22	Settled	9.40
Pennsylvania	Aqua	D-R-2021-3027385 D-R-2021-3027386	Water/WW	Base rate case	05/16/22	Litigated	10.00
New Hampsh.	Aquarion Water Co. of New Hampshire Inc.	D-DW-20-184	Water	Base rate case	07/29/22	Settled	9.10
New Jersey	New Jersey-American Water Co. Inc.	D-WR22010019	Water/WW	Base rate case	08/17/22	Settled	9.60
Ohio	Aqua Ohio Inc.	C-21-0595-WW-AIR	Water	Base rate case	09/21/22	Settled	9.50

As of Nov. 3, 2022.

W = water; WW = wastewater.

Source: Regulatory Research Associates, a group within S&P Global Commodity Insights.

2022 Average 9.59

2021 Average 9.46

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. W-354, SUB 360

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of

Application by Carolina Water Service, Inc., of	)	ORDER APPROVING JOINT
North Carolina, 4944 Parkway Plaza Boulevard,	)	PARTIAL SETTLEMENT
Suite 375, Charlotte, North Carolina 28217, for	)	AGREEMENT AND STIPULATION,
Authority to Adjust and Increase Rates for	)	GRANTING PARTIAL RATE
Water and Sewer Utility Service in All of its	)	INCREASE, AND REQUIRING
Service Areas in North Carolina, Except Corolla	)	CUSTOMER NOTICE
Light and Monteray Shores Service Area	)	

HEARD: Tuesday, August 28, 2018, at 7:00 p.m., in the Craven County Courthouse, Courthouse Annex, Courtroom #4, 302 Broad Street, New Bern, North Carolina

Wednesday, August 29, 2018, at 7:00 p.m., in Courtroom 317, New Hanover County Courthouse, 316 Princess Street, Wilmington, North Carolina

Wednesday, September 19, 2018, at 7:00 p.m., in the Mecklenburg County Courthouse, Courtroom 5350, 832 East 4th Street, Charlotte, North Carolina

Tuesday, September 25, 2018, at 7:00 p.m., in the Watauga County Courthouse, Courtroom #1, 842 W. King Street, Boone, North Carolina

Wednesday, September 26, 2018, at 7:00 p.m., in the Buncombe County Courthouse, Courtroom 1A, 60 Court Plaza, Asheville, North Carolina

Monday, October 8, 2018, at 7:00 p.m., and Tuesday, October 16, 2018, at 10:00 a.m., in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Chairman Edward S. Finley, Jr., Presiding, and Commissioners ToNola D. Brown-Bland, Jerry C. Dockham, James G. Patterson, Lyons Gray, Daniel G. Clodfelter, and Charlotte A. Mitchell

that these results are unreasonably high. Each of these results are higher than witness D'Ascendis' estimates of the cost of equity for his own Utility Proxy Group and deserve no weight, particularly with respect to the DCF. The Commission further concludes that given the difference in these results, the risk of the two groups is not equal and the Utility Proxy Group is more reliable as a proxy for the investment risk of common equity in CWSNC.

After determining that the indicated cost of equity from the DCF, CAPM, and risk premium methods applied to both of his proxy groups equals 10.80%, witness D'Ascendis then adjusted the indicated cost of equity upward by 0.40% to reflect CWSNC's smaller size compared to companies in his Utility Proxy Group. He testified that the size of the company is a significant element of business risk for which investors expect to be compensated through higher returns. Witness D'Ascendis calculated his size adjustment as described in his prefiled direct testimony and stated that even though a 4.61% upward size adjustment is indicated, he applies a 0.40% size premium to CWSNC's indicated common equity cost rate. Witness Hinton testified that he does not believe it is appropriate to add a risk premium to the cost of equity of CWSNC due to size for several reasons. First, from a regulatory policy perspective, witness Hinton stated that ratepayers should not be required to pay higher rates because they are located in the franchise area of a utility which is arbitrarily considered to be small. Further, if such adjustments were routinely allowed, an incentive would exist for large utilities to form subsidiaries or split-up subsidiaries to obtain higher returns. In addition, he noted that CWSNC operates in a franchise environment that insulates the Company from competition with procedures in place for rate adjustments for circumstances that impact its earnings. Finally, while witness Hinton stated that while there are studies that address how the small size of a company relates to higher returns, he is aware of only one study that focuses on the size of regulated utilities and risk and that study concluded that utility stocks do not exhibit a significant size premium. In rebuttal, witness D'Ascendis maintained that a small size adjustment was necessary based on the results of studies he cited and discussed and contended that the study concerning size premiums for utilities discussed by witness Hinton was flawed.

Based upon the foregoing and the entire record in this proceeding, the Commission concludes that a size adjustment of 0.40% is not warranted and should not be approved. The Commission determines there is insufficient evidence to authorize an adjustment to the approved rate of return on equity in this case. The record simply does not indicate the extent to which CWSNC's size alone justifies added risk. While a small water/wastewater utility might face greater risk than a publicly-traded peer group, because for example the service area was confined to a hurricane prone coastal geographic area, evidence of such factual predicates is absent from the record. The Commission notes that the witnesses also disagreed with respect to whether the studies discussed in the testimony concerning size and risk are reliable or even applicable to regulated utilities. The Commission concludes that the testimony regarding these studies is not convincing and does not support a size adjustment. In addition, while witness D'Ascendis calculates and testifies that a 4.61% upward size adjustment is indicated, he applies a size premium of 0.40% to

CWSNC's indicated cost of equity. The Commission thus concludes that the 0.40% adjustment is not supported by his testimony and is rather arbitrary.

Having determined that the appropriate rate of return on equity based upon the evidence in this proceeding is 9.75%, the Commission notes that there is considerable testimony concerning the authorized returns on equity for water utilities in other jurisdictions. While the Commission has relied upon the record in this proceeding and is certainly aware that returns in other jurisdictions can be influenced by many factors, such as different capital market conditions during different periods of time, settlements versus full litigation, the Commission concludes that the rate of return on equity trends and decisions by other regulatory authorities deserve some weight as (1) they provide a check or additional perspective on the case-specific circumstances, and (2) the Company must compete with other regulated utilities in the capital markets, meaning that a rate of return significantly lower than that approved for other utilities of comparable risk would undermine the Company's ability to raise necessary capital, while a rate of return significantly higher than other utilities of comparable risk would result in customers paying more than necessary. Public Staff D'Ascendis Cross-Examination Exhibit 3, the RRA Water Advisory publication showing approved return on equity decisions for water utilities across the country from January 2014 through June 30, 2018, is helpful in illustrating that the average rate of return on equity for water utilities is 9.59% in 2014, 9.76% in 2015, 9.71% in 2016, 9.56% in 2017, and in the only seven cases reported on for the first six months of 2018 the average is 9.41% with a range of 8.9% to 10.5%. This authorized return data is generally supportive of the Commission approved return on equity of 9.75% based upon the evidence in this proceeding. To the extent it is not, the record evidence justifies any such difference.

In its post-hearing brief, the AGO notes that the 10.80% to 11.20% range for rate of return on equity requested by CWSNC is substantially higher than the 9.6% return on equity stipulated to in the Sub 356 Proceeding. In this case, the AGO, in its role as consumer advocate, argues that the DCF model is relied upon by investors using widely available current market data and the DCF results produced by expert witnesses for CWSNC and the Public Staff show that a 9.2% return on equity is more than sufficient to attract the investment dollars needed for adequate service. However, unlike the AGO, the Commission cannot ignore the other evidence in this proceeding. When other such evidence is considered and weighed by the Commission as discussed hereinabove, the Commission finds that the reasonable and appropriate return on equity is 9.75%.

The Commission notes further that its approval of a rate of return on equity at the level of 9.75% or for that matter at any level, is not a guarantee to the Company that it will earn a rate of return on equity at that level. Rather, as North Carolina law requires, setting the rate of return on equity at this level merely affords CWSNC the opportunity to achieve such a return. The Commission finds, based upon all the evidence presented, that the rate of return on equity provided for herein will indeed afford the Company the opportunity to earn a reasonable and sufficient return for its shareholders while at the same time producing rates that are just and reasonable to its customers.

11. That, within 180 days of the date of this Order, CWSNC shall file a report with the Commission on the progress of the capital project intended to resolve the quality of service concern identified by Ms. Brown, one of the public witnesses appearing at the public hearing in Asheville, as is discussed in more detail in this Order. Such report shall state whether Ms. Brown has indicated to CWSNC that the final resolution of the issue is satisfactory;

12. That the two certificate of deposit bond sureties previously filed by Utilities, Inc. (as noted above) from BB&T for Amherst Subdivision in Wake County and for the Carolina Pines Service Area in Craven County, North Carolina shall be released to Utilities, Inc. The Chief Clerk shall file a copy of the letter to Utilities, Inc. from the Deputy Clerk releasing the bond sureties in Docket Nos. W-354, Sub 326, W-1152, Sub 8, W-1151, Sub 7, and this docket;

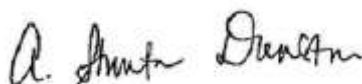
13. That the Chief Clerk shall establish Docket No. W-354, Sub 360A as the single docket to be used for all future WSIC/SSIC filings, orders, and reporting requirements. To that end, the Chief Clerk shall copy CWSNC's WSIC/SSIC pending application filed on January 31, 2019, in Docket No. W-354, Sub 356A and Sub 360 into Docket No. W-354, Sub 360A; and

14. That the Chief Clerk shall close Docket No. W-354, Subs 356A, 344A, and 336A.

ISSUED BY ORDER OF THE COMMISSION.

This the 21<sup>st</sup> day of February, 2019.

NORTH CAROLINA UTILITIES COMMISSION



A. Shonta Dunston, Deputy Clerk

Commissioner Daniel G. Clodfelter concurring in part and dissenting in part.

**RATING ACTION COMMENTARY**

# **Fitch Affirms PE and PSE; Outlooks Revised to Stable**

Tue 01 Jun, 2021 - 12:47 PM ET

Fitch Ratings - New York - 01 Jun 2021: Fitch Ratings has affirmed Puget Energy Inc.'s (PE) Long-Term Issuer Default Rating (LT IDR) at 'BBB-' and Puget Sound Energy, Inc.'s (PSE) LT IDR at 'BBB+'. The Rating Outlook for both entities has been revised to Stable from Negative.

PE and PSE's Rating Outlooks improved as a result of the Senate Bill 5295, which was signed into law in May 2021. The legislation allows for multi-year rate plans, reducing regulatory lag. Certain rate adjustments and mitigating actions after the July 2020 rate order are expected to stabilize FFO leverage at around 5.5x in the next two years. FFO leverage could further improve to below 5.5x assuming Washington Utilities and Transportation Commission (WUTC) implements the legislation in a credit-supportive manner in the next rate case.

## **KEY RATING DRIVERS**

### **New Legislation Reduces Regulatory Lag**

On May 3, 2021, Washington Governor Jay Inslee signed into law the Senate Bill 5295 to transform utility regulation into multi-year rate plan and performance-based rate-making. Fitch believes that the legislation is largely positive, but it is subject to interpretation and implementation by the WUTC.

Under the law, beginning Jan. 1, 2022, utilities will file multi-year rate plans between two to four years in length, which would reduce regulatory lag and provide greater certainties on earnings and cash flow going forward. Rates after the first year can be based on forecast data. This is an improvement from the historic test year.

If the commission approves a multiyear rate plan with a duration of three or four years, utilities are bound by rates of the first and second year, but can file a new rate plan in year three and four. Utilities must also defer refund for earnings exceeding 0.5% above the authorized returns. The commission must, in approving a multiyear rate plan, determine a set of performance measures that will be used to assess a gas or electrical company operating under a multiyear rate plan. Fitch expects PSE to file a multi-year rate case in early 2022 with an order to follow 11-month later.

### Favorable Rate Adjustments

PSE received an unfavorable rate order in July 2020. Since then, PSE has secured some positive rate adjustments. WUTC increased the revenue requirement for the rate order to \$27.8 million from \$2.2 million, primary due to errors related to EDIT and power costs. New rates took effect on Oct. 1, 2020.

Puget began to recover certain deferred power and gas costs totaling \$124 million in late 2020 and secured revenue decoupling revenue of \$36.4 million in 2021.

In April 2021, a settlement was reached for the 2020 power cost only rate case (PCORC). The settlement would result a revenue increase of \$65.3 million or 3.1%. Pending approval by the Washington Commission, the increase is expected to be effective June 2021.

### Credit Metrics Expected to Improve

PSE's and PE's credit metrics in 2019 and 2020 have been negatively affected by mixed rate case outcomes, fuel cost deferral and cash recoveries and refunds due to tax reform. In the next two years, FFO leverage could decline to mid-5x. Assuming a reasonable rate case outcome, Fitch expects FFO leverage to improve to low 5x by 2023.

### Parent-Subsidiary Linkage

Fitch applies a bottom-up approach in rating PSE and PE. PSE's ratings reflect its standalone credit profile, as well as its linkage with PE, while PE's ratings reflect a



consolidated credit profile. Fitch typically limits PSE's IDR to a maximum of two notches above PE's IDR. Currently, the notching differential is two notches.

Fitch generally considers PSE to be stronger than PE due to its lower leverage and lower operating risks as a regulated utility. A high level of parent-only debt (approximately 30%) results in weaker credit metrics at PE. While operational and strategic ties are strong, a prescribed regulatory capital structure provides reasonable protection, allowing PSE to be notched above PE.

The notching differential also reflects the ring-fencing measures in place as conditions to receive Washington commission's approval of PE's 2009 buyout by a consortium of investors. They include a non-consolidation opinion and a requirement that at least one of PSE's directors is an independent director. Without the unanimous vote of all directors, including the independent director, PSE will not consent to the institution of bankruptcy proceedings or the inclusion of PSE in any bankruptcy proceeding by PE or its affiliates.

PSE is prohibited from lending or pledging utility assets to PE or upstream owners without the permission of the commission and there will be no cross-subsidization by PSE customers for unregulated activities. PSE is prohibited from making upstream distributions if the common equity ratio is less than 44%. Dividends are also restricted if PSE's issuer rating is below investment grade. If PSE is downgraded below investment grade, while its EBITDA interest coverage is equal to or greater than 3.0x on an annualized basis, PSE is allowed to distribute dividends only up to an amount sufficient to service debt at PE, and to satisfy financial covenants in PE's credit facilities. Under this scenario, PE is prohibited from distributing to its equity owners.

PE's ability to pay upstream dividends is limited by the merger order issued by WUTC. Pursuant to the merger order, PE may not declare or make a distribution unless on such date PE's ratio of consolidated EBITDA to consolidated interest expense for the four most recently ended fiscal quarters prior to such date is equal to or greater than 2x.

## **DERIVATION SUMMARY**

PE's peers include Cleco Corporate Holdings, LLC (Cleco; BBB-/Stable), IPALCO Enterprises, Inc. (BBB-/Stable) and DPL Inc. (BB/Negative), all of which are holding companies operating one primary utility. All four companies have sizable parent-only debt.

PE has approximately 30% parent-only debt, which is similar to IPALCO and lower than both Cleco's and DPL's 60%.

PSE operates an electric and gas utility with a larger customer base and higher gross revenue than Cleco Power LLC (BBB/Stable), Dayton Power & Light Company (BBB-/Negative) and Indianapolis Power & Light Co. (BBB+/Stable). However, PSE's service territory is less favorable than its peers, as it is subject to restrictive regulation and progressive energy goals in Washington, a primary credit concern.

PE's credit metrics weakened in recent years due to capex, mixed rate case results, fuel cost deferrals and tax reform. PE's FFO leverage is likely to hover around 5.5x in the next two years, modestly stronger than that of Cleco and DPL but weaker than IPALCO. Similar to Cleco Power, DP&L and IPL, PSE's standalone credit metrics remain consistent with its current rating, but it is upward-restricted by PE's ownership.

## **KEY ASSUMPTIONS**

- \$3.1 billion capex from 2021 to 2023;
- PCORC implemented per settlement in April 2021;
- Certain assumptions were made regarding future rate cases;
- Certain management mitigation actions were assumed.

## **RATING SENSITIVITIES**

PE

Factors that could, individually or collectively, lead to positive rating action/upgrade:

- Given the uncertainty of implementing a multi-year rate plan, an upgrade is unlikely in the near to intermediate term. Nevertheless, if PE's FFO leverage declines to below 4.2x, and/or there is a track record of constructive rate case proceedings, PE could be upgraded.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

--PE will be downgraded if the 2022 rate case is unfavorable, causing FFO leverage to exceed 5.5x on a sustained basis;

--A downgrade at PSE could lead to the same at PE.

PSE

Factors that could, individually or collectively, lead to positive rating action/upgrade:

--Given the uncertainty of implementing a multi-year rate plan, an upgrade is unlikely in the near to intermediate term. Nevertheless, if PE is upgraded, PSE could be upgraded.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

--A downgrade at PE could lead to a downgrade at PSE;

--FFO leverage sustained above 4.8x.

## **BEST/WORST CASE RATING SCENARIO**

International scale credit ratings of Non-Financial Corporate issuers have a best-case rating upgrade scenario (defined as the 99th percentile of rating transitions, measured in a positive direction) of three notches over a three-year rating horizon; and a worst-case rating downgrade scenario (defined as the 99th percentile of rating transitions, measured in a negative direction) of four notches over three years. The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Best- and worst-case scenario credit ratings are based on historical performance. For more information about the methodology used to determine sector-specific best- and worst-case scenario credit ratings, visit <https://www.fitchratings.com/site/re/10111579>.

## **ISSUER PROFILE**

PE is an energy services holding company and substantially all of its operations are conducted through its regulated and integrated utility PSE. PSE provides electric and natural gas service principally in the Puget Sound region. PE also has a wholly-owned nonregulated subsidiary, named Puget LNG LLC, which owns, develops and finances the

non-regulated activity of a liquefied natural gas (LNG) facility at the Port of Tacoma, Washington.

## REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

## ESG CONSIDERATIONS

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of '3'. This means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. For more information on Fitch's ESG Relevance Scores, visit [www.fitchratings.com/esg](http://www.fitchratings.com/esg).

## RATING ACTIONS

ENTITY / DEBT ⇄	RATING ⇄			PRIOR ⇄
Puget Sound Energy, Inc.	LT IDR	BBB+ Rating Outlook Stable		BBB+ Rating Outlook Negative
	Affirmed			
	ST IDR	F2	Affirmed	F2
senior secured	LT	A	Affirmed	A
senior unsecured	ST	F2	Affirmed	F2

Puget Energy Inc.	LT IDR	BBB- Rating Outlook Stable	BBB- Rating Outlook Negative
	Affirmed		

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senior secured	LT	BBB	Affirmed	BBB
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[VIEW ADDITIONAL RATING DETAILS](#)

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## PARTICIPATION STATUS

The rated entity (and/or its agents) or, in the case of structured finance, one or more of the transaction parties participated in the rating process except that the following issuer(s), if any, did not participate in the rating process, or provide additional information, beyond the issuer's available public disclosure.

## **APPLICABLE CRITERIA**

[Parent and Subsidiary Linkage Rating Criteria - Effective from 26 August 2020 to 1 December 2021 \(pub. 26 Aug 2020\)](#)

[Corporate Hybrids Treatment and Notching Criteria \(pub. 12 Nov 2020\)](#)

[Corporate Rating Criteria -- Effective from 21 December 2020 to 15 October 2021 \(pub. 21 Dec 2020\) \(including rating assumption sensitivity\)](#)

[Corporates Recovery Ratings and Instrument Ratings Criteria \(pub. 09 Apr 2021\) \(including rating assumption sensitivity\)](#)

[Sector Navigators - Addendum to the Corporate Rating Criteria - Effective from 30 April 2021 to 15 October 2021 \(pub. 30 Apr 2021\)](#)

## **APPLICABLE MODELS**

Numbers in parentheses accompanying applicable model(s) contain hyperlinks to criteria providing description of model(s).

[Corporate Monitoring & Forecasting Model \(COMFORT Model\), v7.9.0 \(1\)](#)

## **ADDITIONAL DISCLOSURES**

[Dodd-Frank Rating Information Disclosure Form](#)

[Solicitation Status](#)

[Endorsement Policy](#)

## **ENDORSEMENT STATUS**

Puget Energy Inc.

EU Endorsed, UK Endorsed

Puget Sound Energy, Inc.

EU Endorsed, UK Endorsed

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**CAROLINA WATER SERVICE, INC., OF NC**  
 Docket No. W-354, Sub 400

**Change from 9.25% to 10.45% on ROE for Base Year and from 9.25% to 10.7% for Rate Years**

CWSNC - Water	NOI Change				Revenue Requirement Change				Sum
	Base Year*	Rate Year 1	Rate Year 2	Rate Year 3	Base Year	Rate Year 1	Rate Year 2	Rate Year 3	
<b>Amount Change</b>	<b>426,269</b>	<b>585,754</b>	<b>638,962</b>	<b>655,404</b>	<b>554,192</b>	<b>761,538</b>	<b>830,714</b>	<b>852,090</b>	<b>\$ 2,998,534.79</b>
9.25%	4,934,072	5,611,119	6,120,811	6,278,316	6,414,784	7,295,012	7,957,662	8,162,434	
10.45%/10.7%	5,360,341	6,196,873	6,759,773	6,933,720	6,968,976	8,056,550	8,788,376	9,014,525	

CWSNC - Sewer	NOI Change				Revenue Requirement Change				Sum
	Base Year*	Rate Year 1	Rate Year 2	Rate Year 3	Base Year	Rate Year 1	Rate Year 2	Rate Year 3	
<b>Amount Change</b>	<b>400,992</b>	<b>592,329</b>	<b>614,227</b>	<b>735,555</b>	<b>521,329</b>	<b>770,087</b>	<b>798,556</b>	<b>956,295</b>	<b>\$ 3,046,266.63</b>
9.25%	4,641,482	5,674,095	5,883,870	7,046,109	6,034,388	7,376,887	7,649,615	9,160,642	
10.45%/10.7%	5,042,474	6,266,424	6,498,097	7,781,664	6,555,717	8,146,974	8,448,172	10,116,936	

BF/FH/TC - Water	NOI Change				Revenue Requirement Change				Sum
	Base Year*	Rate Year 1	Rate Year 2	Rate Year 3	Base Year	Rate Year 1	Rate Year 2	Rate Year 3	
<b>Amount Change</b>	<b>21,582</b>	<b>42,726</b>	<b>49,459</b>	<b>49,468</b>	<b>28,059</b>	<b>55,548</b>	<b>64,302</b>	<b>64,313</b>	<b>\$ 212,221.71</b>
9.25%	249,811	409,285	473,784	473,873	324,779	532,111	615,966	616,082	
10.45%/10.7%	271,393	452,011	523,243	523,341	352,838	587,659	680,268	680,395	

BF/FH - Sewer	NOI Change				Revenue Requirement Change				Sum
	Base Year*	Rate Year 1	Rate Year 2	Rate Year 3	Base Year	Rate Year 1	Rate Year 2	Rate Year 3	
<b>Amount Change</b>	<b>58,676</b>	<b>78,504</b>	<b>124,664</b>	<b>126,638</b>	<b>76,285</b>	<b>102,063</b>	<b>162,076</b>	<b>164,642</b>	<b>\$ 505,065.19</b>
9.25%	679,167	752,009	1,194,192	1,213,100	882,985	977,686	1,552,568	1,577,150	
10.45%/10.7%	737,843	830,513	1,318,856	1,339,738	959,269	1,079,749	1,714,644	1,741,792	

\* CWSNC proposed a 10.45% ROE for Base year and 10.7% for Rate Years.

**TOTAL REVENUE REQUIREMENT CHANGE \$ 6,762,088.32**

# MARKETS DIGEST

## EQUITIES

### Dow Jones Industrial Average

**33700.28** ▼45.41, or 0.13%  
High, low, open and close for each trading day of the past three months.

Trailing P/E ratio	20.95	22.11
P/E estimate*	18.36	18.53
Dividend yield	2.01	1.91
All-time high	36799.65, 01/04/22	

### S&P 500 Index

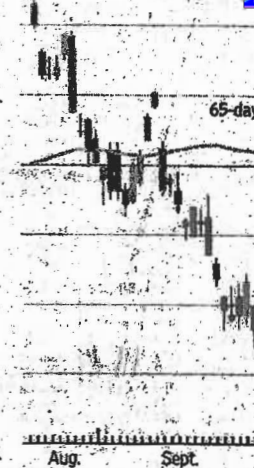
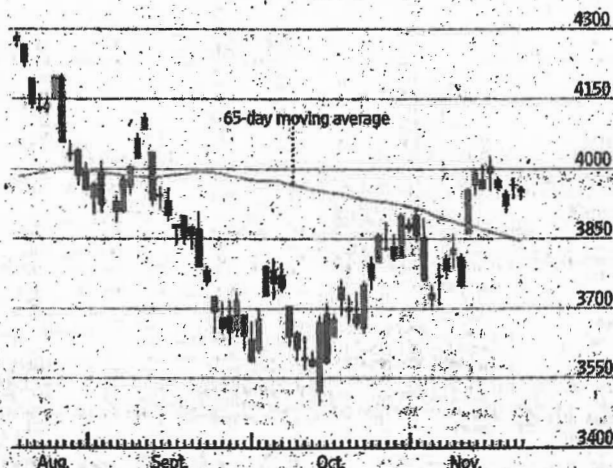
**3949.94** ▼15.40, or 0.39%  
High, low, open and close for each trading day of the past three months.

Trailing P/E ratio*	19.22	28.90
P/E estimate*	17.75	22.43
Dividend yield*	1.68	1.28
All-time high	4796.56, 01/03/22	

### Nasdaq Composite

**11024.51** ▼121.55, or 1.1%  
High, low, open and close for each trading day of the past three months.

Current divisor 015172752695384



\*Weekly P/E data based on as-reported earnings from Blinn Associates Inc. †Based on Nasdaq-100 Index

### Major U.S. Stock-Market Indexes

Index	Today			Net chg	% chg	52-Week		% chg YTD	3-yr. ann.
	High	Low	Latest Close			High	Low		
<b>Dow Jones</b>									
Industrial Average	33864.59	33559.18	<b>33700.28</b>	-45.41	-0.13	36799.65	28725.51	-5.4	-7.3
Transportation Avg	14325.50	14179.35	14295.40	40.69	0.29	16874.53	11999.40	-14.6	-13.2
Utility Average	949.45	938.32	945.37	6.04	0.64	1071.75	838.99	2.4	-3.6
Total Stock Market	39795.09	39500.75	39668.06	-179.39	-0.45	48929.18	36056.21	-17.4	-18.4
Barron's 400	961.19	948.97	958.31	-2.87	-0.30	1114.47	825.73	-14.4	-13.4
<b>Nasdaq Stock Market</b>									
Nasdaq Composite	11128.78	10999.75	<b>11024.51</b>	-121.55	-1.09	15871.26	10321.39	-16.7	-29.5
Nasdaq-100	11664.94	11524.44	11553.45	-123.57	-1.06	16567.50	10690.60	-17.9	-29.2
<b>S&amp;P</b>									
500 Index	3962.00	3933.34	<b>3949.94</b>	-15.40	-0.39	4796.56	3577.03	-16.7	-17.1
MidCap 400	2510.17	2492.71	2504.48	-6.15	-0.24	2875.24	2200.75	-12.9	-11.9
SmallCap 600	1215.32	1206.30	1214.15	-3.99	-0.33	1433.01	1064.45	-15.3	-13.4
<b>Other Indexes</b>									
Russell 2000	1842.96	1828.99	1839.14	-10.59	-0.57	2331.46	1649.84	-11.1	-18.1
NYSE Composite	15309.77	15180.19	15278.26	-31.51	-0.21	17353.76	13472.18	-9.9	-11.0
Value Line	554.75	549.40	552.30	-2.45	-0.44	680.36	491.56	-18.3	-17.8
NYSE Arca Biotech	5187.15	5143.96	5149.42	-35.15	-0.68	5649.54	4208.43	-4.9	-6.7
NYSE Arca Pharma	836.32	826.45	833.83	4.33	0.52	887.27	737.84	7.7	0.8
KBW Bank	106.46	105.52	106.22	0.35	0.34	147.56	94.66	-13.4	-19.7
PHLX Gold/Silver	113.19	111.17	113.04	-0.76	-0.67	167.76	91.40	-14.4	-14.7
PHLX Oil Service	83.18	78.91	83.06	-1.95	-2.29	88.37	49.14	57.3	57.6
PHLX Semiconductor	2696.70	2669.35	2675.83	-48.20	-1.77	4039.51	2162.32	-10.4	-12.2
Choe Volatility	24.12	22.30	22.36	-0.76	-3.29	36.45	16.60	14.6	29.8

### Late Trading

Most active and biggest movers among NYSE, NYSE Arca, NYSE Amex and Nasdaq issues from 4 p.m. to 6 p.m. ET as reported by electronic trading services, securities dealers and regional exchanges. Minimum share price of \$2 and minimum after-hours volume of 50,000 shares.

#### Most active issues in late trading

Company	Symbol	Volume (000)	Last	Net chg	% chg	After Hours High
Invesco Senior Loan ETR	BKLN	6,514.7	20.73	0.03	0.14	20.78
SPDR S&P 500	SPY	6,390.2	394.57	-0.02	-0.01	400.00
KE Holdings ADR	BEKE	4,940.3	14.86	0.15	1.02	14.86
iShares iBoxx \$ HY Cn Bnd	HYG	4,676.2	74.17	-0.03	-0.04	74.29
Bank of America	BAC	3,913.7	37.28	-0.03	-0.08	37.37
CSX	CSX	3,680.4	31.29	...	...	31.32
Infosys ADR	INFY	3,091.4	19.12	-0.18	-0.93	19.38
iShares MSCI EAFE ETF	EFA	3,089.7	64.48	-0.18	-0.28	64.67

#### Percentage gainers...

Company	Symbol	Volume	Last	Net chg	% chg	After Hours High
Harsco	HSC	320.6	6.93	0.33	5.08	6.93
Simmons First Natl CIA	SFNC	63.3	24.76	1.17	4.96	24.76
Agilent Technologies	A	104.4	151.30	6.16	4.24	152.40
Newell Brands	NWL	153.1	13.55	0.50	3.83	13.55
Ardagh Metal Packaging	AMBP	281.9	4.54	0.16	3.65	4.54

#### And losers

Company	Symbol	Volume	Last	Net chg	% chg	After Hours High
scPharmaceuticals	SCPH	51.0	5.40	-0.69	-12.38	6.09
Gallagher	AUG	81.6	175.37	-20.38	-11.62	195.75
Ampco-Pittsburgh	AP	1,776.6	2.50	-0.25	-9.99	2.50
Gaming Leisure Prod	GLPI	68.7	46.41	-4.09	-8.81	50.50
FirstEnergy	FE	145.0	36.41	-2.20	-5.78	38.80

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Sources: FactSet, Dow Jones Market Data

Carolina Water Service of North Carolina  
 Notes to Accompany the Application of the CAPM and ECAPM

Notes:

(1) The market risk premium (MRP) is derived by using six different measures from three sources: Ibbotson, Value Line, and Bloomberg as illustrated below:

Historical Data MRP Estimates:	Using Current Interest Rates	Using Projected 2023 Interest Rates	Using Projected 2024 Interest Rates	Using Projected 2025 Interest Rates
<b>Measure 1: Ibbotson Arithmetic Mean MRP (1926-2021)</b>				
Arithmetic Mean Monthly Returns for Large Stocks 1926-2021:	12.37 %	12.37 %	12.37 %	12.37 %
Arithmetic Mean Income Returns on Long-Term Government Bonds:	5.02	5.02	5.02	5.02
MRP based on Ibbotson Historical Data:	7.35 %	7.35 %	7.35 %	7.35 %
<b>Measure 2: Application of a Regression Analysis to Ibbotson Historical Data (1926-2021)</b>				
	10.27 %	9.34 %	9.38 %	9.05 %
<b>Measure 3: Application of the PRPM to Ibbotson Historical Data: (January 1926 - April 2022)</b>				
	9.35 %	9.35 %	9.35 %	9.35 %
<b>Value Line MRP Estimates:</b>				
<b>Measure 4: Value Line Projected MRP (Thirteen weeks ending May 13, 2022)</b>				
Total projected return on the market 3-5 years hence*:	13.16 %	13.16 %	13.16 %	13.16 %
Projected Risk-Free Rate (see note 2):	2.49	3.33	3.30	3.60
MRP based on Value Line Summary & Index:	10.67 %	9.83 %	9.86 %	9.56 %
*Forecasted 3-5 year capital appreciation plus expected dividend yield				
<b>Measure 5: Value Line Projected Return on the Market based on the S&amp;P 500</b>				
Total return on the Market based on the S&P 500:	16.42 %	16.42 %	16.42 %	16.42 %
Projected Risk-Free Rate (see note 2):	2.49	3.33	3.30	3.60
MRP based on Value Line data	13.93 %	13.09 %	13.12 %	12.82 %
<b>Measure 6: Bloomberg Projected MRP</b>				
Total return on the Market based on the S&P 500:	13.93 %	13.93 %	13.93 %	13.93 %
Projected Risk-Free Rate (see note 2):	2.49	3.33	3.30	3.60
MRP based on Bloomberg data	11.44 %	10.60 %	10.63 %	10.33 %
<b>Average of Value Line, Ibbotson, and Bloomberg MRP:</b>	<b>10.50 %</b>	<b>9.93 %</b>	<b>9.95 %</b>	<b>9.74 %</b>

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**Carolina Water Service**  
of North Carolina™

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## About Carolina Water Service of North Carolina

Carolina Water Service of North Carolina is a private water and wastewater utility provider. We take great pride in delivering safe and reliable utility services to residential and commercial customers in 38 counties across North Carolina.

But our commitment goes beyond providing essential utility services. We care about the health and wellbeing of our customers, employees, and our environment. And we actively contribute to the communities where we live and work. This commitment is expressed in our Company Purpose.

***"We help people enjoy a better life and communities thrive."***

You can learn more about us and the work we do in your community by following our [News \(/carolinawater/news\)](/carolinawater/news) page.

## Your Utility at a Glance

Carolina Water Service has been providing utility services for over 50 years, and all our activities are regulated by the [North Carolina Utilities Commission \(https://www.ncuc.net/index.html\)](https://www.ncuc.net/index.html) and [North Carolina Department of Environmental Quality \(https://deq.nc.gov/\)](https://deq.nc.gov/). We employ utility professional who are a part of the community, and our head office is located in Charlotte.

# Drinking Water Infrastructure



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Production Capacity  
**11,850,480 MGD**



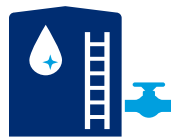
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Distribution Mains  
**516 miles**



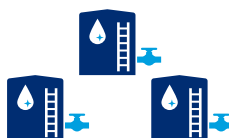
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Potable Wells  
**284 Wells**



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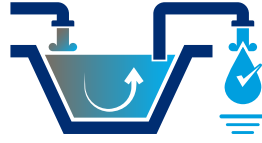
Storage Capacity  
**8,383,115 MG**



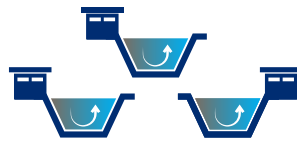
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Storage Tanks  
**229 Tanks**

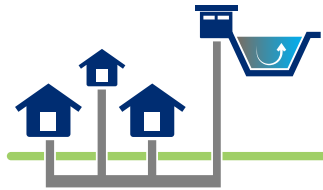
## Wastewater Infrastructure



Treatment Capacity  
**6,858,694 MGD**



Treatment Plants  
**24 Plants**



Collection Mains  
**63.9 miles**

## Investing in Your Utility

We're committed (and obligated by regulators) to invest in older systems to bring them up to modern standards, and maintaining all systems in optimal operating condition through upgrade and replacement programs. To that end, Carolina Water Service of North Carolina has invested over \$20 million in capital improvements since its last rate case.

Even the smallest utility systems require significant investments. But unlike other public infrastructure – roads, bridges, airports, transit, etc. – most water and wastewater infrastructure is never seen, yet we rely on it 24/7. Learn more about [how utility systems work \(/carolinawater/water-smart/utility-systems\)](https://carolinawater.com/water-smart/utility-systems).

# Our Service Areas

We provide utility services to these North Carolina communities.

- Abington
- Amber Acres
- Amber Acres North
- Amber Ridge
- Amherst
- Ashley Hills
- Bahia Bay
- Bear Paw
- Beechbrook
- Belvedere Plantation
- Bent Creek
- Blue Ridge Manor - Ashe Lake - Beaver Creek
- Blue Ridge Manor - Ashe Lake - Holiday Ln
- Blue Ridge Manor - Ashe Lake - Nikanor
- Bradfield Farms
- Brandywine Bay
- Buffalo Creek
- Carolina Forest
- Carolina Trace
- Chapel Hills
- College Park
- Connestee Falls
- Country Club Annex
- Country Cross
- Country Hills - Lemmond Acres
- Crestview Estates
- Crystal Mountain
- Eagles Crossing
- Eastgate
- Eastwood Forest
- Elk River
- Fairfield Harbour
- Fairfield Mountain
  
- Fairfield Sapphire
- FFM Apple Valley
- Forest Hills



- Forestbrook
- Grandview
- Harbor House
- Harbour Point Farm
- Heather Glen
- Heathfield
- Hidden Hollow
- High Meadows
- High Vista
- Holly Acres
- Hound Ears
- Huntington Forest
- Jordan Woods
- Kings Grant
- Larkhaven
- Lindsey Point
- Linville Ridge
- LVS-Danby
- Mason Landing
- Meadow Glen
- Misty Mountain
- Monterrey
- Mountain Air
- Mt Mitchell
- Neuse Woods
- Oakdale Terrace
- Oakes Plantation
- Olde Lamp Place
- Olde Pointe
- Pinnacle Shores
- Powder Horn
- Quail Ridge
- Queens Harbor
- Ransdell Forest
- Riverbend Estates
- Riverpointe
  
- Riverwood
- Rutledge Landing North
- Saddlewood

- Sandy Trail
- Sherwood Forest
- Sherwood Park
- Silverton
- Ski Country
- Ski Mountain
- Stewarts Ridge
- Stone Hollow
- Suburban Heights
- Sugar Mountain
- Tanglewood Estates
- Tanglewood South
- The Ridges
- Treasure Cove
- Tuckahoe
- Watauga Vista
- Waterglyn
- Westwood Forest
- Whispering Pines
- White Oak Plantation
- Wilders Village
- Wildlife Bay
- Wildwood Green
- Willowbrook
- Winston Plantation
- Winston Pointe
- Wolf Laurel
- Wood Trace
- Woodhaven
- Woodrun
- Yorktown
- Zemoso Acres



# Manage Your Utility Account Anytime Anywhere!

Manage Your Account, pay your bill, receive notifications and more ...

[Learn More & Register \(/carolinawater/account-billing/my-utility-connect\)](/carolinawater/account-billing/my-utility-connect)

[Account Login](#)



<https://apps.apple.com/ca/app/my-utility-connect/id1447552942>



[https://play.google.com/store/apps/details?id=com.wsc.scm\\_mobile&hl=en&gl=US](https://play.google.com/store/apps/details?id=com.wsc.scm_mobile&hl=en&gl=US)

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## Customer Service

(800) 525-7990 (M-F, 8 AM to 5 PM Eastern)

[Contact Us Online \(/my-utility-contact-us\)](/my-utility-contact-us)

## Emergencies

(800) 525-7990 (24 Hours)



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of North Carolina™

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Corporation

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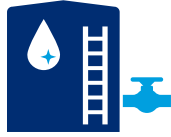
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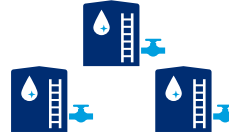
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**Storage Capacity**  
**10 MG**  
37,854 m<sup>3</sup>



**Storage Tanks**  
**115 Tanks**

## The Case for Regulated Water Companies

Private water and wastewater utility ownership and management is an increasingly viable solution for communities navigating the challenges of providing safe, reliable utility services.

### Closing the Infrastructure Gap

Many community utilities are grappling with the complex issues of aging infrastructure, rising operational costs, and increasingly stringent regulatory and environmental requirements. In fact, the US Environmental Protection Agency estimates \$472.6 Billion in additional water infrastructure investment will be required over the next 20 years. Managing this scale of investment and risk requires specialized experience and expertise.

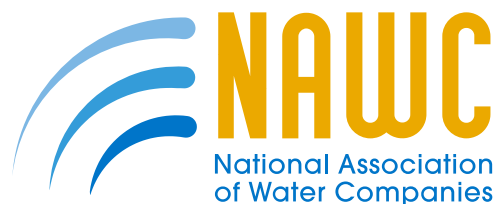


### Water and Wastewater Utilities Are Regulated

Virtually all private utility systems are regulated by government mandate, and regulation touches every aspect of systems design, operation, and service delivery, including the setting of user rates.

Water and wastewater utilities are monopolies by nature, but are strictly regulated to ensure services meet jurisdictional standards and rates are fair and reasonable. Communities always have a voice in the operation of their utilities, whether public or private.

Learn more about the benefits of regulated water companies at the National Association of Water Companies (NAWC) [website](#).



## The Corix Advantage

At Corix, we believe in building strong community relationships to deliver long-term, cost effective, and efficient essential utility services. Our growing list of water systems is a direct result of matching the right resources – human, financial, technological – to local requirements.

### We're Local

As our name suggests, Corix is a *group* of companies, who leverage shared economies and efficiencies, but provide localized services through regional and state operations. Local operations are backed-up by regional and national teams, which provides operational redundancy and risk mitigation in emergencies, such as severe weather events.

So choosing Corix brings the full breadth of our North American resources, expertise, and on-the-ground know-how to your local utility.



### Our People Are Everything

We take great pride in our greatest strength – our people. Our North American team numbers over 800 professionals working in all areas of utility infrastructure management. And we're proud to have one of North America's largest private workforces of qualified water and wastewater systems operators and technicians.

Our lean and agile management, coupled with locally focused operations, lets us take advantage of human resources and efficiencies simply unavailable to smaller utilities. Even our smallest systems have the support of industry leading professionals in areas such as finance, regulation, technology, engineering, safety, and environment.

Investing in our people never stops, and we ensure all our teams are continually trained in the latest operational, safety, and environmental standards and protocols.

Our **Purpose** — *"We help people enjoy a better life and communities thrive."* — inspires our people to care for the communities they serve. Our **Core Values** of **Safety**, **Integrity**, **Connection**, and **Excellence**, underpin our daily activities, and we apply them consistently across all operations.



## Utilities is Our Only Business

With over 20 years of experience in the utility industry, Corix knows community utilities.

Water and wastewater are at the core of our business, and unlike some of our competitors, we offer these services separately or combined. The ability to bundle services can produce significant operating efficiencies and economies of scale. As a result, most of our customers enjoy one-supplier water and wastewater services.

We also own and operate several systems that enjoy multi-utility services – typically water and wastewater together with one or more of gas, electricity, or geothermal. And we're always looking for new, innovative ways to provide essential utility services to the communities we serve.

## We Invest for the Long-Term

A reliable, stable source of financing and capital is key to maintain utility services, implement major system improvements, or build new infrastructure. Corix has that financial expertise, with access to non-traditional sources of capital, and the ability to unlock the equity value of existing capital assets. We're able to do that because we're backed by the **British Columbia Investment Management Corp.** (BCI), one of North America's largest asset management companies.





## We Embrace Technology

Corix applies industry-leading technologies to manage our systems, resources, and information. Our seamless integration of these platforms results in quality utility services for our customers.

### **Computerized Maintenance and Management System**

Lowers costs and improves customer service

### **Geographic Information System**

Helps keep systems running efficiently and reliably, and quickly respond to any issues

### **Asset Management**

Manages maintenance and end-of-life replacement for highest value to customers

### **Supervisor Control and Data Acquisition**

Realtime control and monitoring to lower costs, and enhance safety and security

### **Customer Care and Billing**

Billing and call center support integrated with online customer services

Our command of these technologies ensures efficiency, safety, health and environmental compliance, and the provision of quality, essential utility services for customers at fair and reasonable rates.

## We're Customer Experience Focused

Customers shouldn't have to worry about their utility services. Our approach to providing customer care services is to ensure customers stay happy, while providing communities with reliability, accountability, regulatory compliance, and risk management. We provide:

Customer billing, payment, and collections services

24/7 Call Center and online account services

Informational and communications services

Emergency response



## We Care Deeply About Health, Safety, and the Environment

The protection and enhancement of the health, safety, and environment of the communities where we live and work is deeply engrained into our culture.

We apply technologies to meet and exceed the strictest health and environmental standards

We proactively test for and treat pathogens and contaminants

We strive to use environmentally friendly chemicals in our treatment processes

We continually inform and train our personnel in safety, health, and environmental protocols

We take cyber security concerns seriously and have implemented security measures to ensure the safety of our utility systems

## We Have the Regulatory Know-How

With regulated water, wastewater, and energy operations throughout the United States and Canada, we're experts in all things regulatory. Corix companies have the experience, relationships, and resources needed to anticipate and address all regulatory requirements.



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2,502 km

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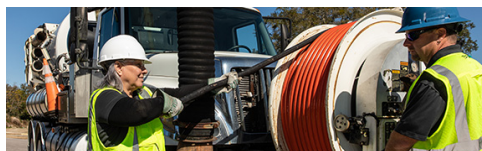
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### We're Local

As our name suggests, Corix is a *group* of companies, who leverage shared economies and efficiencies, but provide localized services through regional and state operations. Local operations are backed-up by regional and national teams, which provides operational redundancy and risk mitigation in emergencies, such as severe weather events.

So choosing Corix brings the full breadth of our North American resources, expertise, and on-the-ground know-how to your local utility.



### Our People Are Everything

We take great pride in our greatest strength – our people. Our North American team numbers over 800 professionals working in all areas of utility infrastructure management. And we're proud to have one of North America's largest private workforces of qualified water and wastewater systems operators and technicians.

Our lean and agile management, coupled with locally focused operations, lets us take advantage of human resources and efficiencies simply unavailable to smaller utilities. Even our smallest systems have the support of industry leading professionals in areas such as finance, regulation, technology, engineering, safety, and environment.

Investing in our people never stops, and we ensure all our teams are continually trained in the latest operational, safety, and environmental standards and protocols.

Our **Purpose** — *"We help people enjoy a better life and communities thrive."* — inspires our people to care for the communities they serve. Our **Core Values** of *Safety, Integrity, Connection,* and *Excellence*, underpin our daily activities, and we apply them consistently across all operations.



## Utilities is Our Only Business

With over 20 years of experience in the utility industry, Corix knows community utilities.

Water and wastewater are at the core of our business, and unlike some of our competitors, we offer these services separately or combined. The ability to bundle services can produce significant operating efficiencies and economies of scale. As a result, most of our customers enjoy one-supplier water and wastewater services.

We also own and operate several systems that enjoy multi-utility services – typically water and wastewater together with one or more of gas, electricity, or geothermal. And we’re always looking for new, innovative ways to provide essential utility services to the communities we serve.

## We Invest for the Long-Term

A reliable, stable source of financing and capital is key to maintain utility services, implement major system improvements, or build new infrastructure. Corix has that financial expertise, with access to non-traditional sources of capital, and the ability to unlock the equity value of existing capital assets. We’re able to do that because we’re backed by the [British Columbia Investment Management Corp.](#) (BCI), one of North America’s largest asset management companies.



## We Embrace Technology

Corix applies industry-leading technologies to manage our systems, resources, and information. Our seamless integration of these platforms results in quality utility services for our customers.

### **Computerized Maintenance and Management System**

Lowers costs and improves customer service

### **Geographic Information System**

Helps keep systems running efficiently and reliably, and quickly respond to any issues

### **Asset Management**

Manages maintenance and end-of-life replacement for highest value to customers

### **Supervisor Control and Data Acquisition**

Realtime control and monitoring to lower costs, and enhance safety and security

## Customer Care and Billing

Billing and call center support integrated with online customer services

Our command of these technologies ensures efficiency, safety, health and environmental compliance, and the provision of quality, essential utility services for customers at fair and reasonable rates.

## We're Customer Experience Focused

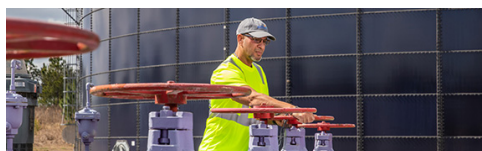
Customers shouldn't have to worry about their utility services. Our approach to providing customer care services is to ensure customers stay happy, while providing communities with reliability, accountability, regulatory compliance, and risk management. We provide:

Customer billing, payment, and collections services

24/7 Call Center and online account services

Informational and communications services

Emergency response



## We Care Deeply About Health, Safety, and the Environment

The protection and enhancement of the health, safety, and environment of the communities where we live and work is deeply engrained into our culture.

We apply technologies to meet and exceed the strictest health and environmental standards

We proactively test for and treat pathogens and contaminants

We strive to use environmentally friendly chemicals in our treatment processes

We continually inform and train our personnel in safety, health, and environmental protocols

We take cyber security concerns seriously and have implemented security measures to ensure the safety of our utility systems

## We Have the Regulatory Know-How

With regulated water, wastewater, and energy operations throughout the United States and Canada, we're experts in all things regulatory. Corix companies have the experience, relationships, and resources needed to anticipate and address all regulatory requirements.







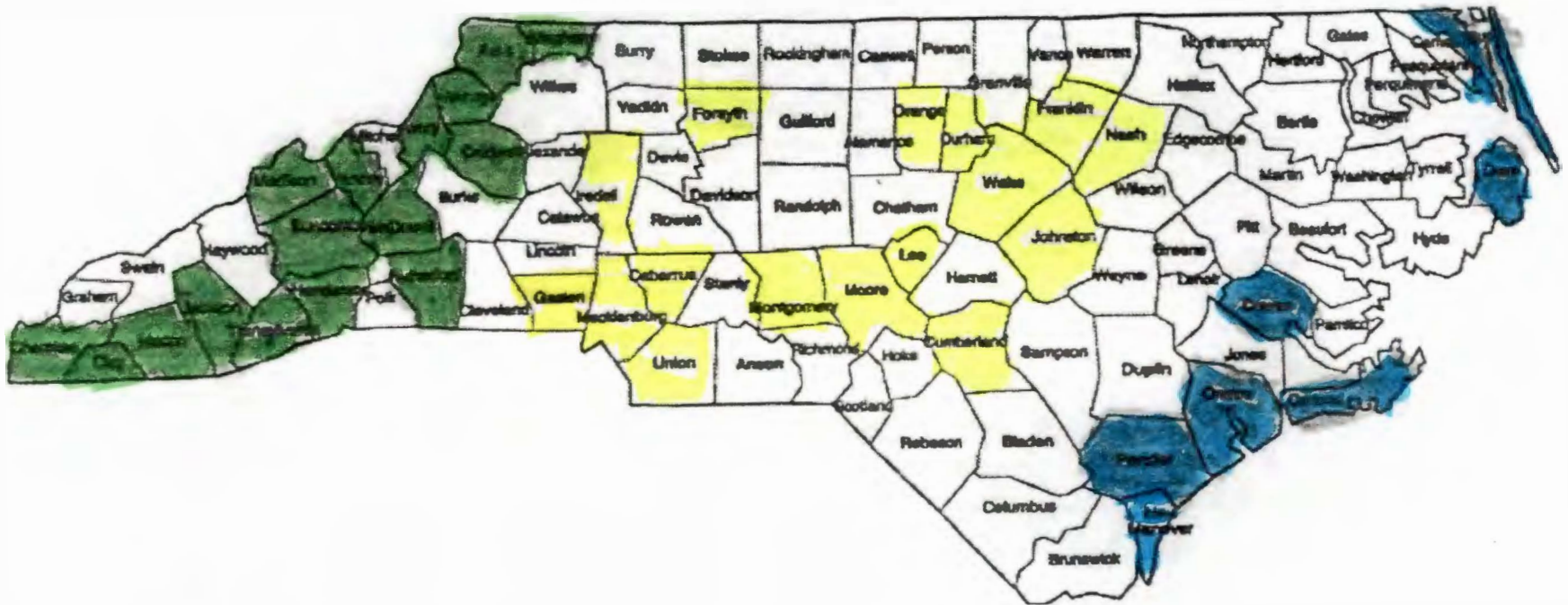
Carolina Water Service, Inc. of North Carolina  
W-354, Sub 400  
Test Year: March 31, 2022  
WSIP Period: April 1, 2023 - March 31, 2026




Docket No. W-354, Sub 400  
Appendix 8  
Schedule G  
Page 1 of 1

Counties in which Water and Sewer service is provided:

<u>County</u>	<u>Water</u>	<u>Sewer</u>
Alleghany	W	
Ashe	W	
Avery	W	S
Buncome	W	S
Cabarrus	W	
Caldwell	W	
Carteret	W	S
Cherokee	W	S
Clay	W	S
Craven	W	S
Cumberland	W	
Currituck		S
Dare		S
Durham	W	
Forsyth	W	S
Franklin	W	
Gaston	W	S
Henderson	W	
Iredell	W	S
Jackson	W	S
Johnston	W	S
Lee	W	S
Macon	W	
Madison	W	S
McDowell	W	
Mecklenburg	W	S
Montgomery	W	
Moore	W	
Nash	W	
New Hanover	W	
Onslow		S
Pender	W	S
Rutherford	W	S
Transylvania	W	S
Union	W	S
Wake	W	S
Watauga	W	S
Yancey	W	S

# Counties Served by CWSNC



-  Mountain Counties
-  Piedmont Counties
-  Coastal Counties

COMMISSION APPROVED COMMON EQUITY RATIOS & ROEs

State	Utility	Docket No.	Order date	Equity Ratio	Return on Equity
IA	Iowa American Water Co.	RPU-2013-0002	2/28/14	52.57%	9.41%
NC	Carolina Water Service of NC	W-354, Sub 336	3/10/14	50.27%	9.75%
NC	Aqua North Carolina	W-218, Sub 363	5/2/14	50.00%	9.75%
HI	Waikoloa Utilities	2011-0331	5/23/14	50.00%	9.89%
NJ	Middlesex Water Co.	WR-13111059	8/18/14	50.71%	9.75%
NY	SUEZ Water New York Inc.	13-W-0295	8/24/14	44.00%	9.20%
NY	SUEZ Water Westchester	13-W-0584	8/24/14	47.00%	9.20%
DE	Tidewater Utilities, Inc.	13-466	8/19/14	50.96%	9.75%
NJ	Aqua New Jersey	WR-14010019	8/20/14	52.47%	9.75%
OH	Aqua Ohio Water Co.	13-2124-WW-AJR	9/10/14	51.60%	9.80%
NY	SUEZ Water New Rochelle, Inc.	13-W-0889	11/14/14	47.00%	9.20%
Average				49.89%	9.69%
HI	Waikoloa Water	2012-0148	2/19/15	50.00%	9.89%
ME	Maine Water	2014-00349	3/11/15	48.50%	9.50%
IL	Aqua Illinois	14-0419	3/25/15	53.26%	9.81%
HI	Kona Water Service	2013-0375	6/29/15	53.00%	10.10%
NJ	SUEZ Toms River	WR-15020269	8/19/15	53.00%	9.75%
NJ	Middlesex Water Co.	WR-15030391	8/19/15	51.36%	9.75%
NJ	New Jersey American Water Co.	WR-15010035	9/11/15	52.00%	9.75%
NC	Carolina Water Service of NC	W-354, Sub 344	12/7/15	51.00%	9.75%
Average				51.52%	9.79%
VA	Aqua Virginia, Inc.	PUE-2014-00045	1/7/16	49.20%	9.25%
DE	Artesian Water	14-132	1/19/16	50.54%	9.75%
NV	Utilities, Inc. of Central Nevada	15-06063	1/25/16	49.45%	9.50%
WV	West Virginia American Water Co.	15-0678-W-42T	2/24/16	45.84%	9.75%
NC	CWS Systems, Inc.	W-778 Sub 91	2/24/16	51.00%	9.75%
NJ	SUEZ New Jersey Inc	WR-15101177	4/27/16	53.00%	9.75%
NJ	Aqua New Jersey	WR18010089	8/9/16	52.86%	9.75%
HI	Hawaii Water Service	2015-0230	9/12/16	53.00%	10.1%
IL	Illinois American Water Co.	16-0093	12/3/16	49.80%	9.79%
Average				50.62%	9.71%
NY	SUEZ Water New York	C-16-W-0130	1/27/17	46.00%	9.0%
IA	Iowa American Water	D-RPU-2016-0002	2/27/17	52.04%	9.6%
NY	New York American Water Co.	C-16-W-0259	5/18/17	46.00%	9.1%
VA	Virginia American Water	C-PUE-2015-00097	5/24/17	46.09%	9.3%
NC	Carolina Water Service, Inc. of NC	W-354 Sub 356	11/9/17	52.00%	9.6%
Average				48.43%	9.31%
IL	Aqua Illinois	D-17-0259	3/7/18	53.22%	9.80%
CA	California American Water Co.	A17-04-003	3/22/18	55.39%	9.20%
CA	California Water Service Co	A17-04-006	3/22/18	53.40%	9.20%
CA	Golden State Water Co.	A17-04-002	3/22/18	57.00%	8.90%
CA	San Jose Water Co.	A17-04-001	3/22/18	53.26%	8.90%
NJ	Middlesex Water Co.	D-WR-17-101049	3/24/18	52.75%	9.60%
SC	Carolina Water Service, Inc.	D-2017-292-WS	5/2/18	61.89%	10.50%
NY	SUEZ Water Owego-Nicots Inc.	C-17-W-0528	7/13/18	46.00%	8.90%
IL	Utility Services of IL, Inc. Water	D-17-1106	9/24/18	52.15%	9.23%
IL	Utility Services of IL, Inc. Water/Water	D-17-1106	9/24/18	52.15%	9.31%
RI	Suez Water Rhode Island	D-R-4800	10/5/18	53.91%	9.40%
NJ	New Jersey American Water	D-WR-17-090985	10/29/18	54.00%	9.60%
MD	Aquarion Water Co. of Mass.	D.P.U. 17-90	10/31/18	47.04%	10.50%
NJ	SUEZ Water New Jersey	D-WR-18050593	11/19/18	54.00%	9.60%
NC	Aqua North Carolina	D-W-218, Sub 497	12/18/18	50.00%	9.70%
CA	Suburban Water Systems	A-18-05-004	12/20/18	60.00%	9.25%
VA	Massanutten Public Service Corp.	C-PUR-2017-00089	12/31/18	52.19%	9.25%
Average				52.86%	9.46%
HI	Hawaii Water Service	D-2017-0350	1/7/19	53.40%	9.20%
MD	Maryland American Water	C-9487	2/5/19	48.86%	NA
WV	West Virginia American Water Co	C-18-0573-W-42T	2/8/19	49.79%	9.75%
NC	Carolina Water Service of NC	D-W-354, Sub 380	2/21/19	50.91%	9.75%
NJ	Aqua New Jersey	WR-18121351	5/28/19	53.00%	9.60%
KY	Kentucky American Water Co.	2018-00358	9/27/19	48.76%	9.70%
Average				60.76%	9.60%
Average of Annual Averages				60.81%	9.57%
Average Across Years				51.04%	9.57%

Three Year

Source: RRA

Average of 30 ROE decisions 7-1-2016 through 6-30-19 = 9.50%

W-354, SUB 400  
PUBLIC STAFF  
D'ASCENDIS PROPOSED CROSS EXHIBIT NO. 14

OFFICIAL COPY  
Nov 22 2022

UTILITIES, INC. AND SUBSIDIARY COMPANIES

CONSOLIDATED STATEMENTS OF CAPITALIZATION  
AS OF AUGUST 31, 2022 AND DECEMBER 31, 2021

	Unaudited August 31, 2022	December 31, 2021			Actual Rate	Blended Rates
<b>COMMON SHAREHOLDERS' EQUITY:</b>			Libor	8,000,000	3.86%	0.05%
Common shares, \$.10 par value; authorized and issued 1,100 shares	\$ 110	\$ 110	Long-term debt (\$50M) - 6/22	49,855,375	3.88%	0.52%
Paid-in capital	257,265,034	237,265,034	Long-term debt (\$50M) - 5/20	49,787,873	3.15%	0.42%
Retained earnings	124,759,970	108,281,563	Long-term debt (\$50M) - 5/20	49,767,345	3.35%	0.45%
			Long-term debt (\$180M) - 7/06	125,411,097	6.58%	2.21%
<b>TOTAL COMMON SHAREHOLDERS' EQUITY</b>	<b>\$ 382,025,114</b>	<b>\$ 345,546,707</b>	Long-term debt (\$100M) - 10/18	99,614,166	4.37%	1.16%
			<b>Equity</b>	<b>382,025,114</b>	<b>50.40%</b>	<b>4.75%</b>
			<b>Total Capital</b>	<b>756,460,971</b>	<b>100.00%</b>	
<b>LONG-TERM DEBT:</b>			LTD	374,435,856		
Collateral trust notes-			LTD + Libor	382,435,856		
6.58%, \$9,000,000 due in annual installments beginning in 2017 through 2035	\$ 367,000,000	\$ 326,000,000				
Debt financing cost	\$ (1,564,144)	\$ (1,501,429)				
<b>TOTAL LONG-TERM DEBT</b>	<b>\$ 365,435,856</b>	<b>\$ 324,498,571</b>				
Less-Current maturities	-	-				
<b>TOTAL LONG-TERM DEBT, NET</b>	<b>\$ 365,435,856</b>	<b>\$ 324,498,571</b>				
<b>CAPITALIZATION, exclusive of short-term financing</b>	<b>\$ 747,460,971</b>	<b>\$ 670,045,278</b>				

(1) Blended interest rate is calculated by dividing each note amount by total debt, multiplied by the interest rate on the note. The weighted rates are added together to calculate the total blended rate.

The accompanying notes to consolidated financial statements are an integral part of these statements.

Carolina Water Service Inc. of North Carolina  
Market Capitalization of Carolina Water Service Inc. of North Carolina and the  
Proxy Group of Six Water Companies

Company	Exchange	[1] Common Stock Shares Outstanding at Fiscal Year End 2021 (millions)	[2] Book Value per Share at Fiscal Year End 2021 (1)	[3] Total Common Equity at Fiscal Year End 2021 (millions) <i>Aug 31 2022</i>	[4] Closing Stock Market Price on October 14, 2022	[5] Market-to-Book Ratio on October 14, 2022 (2)	[6] Market Capitalization on October 14, 2022 (3) (millions)
Carolina Water Service Inc. of North Carolina		NA	NA	\$ <del>96,888</del> <i>382.025(4)</i>	NA		<i>1,465,373</i>
Based upon Proxy Group of Six Water Companies						283.9 (5)	\$ <del>275,065</del> (6)
Proxy Group of Six Water Companies							
American States Water Company	NYSE	36.936	\$ 18.571	\$ 685.947	\$ 84.880	457.1 %	\$ 3,135.152
American Water Works Company, Inc.	NYSE	181.611	40.185	7,298.000	128.440	319.6	23,326.128
California Water Service Group	NYSE	53.716	22.023	1,182.980	54.670	248.2	2,936.654
Essential Utilities Inc.	NYSE	252.868	20.503	5,184.450	39.910	194.7	10,091.947
Middlesex Water Company	NASDAQ	17.522	20.987	367.726	81.020	386.0	1,419.632
SJW Group	NYSE	30.181	34.277	1,034.519	62.200	181.5	1,877.280
Median		45.326	\$ 21.505	\$ 1,108.750	\$ 71.610	283.9 %	\$ 3,035.903

NA= Not Available

Notes: (1) Column 3 / Column 1.

(2) Column 4 / Column 2.

(3) Column 1 \* Column 4.

(4) Combined book common equity from Company 2021 annual report filed with the Commission.

(5) The market-to-book ratio of Carolina Water Service Inc. of North Carolina on October 14, 2022 is assumed to be equal to the market-to-book ratio of Proxy Group of Six Water Companies on October 14, 2022 as appropriate.

(6) Column [3] multiplied by Column [5].

Source of Information: 2021 Annual Forms 10K  
Bloomberg Financial Services

*(4) Common Equity Utilities, Inc  
and Subsidiaries 31 August 2022*

## RRA REGULATORY FOCUS

**Authorized water ROEs remain above 2021 levels, based on small dataset**

Tuesday, November 8, 2022 10:15 AM ET

By Heike Doerr

Market Intelligence

In the first nine months of 2022, seven water utility rate cases were completed with an average return on equity of 9.59%, as monitored by Regulatory Research Associates.

**The Take**

\* While the average electric and gas authorized ROEs remained near all-time lows in the first nine months of 2022, the average has remained higher than 2021 for the water utility group, albeit based on a small sample set. Base rate proceedings for RRA-tracked water utilities across seven states were completed from January to September, with returns on equity ranging from 9.1% to 10.0%.

\* Ten major water utility rate cases were completed in 2021. Cost-of-capital parameters and authorized rate base values were disclosed in just half of these proceedings, however, with an average ROE of 9.46%.

\* The average ROE authorized electric distribution-only utilities was 9.13% in rate cases decided in the first nine months of 2022, up from the 9.04% average for full year 2021. The average ROE authorized gas utilities was 9.42% in cases decided in the same period of 2022 versus 9.56% for full year 2021.

For the trailing 12 months ended Sept. 30, 10 water utility rate cases were completed, with the cost of capital parameters disclosed in nine proceedings and the ROE authorization averaging 9.58%.

At the low end, the New Hampshire Public Utilities Commission authorized Eversource Energy subsidiary Aquarion Water Co. of New Hampshire Inc. a 9.1% ROE in a settled proceeding completed in July.

In a litigated proceeding, the Pennsylvania Public Utility Commission authorized Essential Utilities Inc. subsidiaries Aqua Pennsylvania Inc. and Aqua Pennsylvania Wastewater Inc. a 10.0% return on equity, which included a 25-basis-point management performance bonus. The PUC has granted management performance adjustments to ROE in previous rate cases, ranging from 5 to 25 basis points.

As shown in the table below, the common equity component of capital across rate proceedings over the trailing 12 months ended Sept. 30 ranged from 47.78% to 54.56%.

**Water utility rate case decisions – trailing twelve months, Sept. 30, 2022**

Date	Company	State	ROR (%)	ROE (%)	Common equity as percent of capital	Rate base (\$M)	Test year end
Sep. 21, 2022	Aqua Ohio	OH	6.78	9.50	52.10	265	Dec. 2021
Aug. 17, 2022	New Jersey American Water	NJ	7.01	9.60	54.56	4,146	Jun. 2022
Jul. 29, 2022	Aquarion Water Co. of New Hampshire	NH	7.54	9.10	54.42	29	Dec. 2019
May. 16, 2022	Aqua Pennsylvania Inc.	PA	7.24	10.00	53.95	3,810	Mar. 2023
Apr. 8, 2022	Carolina Water Service Inc. of North Carolina	NC	7.14	9.40	50.20	144	Mar. 2021
Apr. 7, 2022	The Maine Water Co. (Biddeford & Saco Division)	ME	6.29	9.70	50.03	NA	Dec. 2020
Feb. 24, 2022	West Virginia American Water Co.	WV	7.01	9.80	47.97	731	Dec. 2020
Dec. 15, 2021	Middlesex Water Co.	NJ	6.35	9.60	53.00	514	Sep. 2021
Dec. 1, 2021	Utility Services of Illinois Inc	IL	7.19	9.52	47.78	52	Dec. 2022
Nov. 18, 2021	California American Water Co.	CA	NA	NA	NA	668	Dec. 2021
<b>LTM</b>	<b>Average rate award</b>		<b>6.95</b>	<b>9.58</b>	<b>51.56</b>		

As of Nov. 3, 2022.

NA = not applicable or not available; ROR = return on rate base; ROE = return on equity.

Source: Regulatory Research Associates, a group within S&amp;P Global Commodity Insights.

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For additional details regarding water utility rate cases from 2010 through Sept. 30, 2022, please refer to this industry document.

**Comparison to electric, natural gas utilities**

For electric distribution-only cases, the industry average ROE was 9.13% in the first nine months of 2022 versus 9.04% in full year 2021. There were three electric ROE authorizations year-to-date compared with 10 in full year 2021.

The average authorized ROE for gas utilities was 9.42% in cases decided in the first nine months of 2022 versus 9.56% in full year 2021. Seventeen gas cases included an ROE determination year-to-date in 2022 versus 43 in full-year 2021.

For additional details on electric and natural gas utility rate decisions, refer to US energy ROE authorizations hit all-time lows as macroeconomic pressures mount.

*RRA currently evaluates water utility regulation in 25 state jurisdictions and monitors rate proceedings involving rate change requests of \$1.0 million or greater for the 12 largest investor-owned and privately held water utilities. The attached industry document provides data for over 175 rate proceedings currently*

*accumulated, spanning a period between January 2010 and September 2022. The simple mean is utilized for the return averages. The average equity returns indicated may not represent the returns earned by utilities industrywide as it does not include smaller proceedings and every jurisdiction overseeing water utilities*

*Regulatory Research Associates is a group within S&P Global Commodity Insights.*

*S&P Global Commodity Insights produces content for distribution on S&P Capital IQ Pro.*

*For a complete, searchable listing of RRA's in-depth research and analysis, please go to the S&P Capital IQ Pro Energy Research Library.*

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Nov 22 2022Mr. D'Ascendis Return on Equity Recommendations and Authorized Returns on Equity 2015 through 2019 Year-to-Date

Company Name	Case Number	State	D'Ascendis Percent Recommended ROE	Date Authorized	Percent Authorized ROE	Basis Points D'Ascendis Below Authorized ROE
Middlesex Water Company	WR15030391	NJ	10.40	7/27/2015	9.75 <sup>(1)</sup>	65
Utility Services of Illinois, Inc.	14-0741	IL	N/A	9/22/2015	N/A <sup>(1)</sup>	
Carolina Water Service, Inc.	2015-199-WS	SC	10.00-10.50	12/22/2015	9.34 <sup>(1)</sup>	91
Aqua Indiana, Inc. Aboite Wastewater Division	44752	IN	10.15-10.70	8/4/2016	9.70 <sup>(1)</sup>	72
Aqua Ohio, Inc.	16-0907-WW-AIR	OH	10.25-10.65	2/14/2017	9.87 <sup>(1)</sup>	58
Raccoon Creek Utility Operating Company, Inc.	SR-2016-0202	MO	15.75	10/17/2016	12.15 <sup>(1)</sup>	360
Aqua Illinois, Inc.	17-0259	IL	10.85	3/2/2018	9.60 <sup>(1)</sup>	125
Aqua Virginia, Inc.	PUR-2017-00082	VA	10.60	10/19/2018	9.25 <sup>(1)</sup>	135
Columbia Water Company	R-2017-2598203	PA	11.30	3/1/2018	N/A <sup>(1)</sup>	
Middlesex Water Company	WR17101049	NJ	10.70	3/6/2018	9.60 <sup>(1)</sup>	110
Indian Hills Utility Operating Company, Inc.	WR-2017-0259	MO	15.20	11/21/2017	12.00 <sup>(1)</sup>	220
Kaupulehu Water Company	2016-0363	HI	11.60	Ongoing		
Carolina Water Service, Inc.	2017-292-WS	SC	10.45-10.95	5/26/2018	10.50	20
Colorado Natural Gas Company	18AL-305G	CO	11.75-11.90	10/10/2018	10.30 <sup>(1)</sup>	152
SUEZ Water Pennsylvania, Inc.	R-2018-3000834	PA	10.40-11.50	10/10/2028	N/A <sup>(1)</sup>	N/A
Aqua North Carolina, Inc.	W-218, Sub 497	NC	10.80	12/18/2018	9.70	110
Arizona Water Company - Northern Group	W-01445A-18-0164	AZ	10.80-11.35	8/19/2019	9.33	174
Carolina Water Service, Inc. of North Carolina	W-354, Sub 360	NC	10.80-11.20	2/21/2019	9.75	125
Aqua New Jersey, Inc.	WR18121351	NJ	10.45	5/8/2019	9.60 <sup>(1)</sup>	85
Carolina Water Service, Inc. of North Carolina	W-354, Sub 364	NC	10.75	Ongoing		

Average Authorized ROE Basis Points below Mr. D'Ascendis Recommended ROE = 127 basis points

N/A: Not Applicable

<sup>(1)</sup> Result is a product of a settlement/stipulation.

Source: CWSNC Response to Public Staff Data Request 14.2

Note: Where Mr. D'Ascendis recommended a range for ROE, the midpoint of the range used for calculations.



D’Ascendis Proxy Companies  
Approved ROEs – Last Three Years

<u>Company</u>	<u>Decision Date</u>	<u>Approved ROE</u>
Illinois American Water Co.	12-13-16	9.80%
Iowa American Water Co.	2-27-17	9.60%
New York American Water Co.	5-18-17	9.10%
Virginia American Water Co.	5-24-17	9.30%
California American Water Co.	3-22-18	9.20%
California Water Service Co.	3-22-18	9.20%
Golden State Water Co.	3-22-18	8.90%
New Jersey American Water Co.	10-29-18	9.60%
West Virginia American Water Co.	2-8-19	9.75%
Kentucky American Water Co.	6-27-19	9.70%
<b>3 Year Average</b>	<b>=</b>	<b>9.42%</b>

STATE CORPORATION COMMISSION

AT RICHMOND, NOVEMBER 29, 2017

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2017 NOV 29 A 9:04

APPLICATION OF

VIRGINIA ELECTRIC AND POWER COMPANY

CASE NO. PUR-2017-00038

For the determination of the fair rate of return on common equity to be applied to its rate adjustment clauses

FINAL ORDER

On March 31, 2017, Virginia Electric and Power Company ("Dominion" or "Company") filed with the State Corporation Commission ("Commission") an application ("Application") for the determination of the fair rate of return on common equity ("ROE") to be applied to its rate adjustment clauses ("RACs") for the next two years pursuant to § 56-585.1:1 of the Code of Virginia ("Code").<sup>1</sup> Enacted in 2015, this provision of the Code requires that:

Commencing in 2017 and concluding in 2019, the State Corporation Commission, after notice and opportunity for a hearing, shall conduct a proceeding every two years to determine the fair rate of return on common equity to be used by a Phase II Utility as the general rate of return applicable to rate adjustment clauses under subdivisions A 5 or A 6 of § 56-585.1. A Phase II [U]tility's filing in such proceedings shall be made on or before March 31 of 2017 and 2019.<sup>2</sup>

The Company requests that the Commission approve an ROE of 10.5% for Dominion's RACs approved under Subdivision A 5 or A 6 of Code § 56-585.1, to be applied prospectively,

<sup>1</sup> Ex. 2 (Application) at 1.

<sup>2</sup> Code § 56-585.1:1 C 2. Dominion is a Phase II Utility. See Code § 56-585.1 A 1.

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effective with the date of the Commission's final order in this proceeding.<sup>3</sup> Dominion currently has a total of nine RACs subject to the ROE to be determined in this proceeding.<sup>4</sup>

On April 21, 2017, the Commission issued an Order for Notice and Hearing that, among other things, docketed the Application; required Dominion to publish notice of its Application; gave interested persons the opportunity to comment on or participate in the proceeding; and scheduled a public hearing. Notices of participation were filed in this proceeding by the Virginia Committee for Fair Utility Rates ("Committee") and the Office of the Attorney General's Division of Consumer Counsel ("Consumer Counsel"). On July 26, 2017, Consumer Counsel filed the testimony and exhibits of its witness. On August 9, 2017, the Commission's Staff ("Staff") filed the testimony and exhibits of its witness. On August 23, 2017, the Company filed rebuttal testimony. No public comments were received on the Application.

The Commission convened a hearing, as scheduled, on September 6, 2017. No public witnesses appeared to testify at the hearing. The Company, the Committee, Consumer Counsel and Staff participated at the hearing. During the hearing, the Commission received testimony from witnesses on behalf of the participants, admitted evidence on the Application, and received closing argument from counsel.

NOW THE COMMISSION, upon consideration of this matter, is of the opinion and finds as follows.

As noted above, the sole purpose of this case is a determination of the fair ROE to be used by Dominion as the general return applicable to RACs under subdivisions A 5 or A 6 of

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<sup>3</sup> Ex. 2 (Application) at 4.

<sup>4</sup> Dominion's RACs, and subsequent revisions thereto, approved under these statutes include Riders B, BW, C1/C2, GV, R, S, U, US-2, and W.

Code § 56-585.1 A.<sup>5</sup> "Such fair rate of return shall be calculated pursuant to the methodology set forth in subdivisions A 2 a and b of § 56-585.1. . . ."<sup>6</sup> Thus, the Commission follows a similar process in determining a fair ROE herein as has been done in prior proceedings using the methodology set forth in Code § 56-585.1 A 2 a and b. First, the Commission determines the market cost of equity. Next, the statutory peer group ROE floor is applied.

*Market Cost of Equity*

Company witness Hevert calculated Dominion's cost of equity to be between 10.25% and 10.75% and determined that, considering the economic requirements necessary to support continuous access to capital, an ROE of 10.5% represents Dominion's cost of equity.<sup>7</sup> Consumer Counsel witness Woolridge calculated Dominion's market cost of equity to be between 7.6% and 8.75% and determined that 8.75% represents Dominion's market cost of equity.<sup>8</sup> Staff witness Oliver calculated Dominion's market cost of equity to be between 8.25% and 9.25% and determined that establishing the Company's cost of capital at 9.1% was appropriate.<sup>9</sup> The Committee examined the testimony presented by Company witness Hevert, Staff witness Oliver, and Consumer Counsel witness Woolridge and recommended that the Commission adopt a market cost of equity that is no higher than the 9.1% recommended by Staff witness Oliver.<sup>10</sup>

The Commission finds that a market cost of equity within a range of 8.5% and 9.5% fairly represents the actual cost of equity in capital markets for companies comparable in risk to

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<sup>5</sup> Code § 56-585.1:1 C 2.

<sup>6</sup> Code § 56-585.1:1 C 3.

<sup>7</sup> Ex. 3 (Hevert Direct) at 4-50, 54-56.

<sup>8</sup> Ex. 4 (Woolridge Direct) at 1-82.

<sup>9</sup> Ex. 5 (Oliver Direct) at 1-16, 24-34.

<sup>10</sup> See Tr. 18.

Dominion seeking to attract equity capital. Furthermore, under the circumstances of this case and for purposes of implementing Code § 56-585.1:1, the Commission finds that using a cost of equity of 9.2% is fair and reasonable for these purposes. The Commission concludes that this return is supported by the evidence in the record, results in a fair and reasonable ROE, and satisfies the following constitutional standards as stated by Staff witness Oliver: "maintenance of financial integrity, the ability to attract capital on reasonable terms, and earnings commensurate with returns on investments of comparable risk."<sup>11</sup> Conversely, the Commission further finds that Dominion's proposed cost of equity of 10.25% to 10.75% represents neither the actual cost of equity in the marketplace nor a reasonable ROE for the Company.

We conclude that a market cost of equity of 9.2% is supported by reasonable proxy groups, growth rates, discounted cash flow ("DCF") methods, and risk premium analyses.<sup>12</sup> Indeed, we conclude that the evidence supports a market cost of equity at the midpoint of the range, *i.e.*, 9.0%. We find that approving an ROE above the midpoint of the range found reasonable (9.2%) is supported by the concept of gradualism in ROE determinations.

While the market cost of equity approved herein is supported by reasonable proxy groups, growth rates, DCF methods, risk premium analyses, and gradualism in ROE determinations, the Commission finds that Dominion's proposed market cost of equity of 10.5% is not supported by reasonable growth rates, DCF methods or risk premium analyses. For example, the Company continues to use only earnings per share as the measure of growth in its DCF model.<sup>13</sup> As the Commission has previously stated, using only earnings per share as the

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<sup>11</sup> Ex. 5 (Oliver Direct) at 4.

<sup>12</sup> *See, e.g.*, Ex. 5 (Oliver Direct) at 4-16, 24-34; Ex. 4 (Woolridge Direct) at 1-82.

<sup>13</sup> Ex. 3 (Hevert Direct) at 19-21; Ex. 4 (Woolridge Direct) at 68-70; Ex. 5 (Oliver Direct) at 26-27; Tr. 166-67.

measure of long-term growth results in unreasonably high growth rates that upwardly skew results.<sup>14</sup> Moreover, the Company's Capital Asset Pricing Model ("CAPM") analysis is also flawed. For example, the Company's highest ROE estimates result from the use of a 2019 projected 30-year Treasury bond yield of 4.2% and a 2021 projected 30-year Treasury bond yield of 4.4%.<sup>15</sup> The Commission has explicitly rejected the use of such projected interest rates in prior cases, stating that inclusion of these projected rates inflates the results of the utility's risk premium analysis.<sup>16</sup> In addition, the Company exclusively used earnings per share as the measure of long-term growth to develop the market risk premium component of its CAPM analysis, which results in an overstatement of the cost of equity.<sup>17</sup> The Company's Bond Yield Plus Risk Premium analysis contains similar flaws as its CAPM analysis.<sup>18</sup>

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<sup>14</sup> See, e.g., *Application of Virginia Electric and Power Company, For a 2013 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, Case No. PUE-2013-00020, 2013 S.C.C. Ann. Rept. 371, 374, Final Order (Nov. 26, 2013); *Application of Appalachian Power Company, For an increase in electric rates*, Case No. PUE-2006-00065, 2007 S.C.C. Ann. Rept. 321, 327, Final Order (May 15, 2007) (stating that significant biases were embodied in Appalachian Power Company's ("APCo") DCF analysis because the utility's growth rate "primarily emphasized projected earnings per share growth rates and ignored other projected rates of growth for dividends, book value, and retained earnings to estimate a long-term sustainable growth rate assumed by the DCF model and reflected in the rates developed by the other witnesses.").

<sup>15</sup> Ex. 3 (Hevert Direct) at 27; Ex. 9 (Hevert Rebuttal) at 96. Use of the 2021 projected 30-year Treasury bond yield of 4.4% in the Company's original CAPM analysis suggested an ROE range of 10.59% to 12.39%. Ex. 3 (Hevert Direct) at 27. In contrast, use of a current 30-year Treasury bond yield in the Company's original CAPM analysis suggested an ROE range of 9.26% to 11.06%. *Id.*

<sup>16</sup> See, e.g., *Application of Appalachian Power Company, For the determination of the fair rate of return on common equity to be applied to its rate adjustment clauses*, Case No. PUE-2016-00038, 2016 S.C.C. Ann. Rept. 393, 395, Final Order (Oct. 6, 2016); *Application of Aqua Virginia, Inc., For an increase in rates*, Case No. PUE-2014-00045, 2016 S.C.C. Ann. Rept. 206, 209, Final Order (Jan. 7, 2016); *Application of Appalachian Power Company, For an increase in electric rates*, Case No. PUE-2006-00065, 2007 S.C.C. Ann. Rept. 321, 327, Final Order (May 15, 2007). See also Ex. 5 (Oliver Direct) at 27-29.

<sup>17</sup> See, e.g., Ex. 3 (Hevert Direct) at 25-26, Schedule 2; Ex. 4 (Woolridge Direct) at 71-80; Ex. 5 (Oliver Direct) at 29-30.

<sup>18</sup> See Ex. 3 (Hevert Direct) at 27-30; Ex. 4 (Woolridge Direct) at 80-82; Ex. 5 (Oliver Direct) at 29-30.

Further, we reject claims that certain business risks facing Dominion warrant a 10.5% ROE.<sup>19</sup> For example, while Company witness Hevert claims that risks associated with the Company's anticipated capital expenditures warrant a 10.5% ROE, of the approximately \$8.5 billion of additional planned capital expenditures the Company anticipates making, the record indicates that Dominion plans to recover over \$5 billion of this projected amount through RACs, which permit the timely and current recovery of all reasonable and prudent costs on a dollar-for-dollar basis.<sup>20</sup>

Dominion suggests that its ROE should not be any lower than 9.4%.<sup>21</sup> The Commission first approved an ROE of 9.4% for Dominion in a February 16, 2017 Order issued in Case Nos. PUE-2016-00059, PUE-2016-00060, PUE-2016-00061, PUE-2016-00062 and PUE-2016-00063.<sup>22</sup> The midpoint of the range found reasonable in those cases was 9.0%. The Commission, however, did not direct an ROE of 9.0% but, rather, approved 9.4% based on the concept of gradualism in ROE cases. In addition, the Commission's decision in those proceedings was based on the record of evidence presented there, which reflects earlier financial data. For example, in those proceedings Staff and the Company relied upon financial data from late 2016.<sup>23</sup> In contrast, in the instant case, the Company updated its ROE results with financial data through July 2017.<sup>24</sup> Moreover, the record presented in this proceeding shows that

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<sup>19</sup> Ex. 3 (Hevert Direct) at 30-37; Ex. 5 (Oliver Direct) at 31-34.

<sup>20</sup> Ex. 3 (Hevert Direct) at 30-31; Ex. 5 (Oliver Direct) at 31.

<sup>21</sup> Tr. 17.

<sup>22</sup> See, e.g., *Application of Virginia Electric and Power Company d/b/a Dominion Virginia Power, For revision of rate adjustment clause: Rider S, Virginia City Hybrid Energy Center*, Case No. PUE-2016-00062, Doc. Con. Cen. No. 170220479, Order (Feb. 16, 2017).

<sup>23</sup> *Id.* at 11-12.

<sup>24</sup> See, e.g., Ex. 9 (Hevert Rebuttal) at Schedule 1.

Dominion's updated ROE results reflect a reduction in most of the values in its DCF, CAPM and risk premium results.<sup>25</sup>

*Statutory Peer Group*

Code § 56-585.1:1 C 3 states that Dominion's ROE "shall be calculated pursuant to the methodology set forth in subdivisions A 2 a and b of § 56-585.1...." Subdivisions A 2 a and b of Code § 56-585.1 require that the Commission calculate a statutory floor below which the authorized ROE cannot be set. Specifically, the Code states in relevant part:

a. The Commission may use any methodology to determine such return it finds consistent with the public interest, but such return shall not be set lower than the average of the returns on common equity reported to the Securities and Exchange Commission for the three most recent annual periods for which such data are available by not less than a majority, selected by the Commission as specified in subdivision 2 b, of other investor-owned electric utilities in the peer group of the utility subject to such biennial review, nor shall the Commission set such return more than 300 basis points higher than such average.

b. In selecting such majority of peer group investor-owned electric utilities, the Commission shall first remove from such group the two utilities within such group that have the lowest reported returns of the group, as well as the two utilities within such group that have the highest reported returns of the group, and the Commission shall then select a majority of the utilities remaining in such peer group. In its final order regarding such biennial review, the Commission shall identify the utilities in such peer group it selected for the calculation of such limitation. For purposes of this subdivision, an investor-owned electric utility shall be deemed part of such peer group if (i) its principal operations are conducted in the southeastern United States east of the Mississippi River in either the states of West Virginia or Kentucky or in those states south of Virginia, excluding the state of Tennessee, (ii) it is a vertically-integrated electric utility providing generation, transmission and distribution services whose facilities and operations are subject to state public utility regulation in the state where its principal operations are conducted, (iii) it had a long-term bond rating assigned by Moody's Investors Service of at least Baa at the end of the most recent test period subject to such biennial review, and (iv) it is not an affiliate of the utility subject to such biennial review.

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<sup>25</sup> Ex. 3 (Hevert Direct) at 23, 27, 30; Ex. 9 (Hevert Rebuttal) at 96.



The participants differed on which utilities should be included in the statutory peer group in this proceeding. First, Dominion excluded Mississippi Power Company ("Mississippi Power") from the statutory peer group solely because "its Moody's long term bond rating (Ba1) has dropped below the required level of at least Baa."<sup>26</sup> Staff and Consumer Counsel included Mississippi Power in their statutory peer group analyses because "Mississippi Power had a Moody's long-term bond rating of Baa3 at the end of the test period."<sup>27</sup>

Code § 56-585.1 A 2 b mandates that "an investor-owned electric utility shall be deemed part of such peer group if ... (iii) it had a long-term bond rating assigned by Moody's Investors Service of at least Baa at the end of the most recent test period subject to such biennial review...." Code § 56-585.1:1 C 3 states that the ROE "shall be calculated [utilizing] ... a 12-month test period ending December 31 immediately preceding the year in which the proceeding is conducted." Factually, December 31, 2014, is "the end of the most recent test period subject to [a] biennial review"<sup>28</sup> for Dominion. Calendar year 2016 is the "12-month test period ending December 31 immediately preceding the year in which the [present] proceeding is conducted."<sup>29</sup> Notably, under either plain language interpretation identified above, Mississippi Power's downgrade would not affect its inclusion in the statutory peer group because the downgrade occurred on March 1, 2017, which is clearly after the end of either review period.<sup>30</sup> The Commission therefore finds that, for purposes of this proceeding, Mississippi Power shall be considered part of the peer group.

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<sup>26</sup> Ex. 2 (Application) at Filing Schedule 45 - Statement 3A.

<sup>27</sup> Ex 4 (Woolridge Direct) at 86. *See also* Ex. 5 (Oliver Direct) at 19-20.

<sup>28</sup> Code § 56-585.1 A 2 b.

<sup>29</sup> Code § 56-585.1:1 C 3.

<sup>30</sup> Ex 4 (Woolridge Direct) at 86; Ex. 5 (Oliver Direct) at 19; Tr. 132.

The participants also differed on whether APCo should be considered part of the peer group. Staff and Consumer Counsel included APCo in their proposed peer groups, while Dominion excluded APCo from its proposed peer group.<sup>31</sup> However, as discussed below, we have selected a statutory floor majority that is lower than the ROE approved herein regardless of whether APCo is included as part of the total peer group; thus, we need not address APCo's inclusion or exclusion as part of this proceeding.

The majority that the Commission selects had, on average, a return on average equity close to the ROE found fair and reasonable herein.<sup>32</sup> This results in a statutory floor below the ROE approved herein.<sup>33</sup> The Commission concludes that the specific majority chosen herein is reasonable and does not violate any constitutional or statutory provision.<sup>34</sup>

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<sup>31</sup> Ex. 3 (Hevert Direct) at 51-54; Ex 4 (Woolridge Direct) at 85-86; Ex. 5 (Oliver Direct) at 18-19; Ex. 9 (Hevert Rebuttal) at 55-56, 95.

<sup>32</sup> Based upon the facts in this case, the Commission finds that it is reasonable to utilize returns on average equity for this purpose.

<sup>33</sup> The statutory floor without APCo in the peer group is 9.09% and is comprised of the following companies: Entergy Mississippi, Inc., Louisville Gas & Electric Company, Duke Energy Progress, Inc., South Carolina Electric & Gas Company, and Duke Energy Carolinas, LLC. The statutory floor with APCo in the peer group is 9.07% and is comprised of the following companies: Entergy Mississippi, Inc., Louisville Gas & Electric Company, Duke Energy Progress, Inc., South Carolina Electric & Gas Company, Duke Energy Carolinas, LLC, and APCo. *See* Ex. 5 (Oliver Direct) at Schedule 12.

<sup>34</sup> The Code clearly leaves the selection of the "majority" to the Commission's discretion. If the General Assembly wanted the Commission to apply a particular approach or evaluation methodology in selecting a majority, it could have directed as such; it did not. As the Commission has previously determined, it is reasonable in this proceeding to select a majority that has an earned return that is close to the market cost of equity capital found fair and consistent with the public interest herein. The Commission does not, and need not, find that this is the only majority that is reasonable. *See, e.g., Application of Virginia Electric and Power Company, For a 2013 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, Case No. PUE-2013-00020, 2013 S.C.C. Ann. Rept. 371, 375-76, Final Order (Nov. 26, 2013).

In sum, the Commission concludes that the fair ROE in this proceeding for Dominion is 9.2%.<sup>35</sup> The Commission finds that this ROE is supported by the record, is fair and reasonable to the Company within the meaning of the Code, permits the attraction of capital on reasonable terms, fairly compensates investors for the risks assumed, enables the Company to maintain its financial integrity, and satisfies all applicable constitutional standards.

Accordingly, IT IS SO ORDERED and this matter is dismissed.

AN ATTESTED COPY hereof shall be sent by the Clerk of the Commission to all persons on the official Service List in this matter. The Service List is available from the Clerk of the Commission, c/o Document Control Center, 1300 East Main Street, First Floor, Tyler Building, Richmond, Virginia 23219. A copy also shall be sent to the Commission's Office of General Counsel and Divisions of Public Utility Regulation and Utility Accounting and Finance.

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<sup>35</sup> Pursuant to Code § 56-585.1:1 C 3, "any adjustment to the fair rate of return for applicable rate adjustment clauses under subdivisions A 5 and A 6 of § 56-585.1 [shall take] effect on the date of the Commission's final order in the proceeding, utilizing rate adjustment clause true-up protocols as the Commission may in its discretion determine." Accordingly, the 9.2% ROE found appropriate herein shall become effective with respect to the Company RACs under Code § 56-585.1 A 5 and A 6 on the date of this Order and any resulting over- or under-recovery shall be addressed through appropriate true-up protocols in future RAC proceedings.

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. W-354, SUB 363  
DOCKET NO. W-354, SUB 364  
DOCKET NO. W-354, SUB 365

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. W-354, SUB 363 )  
)  
In the Matter of )  
Application by Carolina Water Service, Inc. )  
of North Carolina, 4944 Parkway Plaza )  
Boulevard, Suite 375, Charlotte, North )  
Carolina, 28217, for an Accounting Order to )  
Defer Incremental Storm Damage Expenses )  
Incurred as a Result of Hurricane Florence )

DOCKET NO. W-354, SUB 364 )  
)  
In the Matter of )  
Application by Carolina Water Service, Inc. )  
of North Carolina, 4944 Parkway Plaza )  
Boulevard, Suite 375, Charlotte, North )  
Carolina, 28217, for Authority to Adjust and )  
Increase Rates for Water and Sewer Utility )  
Service in All of its Service Areas in North )  
Carolina )

DOCKET NO. W-354, SUB 365 )  
)  
In the Matter of )  
Application by Carolina Water Service, Inc. )  
of North Carolina, 4944 Parkway Plaza )  
Boulevard, Suite 375, Charlotte, North )  
Carolina, 28217, for an Accounting Order to )  
Defer Post-In-Service Depreciation and )  
Financing Costs Related to Major New )  
Projects That Are or Will Be In-Service Prior )  
to the Date of An Order in Petitioner's )  
Pending Base Rate Case )

ORDER GRANTING PARTIAL  
RATE INCREASE AND  
REQUIRING CUSTOMER NOTICE

HEARD: Thursday, September 5, 2019, at 7:00 p.m., in Courtroom 5350, Mecklenburg County Courthouse, 832 East 4th Street, Charlotte, North Carolina

Tuesday, September 10, 2019, at 7:00 p.m., in Courtroom A, Dare County Courthouse, 962 Marshall C. Collins Drive, Manteo, North Carolina

Tuesday, October 8, 2019, at 7:00 p.m., in Courtroom #1, Watauga County Courthouse, 842 W. King Street, Boone, North Carolina

Wednesday, October 9, 2019, at 7:00 p.m., in Courtroom 1A, Buncombe County Courthouse, 60 Court Plaza, Asheville, North Carolina

Monday, October 14, 2019, at 7:00 p.m., in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

Tuesday, October 22, 2019, at 7:00 p.m., in the Superior Courtroom, Onslow County Courthouse, 625 Court Street, Jacksonville, North Carolina

Monday, December 2, 2019, at 2:00 p.m., in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Commissioner ToNola D. Brown-Bland, Presiding; Chair Charlotte A. Mitchell; and Commissioners Lyons Gray, Daniel G. Clodfelter, Kimberly W. Duffley, and Jeffrey A. Hughes

APPEARANCES:

For Carolina Water Service, Inc. of North Carolina:

Jo Anne Sanford, Sanford Law Office, PLLC, Post Office Box 28085, Raleigh, North Carolina 27611

Robert H. Bennink, Jr., Bennink Law Office, 130 Murphy Drive, Cary, North Carolina 27513

Mark R. Alson, Ice Miller LLP, One American Square, Suite 290, Indianapolis, Indiana 46282-0200

Christina D. Cress, Nichols, Choi & Lee, PLLC, 4700 Homewood Court, Suite 220, Raleigh, North Carolina 27609

In addition to estimating the cost of equity for his Utility Proxy Group of publicly-traded water utilities, witness D'Ascendis attempted to estimate the cost of equity for another proxy group consisting of 10 domestic, non-price regulated companies. The rebuttal results of the DCF, RPM, and CAPM applied to the non-price regulated proxy group are 11.63%, 11.23%, and 10.39%, respectively. The Commission concludes that these results are unreasonably high. Each of these results is higher than witness D'Ascendis' estimates of the cost of equity for his own Utility Proxy Group and deserves no weight. The Commission further concludes that given the difference in these results, the risk of the two groups is not equal and the Utility Proxy Group is more reliable as a proxy for the investment risk of common equity in CWSNC.

After determining that the indicated cost of equity from the DCF, CAPM, and risk premium methods applied to both of his proxy groups equals in his rebuttal 9.80% rate of return on common equity, witness D'Ascendis then adjusted the indicated cost of equity upward by 0.40% to reflect CWSNC's smaller size compared to companies in his Utility Proxy Group. He testified that the size of the company is a significant element of business risk for which investors expect to be compensated through higher returns. Witness D'Ascendis calculated his size adjustment as described in his prefiled direct testimony and stated that even though a 3.94% upward size adjustment is indicated, he applies a 0.40% size premium to CWSNC's indicated common equity cost rate.

Witness Hinton testified that he does not believe it is appropriate to add a risk premium to the cost of equity of CWSNC due to size for several reasons. First, from a regulatory policy perspective, witness Hinton stated that ratepayers should not be required to pay higher rates because they are located in the franchise area of a utility that is arbitrarily considered to be small. Further, if such adjustments were routinely allowed, an incentive would exist for large utilities to form subsidiaries or split-up subsidiaries to obtain higher returns. In addition, he noted that CWSNC operates in a franchise environment that insulates the Company from the competition with procedures in place for rate adjustments for circumstances that impact its earnings. Finally, while witness Hinton stated that while there are studies that address how the small size of a company relates to higher returns, he is aware of only one study that focuses on the size of regulated utilities and risk and that study concluded that utility stocks do not exhibit a significant differential in risk due to size. In rebuttal, witness D'Ascendis maintained that a small size adjustment was necessary based on the results of studies he cited and discussed. He contended that the study concerning size premiums for utilities discussed by witness Hinton was flawed.

The uncontroverted evidence is that both CWSNC and the Public Staff used the Utilities, Inc. capital structure and debt cost in this proceeding. CWSNC obtains all its debt and equity from CWSNC's parent company Utilities, Inc. CWSNC does not participate in the debt markets. The Corix CEO, Gordon Barefoot, testified that Corix, the parent company of Utilities, Inc., provides access to favorable terms for debt financing in capital markets.

Based upon the foregoing and the entire record in this proceeding, the Commission concludes that a size adjustment of 0.40% is not warranted and should not be approved. The Commission determines there is insufficient evidence to authorize an adjustment to the approved rate of return on common equity in this case. The record simply does not indicate the extent to which CWSNC's size alone justifies the added risk premium. While a small water/wastewater utility might face greater risk than a publicly-traded peer group, because for example the service area was confined to a hurricane-prone coastal geographic area, evidence of such factual predicates is absent from the record. CWSNC has water and wastewater systems along the North Carolina coast, in the Piedmont, and in the mountains. The Commission notes that the witnesses also disagreed with respect to whether the studies discussed in the testimony concerning size and risk are reliable or even applicable to regulated utilities. The Commission concludes that the testimony regarding these studies is not convincing and does not support a size adjustment.

Having determined that the appropriate rate of return on common equity based upon the evidence in this proceeding is 9.50%, the Commission notes that there is considerable testimony concerning the authorized returns on equity for water utilities in other jurisdictions. While the Commission has relied upon the record in this proceeding and is certainly aware that returns in other jurisdictions can be influenced by many factors, such as different capital market conditions during different periods of time, settlements versus full litigation, the Commission concludes that the rate of return on common equity trends and decisions by other regulatory authorities deserve some weight as (1) they provide a check or additional perspective on the case-specific circumstances, and (2) the Company must compete with other regulated utilities in the capital markets, meaning that a rate of return significantly lower than that approved for other utilities of comparable risk would undermine the Company's ability to raise necessary capital, while a rate of return significantly higher than other utilities of comparable risk would result in customers paying more than necessary.

Public Staff D'Ascendis Cross-Examination Exhibit 2, which has RRA approved rate of return on common equity listings showing approved return on equity decisions for water utilities across the country from January 2014 through June 30, 2019, is helpful in illustrating that the average rate of return on common equity for water utilities was 9.59% in 2014, 9.79% in 2015, 9.71% in 2016, 9.31% in 2017, 9.45% in 2018, and in the only five reported cases for the first six months of 2019 the average is 9.60%. This authorized return data is generally supportive of the Commission approved return on equity of 9.50% based upon all the evidence in this proceeding.

These factors lead the Commission to conclude that a 9.50% rate of return on common equity is supported by the substantial weight of the evidence in this proceeding. However, to meet its obligation in accord with the holding in *Cooper I*, the Commission will next address the impact of changing economic conditions on customers.

In this case all parties had the opportunity to present the Commission with evidence concerning changing economic conditions as they affect customers. The testimony of witnesses D'Ascendis and Hinton, which the Commission finds entitled to

customers, and that other bills produced, such as final bills, late notices, re-bills, or other miscellaneous bills are not included in the NCUC Form W-1, Item 26 filing; and

17. That the Chief Clerk shall establish Docket No. W-354, Sub 364A as the single docket to be used for all future WSIC and SSIC filings, orders, and reporting requirements and shall close Docket No. W-354, Sub 360A.

ISSUED BY ORDER OF THE COMMISSION.

This the 31st day of March, 2020.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in black ink that reads "Kimberley A. Campbell". The signature is written in a cursive style with a large initial 'K'.

Kimberley A. Campbell, Chief Clerk



**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-2, SUB 1131  
DOCKET NO. E-2, SUB 1142  
DOCKET NO. E-2, SUB 1103  
DOCKET NO. E-2, SUB 1153

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1131 )

In the Matter of )  
Application by Duke Energy Progress, LLC, )  
for Accounting Order to Defer Incremental )  
Storm Damage Expenses )

DOCKET NO. E-2, SUB 1142 )

In the Matter of )  
Application by Duke Energy Progress, LLC, )  
For Adjustment of Rates and Charges )  
Applicable to Electric Utility Service in North )  
Carolina )

ORDER ACCEPTING  
STIPULATION, DECIDING  
CONTESTED ISSUES AND  
GRANTING PARTIAL RATE  
INCREASE

DOCKET NO. E-2, SUB 1103 )

In the Matter of )  
Joint Application by Duke Energy Progress, )  
LLC, and Duke Energy Carolinas, LLC, for )  
Accounting Order to Defer Environmental )  
Compliance Costs )

DOCKET NO. E-2, SUB 1153 )

In the Matter of )  
Petition of Duke Energy Progress, LLC, for an )  
Order Approving a Job Retention Rider )

HEARD: Tuesday, September 12, 2017, at 7:00 p.m., Richmond County Courthouse,  
Courtroom A, 105 W. Franklin Street, Rockingham, North Carolina

Monday, September 25, 2017, at 7:00 p.m., Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

Wednesday, September 27, 2017, at 7:00 p.m., Buncombe County Courthouse, Courtroom 1A, 60 Court Plaza, Asheville, North Carolina

Wednesday, October 11, 2017, at 7:00 p.m., Greene County Courthouse, 301 N. Greene Street, Snow Hill, North Carolina

Thursday, October 12, 2017, at 7:00 p.m., New Hanover County Courthouse, 316 Princess Street, Wilmington, North Carolina

Monday, November 27, 2017, at 1:30 p.m., Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Chairman Edward S. Finley, Jr., Presiding; Commissioners Bryan E. Beatty,<sup>1</sup> ToNola D. Brown-Bland, Jerry C. Dockham, James G. Patterson, Lyons Gray, and Daniel G. Clodfelter

APPEARANCES:

For Duke Energy Progress, LLC:

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299 1<sup>st</sup> Avenue N, DEF-151  
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<sup>1</sup> Commissioner Bryan E. Beatty's term ended before the Commission issued its decision in this proceeding.

Commission approved rate of return on equity for a vertically integrated electric company for the period of 2014 through the hearing in 2017 was 9.2%. Witness Parcell's specific DCF result was 8.85%, witness Polich's was 8.48%, and the mid-point of witness O'Donnell's was 8.25%. The average of Hevert's constant growth DCF means was 8.92%, and the mid-point of the range of witness Hevert's Multi-Stage DCF analysis was 9.0%. The Commission considers all of these DCF results to be outliers, being well below the lowest vertically-integrated rate of return on equity of 9.2%. The Commission determines that all of these DCF analyses in the current market produce unrealistic low results.

The Commission gives no weight to any of the witnesses' CAPM analyses. The analyses of witness Parcell with a mid-point of 6.4% is unrealistically low, and witness Parcell agreed as much in his testimony. The CAPM analysis of witness O'Donnell resulted in a CAPM rate of return on equity mid-point of 6.05%, which is an outlier well below the 9.2% previously discussed. Witness Polich's CAPM weighted median rate of return on equity of 7.56% is also an outlier and unrealistically low. DEP Witness Hevert's CAPM range of 9.15% to 11.49% is also an outlier and upwardly biased due to his use of the near-term projected 30-year Treasury interest rate of 3.52%, which witness Parcell testified greatly exceeds the current level of long-term Treasury of about 2.8%. Witness Hevert's risk premium component of this CAPM uses a constant growth DCF for the S&P 500 companies using analysts projected earnings per share forecasts as the growth component. Witness Hevert's DCF dividend growth, component based solely on analysts' earnings per share growth projections, without consideration of any historical results, is upwardly biased and unreliable.

The rate of return on equity testimonies of Commercial Group witnesses Chriss and Rosa focused on the commission-approved rates of return on equity authorized for vertically-integrated electric utilities in 2014, 2015, 2016, and year-to-date 2017 listed in Commercial Group Exhibit CR-3. The Commission gives weight to this testimony only as a check on the Commission's approved 9.9% rate of return on equity and to evaluate outlier rate of return on equity recommendations. CIGFUR witness Phillips' testimony focused on the RRA report Major Rate Case Decisions. The 9.61% average authorized rate of return on equity for electric utilities included both vertically-integrated electric utilities and distribution-only electric utilities. Since DEP is a vertically-integrated electric utility, the Commission gives witness Phillips' rate of return on equity testimony limited weight regarding authorized rates of return on equity for distribution-only electric utilities. Rather, as noted above, recently authorized rates of return on equity for vertically-integrated electric utilities since 2014 average 9.85%, and in jurisdictions with constructive regulatory environments average 10.03%, and serve as a better check.

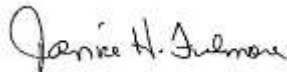
The 9.9% rate of return on equity approved in this proceeding for DEP is also consistent with the 9.9% rate of return on equity the Commission approved for DNCP in the Order dated December 22, 2016, in Docket No. E-22, Sub 532.

The Commission notes further that its approval of a rate of return on equity at the level of 9.9% – or for that matter, at any level – is not a guarantee to the Company that it will earn a rate of return on equity at that level. Rather, as North Carolina law requires, setting the rate of return on equity at this level merely affords DEP the opportunity to

32. That if DEP receives revenue for any deferred cost for a longer period of time than the amortization period approved by the Commission for that deferred cost, the Company shall continue to record all revenue received for that deferred cost in the specific regulatory asset account established for that deferred cost until the Company's next general rate case.

This 23<sup>rd</sup> day of February, 2018.

NORTH CAROLINA UTILITIES COMMISSION



Janice H. Fulmore, Deputy Clerk

Commissioner ToNola D. Brown-Bland dissents in part.

Commissioner Daniel G. Clodfelter concurs in part, and dissents in part.

Commissioner Charlotte A. Mitchell did not participate in this decision.

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-7, SUB 1146  
DOCKET NO. E-7, SUB 819  
DOCKET NO. E-7, SUB 1152  
DOCKET NO. E-7, SUB 1110

DOCKET NO. E-7, SUB 1146 )  
)  
In the Matter of )  
Application of Duke Energy Carolinas, LLC, )  
for Adjustment of Rates and Charges )  
Applicable to Electric Utility Service in North )  
Carolina )

DOCKET NO. E-7, SUB 819 )  
)  
In the Matter of )  
Amended Application by Duke Energy )  
Carolinas, LLC, for Approval of Decision to )  
Incur Nuclear Generation Project )  
Development Costs )

ORDER ACCEPTING STIPULATION,  
DECIDING CONTESTED ISSUES,  
AND REQUIRING REVENUE  
REDUCTION

DOCKET NO. E-2, SUB 1152 )  
)  
In the Matter of )  
Petition of Duke Energy Carolinas, LLC, for )  
an Order Approving a Job Retention Rider )

DOCKET NO. E-7, SUB 1110 )  
)  
In the Matter of )  
Joint Application by Duke Energy Progress, )  
LLC, and Duke Energy Carolinas, LLC, for )  
Accounting Order to Defer Environmental )  
Compliance Costs )

HEARD: Tuesday, January 16, 2018, at 7:00 p.m., in the Macon County Courthouse,  
Courtroom A, 5 W. Main Street, Franklin, North Carolina

Wednesday, January 24, 2018, at 7:00 p.m., in the Guilford County  
Courthouse, Courtroom 1C, 201 S. Eugene Street, Greensboro, North  
Carolina

Tuesday, January 30, 2018, at 6:30 p.m., in the Mecklenburg County Courthouse, 832 E. 4th Street, Charlotte, North Carolina

Monday, March 5, 2018, at 1:30 p.m., Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Chairman Edward S. Finley, Jr., Presiding; Commissioners ToNola D. Brown-Bland, Jerry C. Dockham, James G. Patterson, Lyons Gray, and Daniel G. Clodfelter

APPEARANCES:

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In its post-hearing brief, Tech Customers state that while the Stipulation is material evidence entitled to appropriate weight in determining DEC's rate of return on equity and other rate of return inputs, the return approved by the Commission must be justified by substantial, competent evidence in the record as a whole. Tech Customers acknowledge that the 9.9% rate of return agreed to in the Stipulation is comfortably within the range advocated by the parties to the Stipulation, but argues that the Stipulation, standing alone, cannot support the 9.9% recommended return on equity, particularly when the rate at one side of the range lacks any indicia of a rational basis.

Tech Customers state that a utility advocating a rate of return on equity figure that substantially exceeds the output of widely-recognized empirical models and that exceeds recently authorized returns must justify that proposed upward adjustment with a quantitative analysis that shows the applicants risk profile to be materially higher than that of the proxy group. Tech Customers state that its witness Strunk outlined several empirical measures of risk in his testimony and the associated exhibits and none suggests DEC presents a higher risk profile than the proxy group companies. Given the results of the empirical models and the lack of objective evidence by DEC that it presents a higher risk profile than the proxy group warranting an upward departure from these measures, a rate of return on equity of 9.9% is unreasonably high. Accordingly, Tech Customers contend that the evidence presented concerning other authorized rates of return on equity, when put into proper context, lends substantial support to an authorized rate of return on equity of 9.70%.

The Commission has carefully evaluated the DCF analysis recommendations of witnesses Parcell, Hevert, Woolridge, Strunk, and O'Donnell, and the Commission gives limited weight to these analyses. As shown on Commercial Group's Exhibit CR-3, the lowest Commission-approved rate of return on equity for a vertically-integrated electric company for the period of 2015 through 2017 was 9.1%. Witness Parcell's specific DCF result was 8.7%, as stated in AGO witness Woolridge's Supplemental Exhibit JRW-2, p.1, his DCF recommendation was 8.80%, and the mid-point of witness O'Donnell's DCF was 8.5%. The average of Hevert's constant growth DCF means, as stated in Table 11 of his rebuttal testimony, was 8.45%, and the mid-point of the range of witness Hevert's Multi-Stage DCF analysis was 8.78%. The Commission considers all of these DCF results to be outliers, being well below the lowest vertically-integrated authorized rate of return on equity of 9.1%. The Commission determines that all of these DCF analyses in the current market produce unrealistically low results.

The Commission gives no weight to any of the witnesses' CAPM analyses. The analyses of witness Parcell with a mid-point of 6.5% is unrealistically low, and witness Parcell agreed as much in his testimony. The CAPM analysis of witness O'Donnell resulted in a CAPM rate of return on equity mid-point of 6.29%, which is an outlier well below the 9.1% previously discussed. Witness Woolridge's CAPM weighted median rate of return on equity of 7.90% is also an outlier and unrealistically low. DEC Witness Hevert's CAPM range of 9.18% to 11.88% is also an outlier and upwardly biased due to witness Hevert's risk premium component of his CAPM using a constant growth DCF for

the S&P 500 companies solely using analysts projected EPS forecasts as the growth component. Witness Hevert's DCF dividend growth, component based solely on analysts' EPS growth projections, without consideration of any historical results, is upwardly biased and unreliable.

The rate of return on equity testimonies of Commercial Group witnesses Chriss and Rosa focused on the commission-approved rates of return on equity authorized for vertically-integrated electric utilities in 2015, 2016, and 2017 listed in Commercial Group Exhibit CR-3. The Commission gives weight to this testimony only as a check on the Commission's approved 9.9% rate of return on equity and to evaluate outlier rate of return on equity recommendations. CIGFUR III witness Phillips' testimony focused on the RRA report Major Rate Case Decisions, which showed a 9.61% average authorized rate of return on equity for electric utilities including both vertically-integrated electric utilities and distribution-only electric utilities. Since DEC is a vertically-integrated electric utility, the Commission gives witness Phillips' rate of return on equity testimony limited weight regarding authorized rates of return on equity for distribution-only electric utilities. Rather, as stated in Commercial Group Exhibit CR-3, recently authorized rates of return on equity for vertically-integrated electric utilities since 2015 average 9.78%, and in jurisdictions with RRA rated Average 1 constructive regulatory environments, being the same A1 rating as North Carolina, as shown in Hevert Exhibit RBH-R27 for the 16 decisions for vertically integrated electric utilities in the years 2015, 2016, and 2017, the average approved rate of return on equity was 9.93%. These two vertically-integrated electric utilities averages serve as a better check.

The 9.9% rate of return on equity approved in this proceeding for DEC is also consistent with the 9.9% rate of return on equity that the Commission approved for DNCP in the 2016 Rate Order and DEP in the 2018 Rate Order.

The Commission notes further that its approval of a rate of return on equity at the level of 9.9% – or for that matter, at any level – is not a guarantee to the Company that it will earn a rate of return on equity at that level. Rather, as North Carolina law requires, setting the rate of return on equity at this level merely affords DEC the opportunity to achieve such a return. The Commission finds and concludes, based upon all the evidence presented, that the rate of return on equity provided for herein will indeed afford the Company the opportunity to earn a reasonable and sufficient return for its shareholders, while at the same time producing rates that are just and reasonable to its customers.

### Capital Structure

DEC originally proposed using a capital structure of 53% members' equity and 47% long-term debt. Tr. Vol. 4, p. 43. The Stipulation provides for a capital structure of 52% equity and 48% long-term debt. For the reasons set forth herein, the Commission finds that a 52/48 capital structure as set out in the Stipulation is just and reasonable.

Witness De May testified that the Company's specific debt/equity ratio will vary over time, depending on the timing and size of debt issuances, seasonality of earnings,



48. That DEC shall submit a proposed customer notice to the Commission for review and approval, and upon approval of the notice by the Commission, shall give appropriate notice of the approved rate adjustment by mailing the notice to each of its North Carolina retail customers during the billing cycle following the effective date of the new rates.

ISSUED BY ORDER OF THE COMMISSION.

This the 22<sup>nd</sup> day of June, 2018.

NORTH CAROLINA UTILITIES COMMISSION



Linnetta Threatt, Deputy Clerk

Commissioner ToNola D. Brown-Bland concurring in part and dissenting in part.

Commissioner Daniel G. Clodfelter concurring in part and dissenting in part.

Commissioner Charlotte A. Mitchell did not participate in this decision.