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APPLICATION OF EAST HOUSTON UTILITIES INC. FOR AUTHORITY TO CHANGE RATES

BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS



REVENUE REQUIREMENT PHASE DIRECT TESTIMONY OF MARK FILAROWICZ RATE REGULATION DIVISION PUBLIC UTILITY COMMISSION OF TEXAS NOVEMBER 18, 2022

TABLE OF CONTENTS

I.	STATEMENT OF QUALIFICATIONS	
II.	PURPOSE AND SCOPE OF TESTIMONY	5
III.	BACKGROUND	7
IV.	SUMMARY OF RECOMMENDATION ON RATE OF RETURN	8
V.	COST OF EQUITY	8
A.	PRINCIPLES UNDERLYING THE COST OF EQUITY	8
Β.	COMPARABLE COMPANY ANALYSIS	12
C.	DISCOUNTED CASH FLOW ANALYSIS	14
D.	RISK-PREMIUM ESTIMATE OF THE COST OF EQUITY	
E.	SUMMARY OF COST-OF-EQUITY ANALYSES	
VI.	COST OF DEBT	
VII.	CAPITAL STRUCTURE	
VIII.	OVERALL RATE OF RETURN	

ATTACHMENTS

MF-1	Weighted-Average Cost of Capital
MF-2	Selection Criteria for Proxy Group and Earnings Growth
MF-3	Average Stock Prices
MF-4	Forecasted Dividends
MF-5	Single-Stage Discounted Cash Flow
MF-6	Multistage Discounted Cash Flow
MF-7	Conventional Risk-Premium Analysis
MF-8	Return on Equity
MF-9	List of Previous Direct Testimonies of Mark Filarowicz

1 I. STATEMENT OF QUALIFICATIONS

2 Q. Please state your name and business address. 3 A. My name is Mark Filarowicz. My business address is 1701 North Congress Avenue, Austin, Texas. 4 5 Q. Who is your employer and what is your position? 6 A. I am employed by the Public Utility Commission of Texas (Commission) as a Senior 7 Financial and Accounting Analyst in the Rate Regulation Division. 8 Q. What are your principal responsibilities as a Senior Financial and Accounting 9 **Analyst for the Commission?** 10 A. My responsibilities include testifying as an expert witness on accounting and financial 11 matters in rate cases and other applications filed with the Commission and participating 12 in the overall examination, review, and analysis of such applications. My responsibilities 13 also include leading or participating in Commission rulemakings. 14 Q. Please describe your professional and educational background. 15 A. In December 2003, I graduated summa cum laude from the University of Texas at Austin 16 with a Bachelor of Science degree in Actuarial Mathematics and a Bachelor of Arts degree 17 in Philosophy. 18 I am licensed as a Certified Public Accountant (CPA) in the state of Texas. I have 19 worked in various aspects of governmental and regulatory accounting for over ten years. 20 I am a Chartered Financial Analyst (CFA) charterholder and a member of the CFA 21 Institute. The CFA charter is obtained after fulfillment of a relevant four-year work 22 experience requirement and successful completion of the three-part CFA Examination 23 (CFA Exam) over a minimum three-calendar-year period. The curriculum for the CFA 24 Exam is extensive and comprehensive; it covers a core body of knowledge fundamental to the practice of investment management and includes the subjects of finance, economics, 25

statistics, accounting and financial reporting, equity, fixed income, alternative
 investments, derivatives, asset allocation, behavioral finance, and ethical and professional
 conduct.

From June 2009 to June 2015, I worked for the Railroad Commission of Texas in varying capacities as a legal assistant and researcher, as an accountant, and as a budget analyst. In July 2015, I began employment with the Commission as a regulatory accountant with duties similar to those in my current position. During my time at the Commission, I have reviewed numerous utilities' rate-change applications.

9 Q. Have you previously filed testimony in regulatory proceedings before the 10 Commission?

A. Yes. Attachment MF-9 details the dockets in which I have filed testimony on behalf of
 the public interest before the Commission. I have also filed memoranda and otherwise
 participated in myriad other dockets and projects before the Commission.

14 II. PURPOSE AND SCOPE OF TESTIMONY

15 Q. What is the purpose of your testimony in this proceeding?

16 A. The purpose of my testimony is to present Staff's financial recommendations regarding a 17 fair return on equity (ROE) and overall rate of return on invested capital regarding East 18 Houston Utilities Inc.'s (East Houston) request to change its rates in this docket based on 19 a test year comprising the 12-month period ending December 31, 2020 (test year). My 20 recommendation reflects my calculation of an estimated cost of equity for East Houston; 21 my analysis of East Houston's requested cost of debt and the cost of debt for the test year 22 for public utilities generally; and my assessment of the reasonableness of the capital 23 structure that East Houston requests the Commission use in calculating its authorized rate 24 of return. In the course of my testimony, I describe the bases and analytical techniques 25 used in developing recommendations for a utility's estimated cost of equity. Then, I

1		convert the cost of equity, cost of debt, and capital structure into the rate of return that I							
2		recommend the Commission authorize East Houston to earn on its invested capital.							
3	Q.	What issues identified in the Preliminary Order does your testimony address?							
4	A.	The recommendation contained in my testimony pertains to the following issues from the							
5		Commission's Preliminary Order filed August 4, 2022, ¹ in this proceeding:							
6 7		19. What is the appropriate debt-to-equity capital structure for the utility for the purpose of setting rates?							
8		20. Does the utility have any debt? If so, what is the cost of that debt? [and]							
9 10 11		21. What is the appropriate overall rate of return (weighted cost of capital), including return on equity and cost of debt for the utility consistent with 16 TAC [Texas Administrative Code] 24.41(c)(1)? ²							
12	Q.	What is the scope of your review?							
13	A.	My review encompasses analysis of the Application of East Houston Utilities Inc. for							
14		Authority to Change Rates (the Application) as filed on July 29, 2021, and other							
15		documents filed on the record.							
16	Q.	What is the basis of your recommendation?							
17	A.	The basis of my recommendation is my review and evaluation of East Houston's							
18		Application, workpapers, and supporting documentation.							
19	Q.	What documents and data did you review in arriving at the conclusions and							
20		recommendations contained in your testimony?							
21	A.	In preparing my testimony for this proceeding, I examined and analyzed the Application,							
22		other documentation on the record, and data from financial resources such as Standard							
23		and Poor's (S&P), Value Line Investment Survey (Value Line), Zacks Investment Service							
24		(Zacks), Yahoo! Finance, and S&P Global Market Intelligence (S&P Global) (formerly							
25		SNL Financial).							

¹ Preliminary Order (Aug. 4, 2022).

 $^{^{2}}$ *Id.* at page 5 of 9.

1	Q.	On whose behalf are you testifying in this proceeding?										
2	A.	I am testifying on behalf of	the Commissio	on Staff, whose	duty is to represent the public							
3		interest in such proceedings.	. Public Utility	Regulatory Act	, Tex. Util. Code Ann. (PURA)							
4		§ 11.002 provides, "This title is enacted to protect the public interest inherent in the rates										
5		and services of public utilities." ³										
6	III.	BACKGROUND										
7	Q.	Please briefly describe Eas	Please briefly describe East Houston.									
8	A.	East Houston is a Class D water utility that provides services in the state of Texas.										
9	Q.	Please describe East Houston's requested rate of return in this docket.										
10	A.	On Schedule III-1 of its Ap	oplication, East	Houston reque	ests an overall rate of return of							
11		6%, calculated as follows: ⁴										
12		Component	Percentage	<u>Cost</u>	Weighted Cost							
13		Long-Term Debt	50%	0%	0%							
14		Equity	50%	12.00%	6.00%							
15		Total Requested Rat	e of Return		6.00%							
16		Schedule III-1 shows that Ea	ast Houston's a	ctual capital stru	ucture at the end of the test year							
17		consisted of 100% equity.5	In accordance	with the instru	actions on Schedule III-1, East							
18		Houston, because its capita	al structure had	d equity (or de	ebt) greater than 60%, used a							
19		hypothetical capital structur	e for rate-setting	g purposes that	consists of 50% long-term debt							
20		and 50% common equity. ⁶	East Houstor	n, however, fai	led to provide any support or							
21		explanation for its requested	l ROE or cost c	of debt. ⁷								
		³ Public Utility Regulatory Act, T	[°] ex. Util. Code An	n. (PURA) § 11.00	02(a).							
		⁴ Application, Schedule III-1 Requested Return at page 21.										

- ⁵ Ibid.
- ⁶ Ibid.
- ⁷ Ibid.

1 IV. SUMMARY OF RECOMMENDATION ON RATE OF RETURN

2 Q. Please summarize your recommendations in this docket with respect to the rate of

return on invested capital.

4 A. My conclusions and recommendations regarding rate of return on invested capital in this

docket are as follows:

3

5

12

19

26

- The cost of equity for East Houston is in the range of 7.16% to 9.56%, as calculated using discounted cash flow (DCF) analyses and an equity risk-premium model. The point estimate for my recommended return on equity (ROE) for East Houston is 8.87%. My recommended point estimate—which is the average of the result of my combined DCF analyses and the result of my equity risk-premium model—incorporates considerations for East Houston's business holistically.
- East Houston's requested cost of debt of 0% is not appropriate, even though it does not have long-term debt. If it did, it would not have cost-free debt and would likely have a cost of debt in line with its operational and financial risk as a small (Class D) water utility. For the test year, the average Baa public utility bond issuance was 3.39%. I recommend the Commission approve a cost of debt of 3.39% for East Houston for rate-setting purposes.
- East Houston's requested capital structure for rate-setting purposes consists of 50% long-term debt and 50% common equity. The requested capital structure is appropriate for a Class D water utility whose actual capital structure has debt or equity greater than 60%. I recommend that the Commission adopt East Houston's requested regulatory capital structure consisting of 50% long-term debt and 50% common equity for rate-setting purposes.
- I recommend a weighted-average cost of capital and overall rate of return of 6.13% for East Houston. Attachment MF-1 presents the calculation of this value from the recommended capital structure and the component costs of capital.
- 30 V. COST OF EQUITY
- 31 A. PRINCIPLES UNDERLYING THE COST OF EQUITY

32 Q. Please provide your understanding of the legal guidelines for the determination of

- 33 the cost of equity.
- A. The general framework for evaluating the cost of equity for regulated utilities is based on
- 35 two decisions of the U.S. Supreme Court. In the decision for *Bluefield Water Works* &

1		Improvement Co. v. Public Service Commission of West Virginia (Bluefield), ⁸ the Court
2		stated:
3 4 5 6 7		The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. ⁹
8		This decision established financial integrity and capital attraction as standards to be met
9		in setting the rate of return. In the decision for Federal Power Commission v. Hope
10		Natural Gas Co. (Hope), ¹⁰ the Court stated:
11 12 13 14 15		\dots [T]he return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise so as to maintain its credit and to attract capital. ¹¹
16		This decision reinforced the standards of financial integrity and capital attraction, and it
17		further established the standard of setting a return on equity that is commensurate with the
18		risks faced by the equity investor. From a financial perspective, investors in a utility must
19		be given the opportunity to recover their reasonable capital costs, including a reasonable
20		return on equity.
21	Q.	Did these court decisions address the specific methods by which the return on equity
22		should be determined?
23	A.	No. Although these court decisions were helpful in establishing a general framework for
24		evaluation, they did not specify particular methods to achieve this objective.
25		Consequently, analysts use various techniques in determining the cost of equity. These

¹¹ Id. at 603.

⁸ Bluefield Waterworks & Imp. Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923).

⁹ *Id.* at 693.

¹⁰ Fed. Power Comm'n v. Hope Nat. Gas Co., 320 U.S. 591 (1944).

techniques continue to evolve as new financial theories are advanced and the understanding of capital markets improves.

3 Q. What ultimately determines required returns on equity?

4 A. Ultimately, capital markets determine the required return on equity for an investor-owned 5 utility or any publicly traded company. Through the interaction of the buyers and sellers of a company's common stock, the company's equity cost, i.e., the required return on 6 7 equity, is established. Given the market price for a share of common stock, a financial 8 analyst desiring to measure the cost of equity must accurately assess the sum of all investor 9 expectations for the company in question, for a group of comparable companies, or for 10 both. Data generated by stock exchanges and the opinions of investment advisors are 11 important considerations in making these assessments.

12 Q. Is variation common among analysts in their estimates of the cost of equity?

13 A. Yes. Because estimating the cost of equity involves subjective opinion at various stages 14 of the analysis, there is no single infallible approach that is appropriate in all circumstances. The opinions of experts can differ widely on many factors relevant to the 15 16 cost of equity, such as basic assumptions about risk, economic conditions, and investor 17 expectations. Variations in the chosen approaches, and even in the application of the same approach by different analysts, are commonplace and can be expected. To rely solely on 18 19 one approach for all companies under all market conditions and economic environments 20 would be inappropriate. The results of various appropriate methods, however, should 21 generally be close to each other or their estimates should have overlapping ranges.

22 Q.

Q. Is variation common among models and the inputs used in those models?

A. Yes. Certain financial models have a long tenure with regard to utility financial analysis.
It is common, however, for rate-of-return witnesses to employ different specific models,

and it is even more common for inputs used in the models to vary between rate-of-return
 witnesses.

3 As a general matter, an input to a financial model should be judged on how it functions within the operations of the overall model, and not on its own outside the context 4 of the model in which it is used. A model, moreover, should be judged by its holistic 5 mechanics and the reasonableness of the results that it yields, not by any individual inputs. 6 7 Finally, although there is some overlap between different financial analysts' models and 8 between various types of utility ROE models, a specific input, assumption, or mechanic 9 of a model that is appropriate and useful for targeting the cost of equity of a Class D water 10 utility may not necessarily be appropriate or useful in a different context.

- 11 Q. What models and techniques did you use to estimate the cost of equity for East
 12 Houston?
- A. I used three approaches to estimate a cost of equity for East Houston. Two are DCF
 approaches and one is a risk-premium model.
- 15The DCF methodology determines the price of a stock by estimating the value of16future cash flows that the stock will produce for its owners. I discuss this method and its17application in the analysis in Part C of this section of my testimony.
- 18 The conventional risk-premium approach that I use in my testimony relies on the 19 historical relationship between two indices. A value for one of the indices, which is 20 unknown in a particular period, is forecasted using its historical relationship to the other 21 index, where the value for that same period is known. I discuss this approach in Part D of 22 this section of my testimony.
- The use of DCF analyses and risk-premium methodologies is well-established at this Commission, which has relied upon these methods in rate-case decisions for at least the last three decades.

B. COMPARABLE COMPANY ANALYSIS

2 Q. What is the purpose of a comparable company analysis?

A. The objective of a comparable company analysis is to estimate the cost of equity for a target company by estimating the costs of equity for companies with similar risk characteristics. Cash flows are subject to the influence of many factors, not all of which may be identified. The use of multiple proxy companies in determining the target company's cost of equity mitigates the influence of unknown factors by spreading them over the several companies in the comparable company analysis.

9 Q. Please describe the group of comparable companies you used to perform your cost 10 of-equity analysis.

11 A. I selected comparable companies for my analysis by starting with all the water utility 12 companies on which Value Line reports in its Ratings and Reports publication in the Water Utility Group and selecting those companies as much like East Houston as possible 13 without unreasonably restricting their number. The more companies there are in the 14 15 analysis, the more the effects of an unexpected anomaly in one will be diluted by the rest, 16 and, therefore, the better the comparison to the target company will be. On the other hand, 17 choosing less stringent screening criteria to increase the number of comparable companies 18 might result in the selection of companies with characteristics unlike those of East 19 Houston.

20 Q. On what basis did you select your group of comparable companies?

- A. In selecting a group of companies that I think are appropriately comparable to East
 Houston, I selected those water utilities that:
- 23
- are followed by Value Line in the Water Utility Group;
- have a positive (greater than 0%) long-term forecast of earnings growth
 rate from Value Line and, if Zacks or Yahoo! Finance provides an estimate

1		for long-term earnings growth rate, have a positive (greater than 0%) long-						
2		term forecast of earnings growth rate from Zacks or Yahoo! Finance;						
3		• if covered by S&P, have an investment grade credit rating and, if the						
4		outlook is negative or if the utility has a negative credit watch, would not						
5		lose an investment-grade rating if downgraded one notch in credit rating;						
6		• have not had recent and do not have planned or expected potential merger						
7		activities or other major capital expansion or contraction, and have not had						
8		any major, recent extraordinary events that would affect overall financial						
9		condition;						
10		• have not had recent dividend omissions or cuts; and						
11		• are not otherwise considered inappropriate for being a proxy to target the						
12		cost of equity for East Houston.						
13	Q.	Please list the companies that met the screening criteria.						
14	A.	Listed below are the companies that met the screening criteria:						
15 16		<u>Ticker</u> Symbol Company						
17		AWR American States Water Company						
18		AWK American Water Works Company						
19		CWT California Water Service Group						
20		WRTG Essential Utilities						
21		MSEX Middlesex Water Company						
22		SJW SJW Group						
23	Q.	Did East Houston perform a comparable group analysis in determining its requested						
24		cost of equity in this proceeding?						
25	A.	No.						

C. DISCOUNTED CASH FLOW ANALYSIS

2 Q. Please explain the DCF methodology.

A. The DCF methodology derives from the Gordon dividend constant-growth model. In its original form, the Gordon dividend growth model is a tool used for determining the value of a share of common stock. The theory underlying the model holds that the price of a share is equal to the present value of all future dividends. It is expressed mathematically as follows:

8
$$P_0 = \frac{D_1}{(1+k)^1} + \frac{D_2}{(1+k)^2} + \frac{D_n}{(1+k)^n}$$

11 where:
$$P_o =$$
 current share price;

12 $D_i =$ expected dividend in year i;

13
$$k = investors' required rate of return$$

$$n = year of expected share price realization$$

15 When the dividends are assumed to grow at a constant rate—g—the DCF is of the 16 constant-growth variety and all future dividends can be expressed in terms of the current 17 dividend, D_o, by the following equation:

18
$$D_o(1+g)^1 = D_o(1+g)^2 = D_o(1+g)^n$$

20
$$(1+k)^1$$
 $(1+k)^2$ $(1+k)^n$

Finally, if the discount rate or required rate of return—k—is assumed to be constant from year to year and k is greater than g, then the equation above reduces to the following form as n approaches infinity:

24
$$D_0(1+g)$$

2

For purposes of estimating the cost of common equity, the equation above may be rearranged to solve for the investor's required rate of return:

3
$$D_{o}(1+g)$$

4 $k = -----+g$
5 P_{o}

6 or more simply:

$$\begin{array}{ccc}
7 & D_1 \\
8 & k = ---- + g \\
9 & P_0
\end{array}$$

10 The constant-growth DCF model recognizes that the return to the stockholder consists of 11 two parts: dividend yield and growth. Equity investors expect to receive a portion of their 12 total required return in the form of current dividends and the remainder through price 13 appreciation.

14 **Q**. Are there variations of the constant-growth DCF model?

15 A. Yes. For conditions in which significantly different growth rates are expected over 16 different periods of time, analysts often employ a multistage version of the DCF model. 17 For example, the expected near-term growth of a given company may be significantly 18 higher or lower than the expected sustainable growth rate. In these situations, it is 19 appropriate to apply a multistage DCF model that incorporates the various growth rates 20 expected over time.

21 Under the multistage DCF, the equation for the constant-growth DCF is simply 22 expanded to incorporate two or more growth-rate periods, with the assumption that a 23 permanent constant growth rate can be estimated for some point in the future:

24
$$D_0(1+g_1)$$
 $D_1(1+g_2)$ $D_{(n-1)}(1+g_n)$

25

- $P_{o} = \frac{1}{(1+k)^{1}} + \frac{1}{(1+k)^{2}} + \frac{1}{(1+k)^{n}}$
- 26

1 where the variables are the same as in the equation in the previous question-and-answer, 2 but there are more subscripts to indicate the different time periods to which the variables 3 apply—e.g., g_1 represents the growth rate for the first period; D_2 , the dividend rate for the 4 second period; g_2 , the growth rate for the second period; and so on. The "n" subscript 5 represents however many periods are to be included (up to infinity).

6 Q. What prices did you use for your DCF analyses?

A. As shown on Attachment MF-3, I used stock prices that are an average of weekly prices
over a recent 12-week period. The 12-week period is both long enough to smooth out
stock market fluctuations and provide an assessment of long-term expectations, and short
enough to capture the impact of current information on market perceptions of risk,
earnings growth, and dividend growth. Twelve weeks is a reasonable period of time to
balance capturing the benefits of both these goals.

13 Q. What versions of the DCF model did you use in your analysis?

A. I used both a single-stage version and a multistage version of the DCF model. In the
single-stage version, the stock's dividend growth is based on analysts' estimates of the
utility's earnings growth over the next five years. In the multistage version of the DCF
model, I used a two-stage growth approach. The first stage in this version covers five
years and uses the same analysts' estimates that I used in the single-stage version. The
second stage, which covers years six through 150, is based on a 5.18% projected longterm growth in Gross Domestic Product (GDP), as discussed below.

21 Q. Why did you use two versions of the DCF model?

A. I used two versions of the DCF model because each model is reasonable in its own right
 and therefore likely to be used by investors. By blending the two, I more closely
 approximate the expectations of investors on average than if I were to use either one alone.

1 Q. What are the key assumptions underlying the DCF model?

2 A. The model rests on three principal assumptions. First, investors evaluate the expected risk 3 and expected cash flows of all securities in the capital markets and, through the trading process, adjust the price of each security so that the expected return is commensurate with 4 5 the expected risk. Second, investors discount the expected cash flows at the same ratek—in every future period. Third, dividends, rather than earnings per se, constitute the 6 7 source of value for a share of stock. Absent a sale of the stock, dividends are the only 8 cash flows received by investors. The earnings of the company that issued the stock, 9 however, are critical because they make it possible to pay dividends, and the level of 10 earnings ultimately determines the level of growth in the company and the growth in 11 dividends over time.

12 Q. Please describe the growth component of the DCF model.

A. Because of the relationship between sustainable earnings growth and dividend growth, the growth rate commonly used in the DCF is the earnings growth of the company whose cost of equity is being estimated. Estimates of earnings growth are appropriate because the issue is not the rate at which the firm will actually grow (which is primarily a function of economic conditions, management ability, regulatory environment, etc.), but rather the growth expectation that investors have embodied in the current price of the stock.

19 Q. Is it possible to know what expected earnings growth rate is actually embodied in the 20 price of a stock?

A. No. There is no objective way to precisely determine the growth rate expected by a
 consensus of investors. No matter what technique is used, the best that can be said of any
 estimate developed by a rate-of-return analyst is that it is a reasonable proxy for investors'
 consensus expectations about growth.

Q. What estimates for the growth expectations of investors did you use in your DCF analyses?

A. I relied upon Value Line, Zacks, and Yahoo! Finance for the earnings growth rates in the
single-stage DCF model and the first stage of the multistage DCF model. I used Value
Line because it is one of the nation's largest independent investment research services, as
well as a major money management institution.¹² I included Zacks because it compiles
consensus earnings forecasts from groups of professional security analysts.¹³ Finally, I
also included Yahoo! Finance for similar reasons to the first two.¹⁴

For the second stage of the multistage DCF model, I used an expected long-run
nominal growth rate of 5.18%, consisting of the 3.18% per year average real growth-rate
of GDP for the period 1950 through 2021 as calculated from data reported by the U.S.
Bureau of Economic Analysis,¹⁵ and the 2.00% rate of long-run inflation forecast by the
Board of Governors of the Federal Reserve System in its most recent estimate.¹⁶ These
are widely disseminated data that investors generally consider credible.

Q. Why do you use a consensus forecast from professional security analysts rather than historical data as a proxy for investor expectations of growth?

A. There are several reasons why I use professional security analysts' forecasts instead of
historical data. First, the cost of equity is a forward-looking concept, and security analysts
use extensive and sophisticated financial models to forecast growth rates. To the extent
that historical growth rates for dividends, earnings, and book values are relevant to future
growth, they are already incorporated into these forecasts. In addition, other pertinent

¹² Accessible at www.valueline.com.

¹⁴ Accessible at finance.yahoo.com.

¹⁵ U.S. Bureau of Economic Analysis, Real Gross Domestic Product (GDPC1), retrieved from FRED, Federal Reserve Bank of St. Louis; *accessible at* https://fred.stlouisfed.org/series/GDPC1 (Oct. 5, 2022).

¹³ Accessible at www.zacks.com.

¹⁶ Monetary Policy Report to the Congress, Board of Governors of the Federal Reserve System at page 51 (Jun. 17, 2022).

information—such as general economic projections and the impact of new legislation,
 regulatory actions, and technological advancements—is factored into the projections
 made by investment advisory firms, providing a more comprehensive estimate and
 reflecting a broader base of relevant information.

5 Second, it is not plausible to assume that the large institutional investors who 6 dominate stock trading use valuation techniques based on the assumption that historical 7 trends in earnings and dividends will simply be repeated. These institutions pay 8 substantial amounts of money to investment services such as Value Line for information 9 that includes earnings forecasts. The substantial payment suggests that these investors 10 consider the information valuable and actually use it when making investment decisions.

11 Third, a long history of empirical academic research by authorities such as Dr. 12 Myron Gordon, the originator of the Gordon dividend growth model described earlier, has 13 shown that consensus forecasts from professional security analysts do a better job of 14 predicting the valuation of common stocks than mechanically derived forecasts from 15 historical data.

16 Q. What are the results of your DCF analyses?

17 A. Attachment MF-4 shows recent stock price averages and forecasted dividends for 18 companies in the comparable group; these data feed into the single-stage DCF and 19 multistage DCF calculations in Attachment MF-5 and Attachment MF-6, respectively. 20 Attachment MF-5 includes a summary of the results of my single-stage DCF analysis. 21 Using the average of earnings growth rates projected by Value Line and Yahoo! Finance 22 and, where applicable, Zacks, the estimates for the unadjusted comparable companies 23 yields an average cost of equity of 9.22%. The multistage DCF yields a cost-of-equity estimate with an average of 7.16%, as shown on Attachment MF-6. 24

D. RISK-PREMIUM ESTIMATE OF THE COST OF EQUITY

2

Q. Please describe the general methodology of your risk-premium analysis.

3 A. Because the cost of equity is not directly observable, estimates for it may be derived by 4 examining bond yields, which are readily observable, and adding a premium to 5 compensate for the additional risk assumed to exist in equity investments. Equity 6 investments have traditionally been viewed as being riskier than debt investments because 7 stockholder payments are not contractually defined and because debt holders generally have a senior claim on the assets of a firm if it declares bankruptcy. The yields on long-8 9 term bonds are typically used in risk-premium analyses because equity investments are 10 usually thought of as long-term investments. Because the holding periods for these 11 investments are assumed to be similar, the inflation expectations built into long-term bond 12 yields should also apply to equity investments.

Q. Are equity risk premiums stable over time, or do they vary with capital market conditions?

Several empirical studies have demonstrated that equity risk premiums vary over time as 15 A. 16 changes occur in the capital markets. In addition, it is reasonable to expect the equity risk 17 premium for a particular company to change as the specific risks facing a company change 18 over time. With regard to the influence of capital market conditions, several studies have 19 identified an inverse relationship between the level of interest rates and the size of equity 20 risk premiums. One explanation for this phenomenon is the differential impact of inflation 21 on debt and equity investments. Because bond interest payments are fixed upon issuance, 22 there is no mechanism for adjusting returns for changes in inflation and purchasing power. 23 Therefore, when inflationary fears rise, the perceived risk associated with bond 24 investments increases, and interest rates rise. On the other hand, equity investors may be 25 shielded somewhat from inflation by the company's ability to raise dividend payouts 26 during inflationary periods. Because stocks may be viewed as a better hedge against

inflation, the cost of equity will tend to rise less than the cost of debt. Consequently, the 2 equity risk premium can be expected to fall as interest rates rise.

3 In addition to the influence of inflation, changes in investor risk preferences can significantly affect equity risk premiums. For example, if a major economic disruption or 4 a recession were anticipated, a move to higher quality investments would likely occur. 5 6 This would have the probable effect of decreasing the returns that investors require for 7 investing in U.S. Treasury bonds and high-grade corporate bonds. If the returns on these 8 securities were used to measure risk premiums, the observed equity risk premiums would 9 likely be higher. Conversely, if the demand for higher quality investments were to fall, 10 thereby pushing up the required returns, the observed equity risk premiums would likely be lower. 11

12 Q. Please describe the "conventional" risk-premium approach that you used in your 13 estimate of cost of equity for East Houston.

14 A. I refer to the risk-premium approach I use in the quantitative part of my testimony as the 15 "conventional" risk premium to distinguish it from the concept of risk premiums in 16 general and to denote that it is the primary risk-premium method on which Staff has relied for many years. The conventional risk premium is a risk-premium model that estimates 17 the cost of equity for East Houston by comparing the costs of equity authorized for utilities 18 19 across the United States to the yields of public utility bonds that are rated Baa by Mergent 20 Bond Data. The timeframe I have used for this purpose is 2007 through 2021. In 21 estimating the cost of capital of a Class D water utility that does not have publicly traded 22 securities, it is appropriate for a risk-premium model to use data for public utilities' bond 23 issuances in the calculation.

1 Q. How did you use the relationship between the authorized costs of equity and the bond 2 yields to quantify the cost of equity for East Houston?

- 3 A. I quantified the relationship by subtracting the bond yields from the authorized costs of 4 equity to determine a risk premium for the riskier equity.
- 5 Q. Did you test the data for correlation as you described earlier in the introduction to 6 Part D?
- 7 Yes. I performed a regression analysis to analyze the relationship between the risk A. 8 premium and the bond yields in the corresponding period. The regression analysis shows, 9 with high confidence, that there is a trend in the relationship. It is an inverse trend, in 10 which the risk premiums increase as bond yields decrease. On average, during 2007 through 2021, risk premiums increased 0.7563% for every 1.00% that bond yields 11 12 decreased.

13 Q. Did you incorporate that relationship in your risk-premium estimate?

- 14 A. The calculation of the adjustment to the risk premium and the concomitant Yes. 15 regression analysis appear on Attachment MF-7.
- 16 Q. What current interest rate data do you use in your risk-premium estimate?
- 17 A. I use bond data from a recent 12-month period as the starting point in the calculation of 18 the risk premium on Page 2 of Attachment MF-7. The 12-month period covers September 19 2021 through August 2022. The average Baa public utility bond yield for that period is 20 4.17%.

21 Q. What are the results of your risk-premium analysis, using a recent 12-month period 22 for bond data?

23 A. As shown on Attachment MF-7, the conventional risk-premium analysis implies a cost of 24 equity of 9.56%.

1 E. SUMMARY OF COST-OF-EQUITY ANALYSES

2 Q. Please summarize the results of your cost-of-equity analyses.

A. The results obtained from the analyses appear on Attachment MF-8 and in the following
table:

5	Methodology	Point Estimate	Range
6	Single-stage DCF Analyses	9.22%	4.93% - 14.33%
7	Multistage DCF Analysis	7.16%	6.08% - 8.21%
8			
9	Combined DCF Analysis	8.19%	N/A
10	Conventional Risk Premium	9.56%	N/A
11	ROE Estimate	8.87%	7.16% - 9.56%

12 Q. What is your recommendation for the return on equity for East Houston?

A. Considering the DCF analyses of companies that are comparable to East Houston and the conventional risk-premium analysis described previously in my testimony, I recommend an ROE for East Houston of 8.87%.

16 My point estimate of 8.87% is the average of the results of the combined DCF 17 analyses and the conventional risk-premium estimate, and it lies in the upper half of the range of 7.16% to 9.56% as calculated by those models. After assessing additional factors 18 19 such as current capital market conditions, I concluded that the best estimate for a cost of 20 equity for East Houston is the average of the combined DCF analyses and conventional 21 risk-premium estimate. My point estimate for East Houston's return on equity of 8.87% 22 promotes the public interest by balancing the concerns of ratepayers while affording East 23 Houston a reasonable opportunity to earn a reasonable return on its invested capital.

Based on my analyses and the foregoing considerations, my overall recommendation of 8.87% is a reasonable estimate of the ROE for East Houston and is

1		fully consistent with the requirements of Hope and Bluefield that I referenced earlier in
2		my testimony.
3	VI.	COST OF DEBT
4	Q.	What cost of debt did East Houston request in its Application?
5	A.	East Houston's Application shows that it does not have any debt in its actual capital
6		structure. East Houston requests a cost of debt of 0%, which it uses in calculating its
7		overall requested rate of return. ¹⁷
8	Q.	Do you believe that the cost of debt that East Houston requests in its Application is
9		appropriate for rate-setting purposes?
10	A.	No. I do not believe that the requested cost of debt is 0% is appropriate for setting rates
11		in this docket. Instead, I use a reasonable proxy cost of debt when calculating the overall
12		rate of return that I recommend East Houston earn on its invested capital (in Section VIII
13		below). It is more appropriate to use a proxy cost of debt than a 0% cost of debt in
14		conjunction with the hypothetical 50%-50% capital structure (described in Section VII
15		below) when calculating overall rate of return for a small Class D water utility because
16		the utility could have used debt financing in the test year and, if it had, it would not have
17		been at zero cost.
18	Q.	What is an appropriate proxy cost of debt for a Class D water utility for the purposes
19		of calculating its authorized rate of return and setting rates?
20	A.	An appropriate proxy cost of debt for a Class D water utility is the average Baa public
21		utility bond issuance for the test year. For the test year of 2020, the average Baa public
22		utility bond issuance was 3.39% (see the confidential workpapers associated with this

23 testimony). It is appropriate to use a proxy cost of debt for a Class D water utility because

¹⁷ Application, Schedule III-1 Requested Return at page 21.

there is a history of use of this methodology before the Commission when setting rates of
 return for small water utilities.

3 Q. What cost of debt do you recommend for East Houston?

- 4 A. I recommend the Commission approve a cost of long-term debt of 3.39% for East Houston
 5 for the purpose of setting rates in this docket.
- 6 VII. CAPITAL STRUCTURE

7 Q. What capital structure did East Houston propose in its Application?

A. East Houston requested, in its Application, a capital structure consisting of 50% long-term
debt and 50% common equity for the purpose of establishing rates.¹⁸

10 Q. Is the capital structure that East Houston requests its actual capital structure from 11 the test year?

- 12 A. No. The Application shows that, at the end of the test year, East Houston did not have 13 any long-term debt and, consequently, had an actual capital structure consisting of 100% 14 equity.¹⁹ In accordance with the instructions on Schedule III-1, East Houston used a 15 hypothetical capital structure consisting of 50% long-term debt and 50% equity for the 16 purposes of calculating its requested overall rate of return.²⁰
- Q. Do you believe that the capital structure that East Houston is requesting in its
 Application is appropriate for rate-setting purposes?
- A. Yes. Because East Houston is a Class D water utility (i.e., a small water utility) and has
 an actual capital structure with equity greater than 60%, it is appropriate to use a
 hypothetical capital structure consisting of 50% long-term debt and 50% equity for ratesetting purposes. The instructions on Schedule III-1 Requested Return for a Class D water
 - ¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

utility require this method and there is a history at the Commission of using a 50%-50%
capital structure when calculating rates for small water utilities. Also, the utilities in the
comparable group have capital structures closer to the proxy 50%-50% capital structure,
and they do not have capital structures similar to East Houston's actual capital structure
that includes only equity. In this case, I recommend that the Commission approve a
regulatory capital structure for East Houston that consists of 50% long-term debt and 50%
common equity for rate-setting purposes.

8

9

VIII. OVERALL RATE OF RETURN

Q. How did you calculate the overall cost of capital?

A. To calculate the recommended rate of return for East Houston, I employed the weighted average cost-of-capital methodology, the use of which involves three steps in a regulatory
 setting.

13 First, the analyst must identify the sources of capital and estimate the component 14 cost of each source of capital in the target company's capital structure. Sources of capital generally consist of long-term debt and common equity in the water utility regulatory 15 16 setting. The determination of cost for long-term debt is relatively straightforward because 17 the costs of this capital source are embedded—i.e., they are set by contractual obligation and are therefore directly observable. In contrast, the cost of equity is not directly 18 19 observable and must be estimated using analytical models, as I have done earlier in Parts 20 A through E of Section V of my testimony.

Second, the analyst must recommend an appropriate capital structure for
 regulatory purposes. For each source of capital identified, the analyst must recommend
 an appropriate weight. I do this in Section VII of my testimony.

Third, the cost of each capital source is weighted by its relative proportion in the recommended capital structure. The sum of these weighted component costs represents the weighted-average cost of capital—i.e., the overall rate of return. For ratemaking

1		purposes for a water utility, this overall rate of return is multiplied by the utility's invested
2		capital (the rate base) in order to calculate the return component of the cost of service.
3	Q.	What overall rate of return are you proposing for East Houston in this proceeding?
4	А.	As shown on Attachment MF-1, East Houston's requested capital structure, when
5		combined with my recommended cost of debt and cost of equity, results in a weighted-
6		average cost of capital of 6.13%.
7	Q.	If you do not address an issue or position in your testimony, should that be
8		interpreted as support for East Houston's position on that issue?
9	A.	No. The fact that I do not address an issue or position in my testimony should not be
9 10	A.	No. The fact that I do not address an issue or position in my testimony should not be construed as agreeing with, endorsing, or consenting to any position taken by East
9 10 11	A.	No. The fact that I do not address an issue or position in my testimony should not be construed as agreeing with, endorsing, or consenting to any position taken by East Houston.
9 10 11 12	А. Q.	 No. The fact that I do not address an issue or position in my testimony should not be construed as agreeing with, endorsing, or consenting to any position taken by East Houston. Does this conclude your testimony?

Attachment MF-1 Page 1 of 1

WEIGHTED-AVERAGE COST OF CAPITAL

		Component	Weighted
	<u>% of Total</u>	<u>Cost</u>	<u>Avg. Cost</u>
Long-Term Debt	50.00%	3.39%	1.70%
Common Equity	50.00%	8.87%	4.44%
	100.00%		6.13%

SELECTION CRITERIA FOR PROXY GROUP AND EARNINGS GROWTH

Ticker	Ticker		Market Cap. ¹	LTD/Capital ^{1, 2}	S&P Rating ^{3, 4}	Earnings Growth				
Symbol	Company		(Millions)	ETD/Oapital	Odi Rating	VL^1	Zacks ⁵	Yahoo! Finance ⁶	Average	
AWR	American States Water Company		\$2,900	46.1%	A+	5.50%	N/A	4.40%	4.95%	
AWK	American Water Works Company		\$27,100	58.6%	A	3.00%	8.08%	8.30%	6.46%	
CWT	California Water Service Group		\$2,900	47.3%	N/A	6.50%	N/A	11.70%	9.10%	
WTRG	Essential Utilities		\$11,700	52.7%	А	10.00%	6.14%	6.80%	7.65%	
MSEX	Middlesex Water Company		\$1,500	45.3%	А	4.50%	N/A	2.70%	3.60%	
SJW	SJW Group		\$1,900	59.1%	A-	14.00%	N/A	9.80%	11.90%	
	Д	Averages	\$8,000	51.5%	А	7.25%	7.11%	7.28%	7.28%	

Sources: ¹Value Line Investment Report: Water Utility Group (July 8, 2022).

² Most recent actual capital structure from Value Line Investment Report: Water Utility Group (July 8, 2022).

³ Issuer Credit Rating from S&P Global Ratings, retrieved on November 4, 2022, from S&P Global Market Intelligence (www.snl.com).

⁴ Although California Water Service Group does not have a credit rating, the rating for subsidiary California Water Service Co. is A+

⁵ Zacks Investment Research, retrieved on September 8, 2022, from www.zacks.com/stock/quote/

⁶ Yahoo! Finance, retrieved on September 8, 2022, from finance.yahoo.com

AVERAGE STOCK PRICES

Ticker		12-week	12	11	10	9	8	7	6	5	4	3	2	1
Symbol	Company	Average	5-Sep-22	29-Aug-22	22-Aug-22	15-Aug-22	8-Aug-22	1-Aug-22	25-Jul-22	18-Jul-22	11-Jul-22	4-Jul-22	27-Jun-22	20-Jun-22
AWR	American States Water Company	\$84.29	\$83.79	\$82.86	\$84.77	\$88.52	\$88.55	\$87.43	\$86.77	\$82.18	\$82.81	\$81.76	\$83.31	\$78.73
AWK	American Water Works Company	\$152.01	\$153.34	\$148.12	\$151.09	\$157.81	\$157.66	\$154.99	\$154.79	\$147.60	\$147.94	\$150.23	\$152.78	\$147.72
CWT	California Water Service Group	\$58.48	\$58.80	\$58.44	\$60.64	\$62.17	\$62.61	\$59.54	\$59.84	\$57.45	\$56.60	\$55.21	\$56.77	\$53.67
WTRG	Essential Utilities	\$49.04	\$48.81	\$49.16	\$50.28	\$51.75	\$51.63	\$50.45	\$51.65	\$48.41	\$47.26	\$46.19	\$47.18	\$45.70
MSEX	Middlesex Water Company	\$90.60	\$88.89	\$89.21	\$90.75	\$94.21	\$93.63	\$92.29	\$94.81	\$89.87	\$88.83	\$88.70	\$90.26	\$85.71
SJW	SJW Group	\$64.46	\$64.67	\$64.10	\$65.78	\$67.40	\$67.39	\$65.01	\$65.31	\$62.89	\$63.18	\$62.41	\$64.39	\$61.02

Source: Yahoo Finance (https://finance.yahoo.com/lookup/)

Stock Prices are adjusted by Yahoo Finance to reflect the effects of the date when the next dividend is expected to be paid. Data retrieved September 8, 2022.

FORECASTED DIVIDENDS

Ticker		Growth Rate ¹		Next Four Quarters Total Stock Priv		Stock Price	Dividend		
Symbol	Company	(Attach. MF-2)	Next	2nd	3rd	4th	Proj. D 1	(Attach. MF-3)	Yield
AWR	American States Water Company	4.95%	\$0.3975	\$0.3975	\$0.3975	\$0.4172	\$1.61	\$84.29	1.91%
AWK	American Water Works Company	6.46%	\$0.6550	\$0.6550	\$0.6973	\$0.6973	\$2.70	\$152.01	1.78%
CWT	California Water Service Group	9.10%	\$0.2500	\$0.2728	\$0.2728	\$0.2728	\$1.07	\$58.48	1.83%
WTGR	Essential Utilities	7.65%	\$0.2870	\$0.2870	\$0.2870	\$0.3089	\$1.17	\$49.04	2.39%
MSEX	Middlesex Water Company	3.60%	\$0.3004	\$0.3004	\$0.3004	\$0.3004	\$1.20	\$90.60	1.33%
SJW	SJW Group	11.90%	\$0.3600	\$0.4028	\$0.4028	\$0.4028	\$1. 57	\$64.46	2.43%

¹ The growth rate is applied to the quarterly dividend during the period when dividends have historically increased.

DISCOUNTED CASH FLOW

Single-Stage

Ticker		Stock Price	Div1	Dividend Yield	Div. Growth	DCF
Symbol	Company	(Attch. MF-3)	(Attch. MF-4)	(Attch. MF-4)	(Attch. MF-2)	ROE
AWR	American States Water Compar	\$84.29	\$1.61	1.91%	4.95%	6.86%
AWK	American Water Works Compa	\$152.01	\$2.70	1.78%	6.46%	8.24%
CWT	California Water Service Group	\$58.48	\$1.07	1.83%	9.10%	10.93%
WTRG	Essential Utilities	\$49.04	\$1.17	2.39%	7.65%	10.03%
MSEX	Middlesex Water Company	\$90.60	\$1.20	1.33%	3.60%	4.93%
SJW	SJW Group	\$64.46	\$1.57	2.43%	11.90%	14.33%

Minimum 1 st Quartile 4.93%

7.20%

Average 3^{ra} Quartile 9.22%

10.70%

Maximum 14.33%

Standard Deviation 3.02%

Minimum ROE	6.08%
1 st Quartile	6.88%
Average ROE	7.16%
3 rd Quartile	7.57%
Maximum ROE	8.21%

MULTISTAGE DISCOUNTED CASH FLOW

	AWR	AWK	CWT	WTRG	MSEX	SJW
Stock Price	\$84.29	\$152.01	\$58.48	\$49.04	\$90.60	\$64.46
Div1	\$1.61	\$2.70	\$1.07	\$1.17	\$1.20	\$1.57
5-Yr Growth	4.95%	6.46%	9.10%	7.65%	3.60%	11.90%
L-t Growth	5.18%	5.18%	5.18%	5.18%	5.18%	5.18%
Cost of Equity	6.91 %	6.87%	7.15%	7.71%	6.08%	8.21%

		Ca	sh Flows			
2019	-\$84.29	-\$152.01	-\$58.48	-\$49.04	-\$90.60	-\$64.46
2020	\$1.61	\$2.70	\$1.07	\$1.17	\$1.20	\$1.57
2021	\$1.69	\$2.88	\$1.17	\$1.26	\$1.25	\$1.76
2022	\$1.77	\$3.07	\$1.27	\$1.36	\$1.29	\$1.96
2023	\$1.86	\$3.26	\$1.39	\$1.46	\$1.34	\$2.20
2024	\$1.95	\$3.47	\$1.51	\$1.57	\$1.38	\$2.46
2025	\$2.05	\$3.65	\$1.59	\$1.65	\$1.46	\$2.59
2026	\$2.16	\$3.84	\$1.67	\$1.74	\$1.53	\$2.72
2027	\$2.27	\$4.04	\$1.76	\$1.83	\$1.61	\$2.86
2028	\$2.39	\$4.25	\$1.85	\$1.92	\$1.69	\$3.01
2029	\$2.51	\$4.47	\$1.95	\$2.02	\$1.78	\$3.17
2030	\$2.64	\$4.70	\$2.05	\$2.13	\$1.87	\$3.33
2031	\$2.78	\$4.95	\$2.16	\$2.24	\$1.97	\$3.50
2032	\$2.93	\$5.20	\$2.27	\$2.35	\$2.07	\$3.68
2033	\$3.08	\$5.47	\$2.38	\$2.47	\$2.18	\$3.87
2034	\$3.24	\$5.76	\$2.51	\$2.60	\$2.29	\$4.08
2035	\$3.40	\$6.06	\$2.64	\$2.74	\$2.41	\$4.29
2036	\$3.58	\$6.37	\$2.77	\$2.88	\$2.54	\$4.51
2037	\$3.77	\$6.70	\$2.92	\$3.03	\$2.67	\$4.74
2038	\$3.96	\$7.05	\$3.07	\$3.19	\$2.81	\$4.99
2039	\$4.17	\$7.41	\$3.23	\$3.35	\$2.95	\$5.25
-	-	-	-	-	-	-
				-		-
			[Hidden R	ows]		
	-	-			-	-
		-	-	-	-	-
2165	\$2,416.82	\$4,299.61	\$1,873.05	\$1,944.22	\$1,713.30	\$3,043.60
2166	\$2,542.01	\$4,522.33	\$1,970.07	\$2,044.93	\$1,802.05	\$3,201.25
2167	\$2,673.69	\$4,756.59	\$2,072.12	\$2,150.85	\$1,895.39	\$3,367.08
2168	\$2,812.19	\$5,002.98	\$2,179.45	\$2,262.27	\$1,993.58	\$3,541.49
2169	\$2,957.86	\$5,262.14	\$2,292.35	\$2,379.45	\$2,096.84	\$3,724.94

CONVENTIONAL RISK-PREMIUM ANALYSIS OF WATER UTILITIES' AUTHORIZED RETURNS ON EQUITY AND CONCURRENT PUBLIC UTILITY BOND YIELDS

		<u>Avg Baa Bond</u>	
<u>Year</u>	<u>Allowed ROE¹</u>	<u>Yield</u> ²	<u>Risk Premium</u>
2021	9.35%	3.36%	5.99%
^د 2020 ع	9.36%	3.39%	5.97%
2019	9.63%	4.19%	5.44%
2018	9.43%	4.67%	4.76%
2017	9.56%	4.38%	5.18%
2016	9.71%	4.68%	5.03%
2015	9.76%	5.03%	4.73%
2014	9.59%	4.80%	4.79%
2013	9.73%	4.98%	4.75%
2012	9.90%	4.86%	5.04%
2011	10.04%	5.57%	4.47%
2010	10.18%	5.96%	4.22%
2009	10.18%	7.06%	3.12%
2008	10.24%	7.25%	2.99%
2007	<u>10.07%</u>	<u>6.33%</u>	<u>3.74%</u>
Averages	9.78%	5.10%	4.68%

¹ SNL Financial LC (https://platform.mi.spglobal.com/web/client?auth=inherit#industry/statisticsAndGraphs), available at www.snl.c

² Mergent Bond Record, September 2022, p.19, and earlier editions.

³ Average ROE excludes South Carolina punitive ROE of 7.46%, which decreases overall authorized return to 9.04%

CONVENTIONAL RISK-PREMIUM ANALYSIS OF WATER UTILITIES' AUTHORIZED RETURNS ON EQUITY AND CONCURRENT PUBLIC UTILITY BOND YIELDS



Computation of ROE

Average Public Utility Baa Bond Yield, Sep 2021 - Aug 2022		4.17%
Average bond yield over study period	-	<u>5.10%</u>
Change in bond yield		-0.93%
Risk premium/interest rate relationship	X	<u>-0.7563</u>
Adjustment to average risk premium		0.70%
Average risk premium over study period	+	<u>4.68%</u>
Adjusted risk premium		5.39%
Avg seasoned Baa bond yield	+	<u>4.17%</u>
Implied cost of equity:		9.56%

Public Utility Commission of Texas Docket No. 52370

RETURN ON EQUITY

Summary

Single-stage DCF			
Range	Average		
4.93%–14.33%	9.22%		
Multistage DCF			
Range	Average		
6.08%–8.21%	7.16%		
Combined DCF			
Range	Average		
4.93%-14.33%	8.19%		

Risk Premium		
Range	Point Estimate	
N/A	9.56%	

Final Estimate

Range	7.16% - 9.56%
Point	8.87%

Mark Filarowicz, CFA, CPA

Public Utility Commission of Texas List of Previous Testimony

Docket No. 53719

Application of Entergy Texas, Inc. for Authority to Change Rates Testimony on Rate of Return filed November 2, 2022

Docket No. 53601

Application of Oncor Electric Delivery Company LLC for Authority to Change Rates Testimony on Accounting Position and Revenue Requirement Model filed September 2, 2022

Docket No. 53442

Application of CenterPoint Energy Houston Electric, LLC for Approval to Amend Its Distribution Cost Recovery Factor Testimony in Support of Stipulation filed July 12, 2022

Docket No. 52354

Application of Entergy Texas, Inc. to Update Its Generation Cost Recovery Rider to Reflect the Acquisition of the Hardin County Peaking Facility Testimony in Support of Stipulation filed April 25, 2022

Docket No. 52389

Application of Southwestern Electric Power Company for Advanced Metering System (AMS) Deployment Plan, AMS Surcharge, and Non-Standard Metering Service Fees Testimony on Accounting Position and Rate-Case Expenses filed December 8, 2021

Docket No. 52067

Application of Entergy Texas, Inc. to Adjust its Energy Efficiency Cost Recovery Factor and Request to Establish Revised Cost Caps

Testimony in Support of Stipulation filed November 1, 2021

Docket No. 52397

Application of Southwestern Electric Power Company to Implement a Net Interim Fuel Surcharge

Testimony on Interest Rate and Calculation filed October 13, 2021

Docket No. 51381

Application of Entergy Texas, Inc. to Establish a Generation Cost Recovery Rider Related to the Montgomery County Power Station

Testimony in Support of Stipulation filed October 13, 2021

Docket No. 51802

Application of Southwestern Public Service Company for Authority to Change Rates Testimony on Accounting Position and Revenue Requirement Model filed August 20, 2021

Errata filed October 12, 2021

Docket No. 51556

Application of GEUS to Change Rates for Wholesale Transmission Service Testimony in Support of Stipulation filed July 13, 2021

Docket No. 51996

Application of Oncor Electric Delivery Company LLC for Approval to Amend Its Distribution Cost Recovery Factor

Testimony in Support of Stipulation filed June 18, 2021

Docket No. 51415

Application of Southwestern Electric Power Company L.L.C. for Authority to Change Rates Testimony on Rate of Return filed April 7, 2021

Docket No. 51611

Application of Sharyland Utilities, L.L.C. for Authority to Change Rates Testimony on Rate of Return filed March 12, 2021

Docket No. 50734

Application of Oncor Electric Delivery Company LLC for Approval to Amend Its Distribution Cost Recovery Factor

Testimony in Support of Stipulation filed June 24, 2020

Docket No. 49421

Application of CenterPoint Energy Houston Electric, LLC for Authority to Change Rates Testimony on Accounting Position and Revenue Requirement Model filed June 12, 2019

Docket No. 47588

Review of Rate Case Expenses Incurred by Southwestern Public Service Company in Docket No. 47527

Testimony on Rate-Case Expenses and in Support of Stipulation filed May 23, 2019

Docket No. 49057

Application of Entergy Texas, Inc. To Set a Transmission Cost Recovery Factor Testimony on Accounting Position and Revenue Requirement Model filed March 25, 2019

Docket No. 48371

Entergy Texas, Inc.'s Statement of Intent and Application for Authority to Change Rates Testimony on Rate of Return filed August 8, 2018

Docket No. 48325

Application of Oncor Electric Delivery Company LLC for Authority to Decrease Rates

 Testimony on Accounting Position and Effects of the Tax Cuts and Jobs Act of 2017
 filed August 8, 2018
 Testimony in Support of Stipulation filed September 11, 2018
 Errata filed September 13, 2018

Docket No. 47527

Application of Southwestern Public Service Company for Authority to Change Rates Testimony on Rate of Return filed May 2, 2018

Docket No. 46328

Review of Rate Case Expenses Incurred by Southwestern Public Service Company and Municipalities in Docket No. 45524

Testimony on Rate-Case Expenses and in Support of Stipulation filed November 30, 2017

Docket No. 46831

Application of El Paso Electric Company to Change Rates Testimony on Rate of Return filed June 30, 2017

Docket No. 47032

Application of CenterPoint Houston Electric, LLC for Approval to Amend Its Distribution Cost Recovery Factor

Testimony on Accounting Position, DCRF Revenue Requirement, and Rate-Case Expenses filed June 7, 2017

Docket No. 45524

Application of Southwestern Public Service Company for Authority to Change Rates Testimony on Accounting Position and Cost of Service filed August 23, 2016 Testimony in Support of Stipulation filed December 8, 2016

Docket No. 46014

Application of CenterPoint Energy Houston Electric, LLC for Approval of an Adjustment to Its Energy Efficiency Cost Recovery Factor

Testimony on Accounting Position filed August 8, 2016

Docket No. 45475

Review of Rate Case Expenses Incurred by El Paso Electric Company and Municipalities in Docket No. 44941

Testimony on Rate-Case Expenses and in Support of Stipulation filed July 21, 2016

Docket No. 44941

Application of El Paso Electric Company to Change Rates Testimony on Rate-Case Expenses and in Support of Stipulation filed July 21, 2016

Docket No. 45084

Application of Entergy Texas, Inc. for Approval of a Transmission Cost Recovery Factor Testimony on Accounting Position and TCRF Revenue Requirement filed November 24, 2015

Errata filed December 10, 2015

Docket No. 45083

Application of Entergy Texas, Inc. for Approval to Amend Its Distribution Cost Recovery Factor Testimony on Accounting Position and DCRF Revenue Requirement filed October 23, 2015 The following files are not convertible:

52370 Staff's Rate-of-Return Model.xlsx

Please see the ZIP file for this Filing on the PUC Interchange in order to access these files.

Contact centralrecords@puc.texas.gov if you have any questions.